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GALLSTONES, THEIR SURGICAL TREATMENT.*

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The last few years have greatly enlarged our knowledge of the pathology of gallstones and altered our views of the proper treatment of the various conditions caused by them. Many of these changes are analogous to those which have taken place in our opinions of appendicitis and its treatment. In both we have conditions which may be treated medically, that is to say, expectantly—for little direct effect can be produced upon either by medical or hygienic measures—and in both the only real treatment for well marked lesions is surgical and operative.

In both conditions, too, the technique of operation has been so far developed that surgeons are agreed as to essentials, and all the various possible conditions and complications have been met and overcome with appropriate operative procedures. In appendicitis, practical unanimity prevails as to what treatment is to be adopted in the different types of the disease, those which require operation immediately, those which can wait for a convenient season, and those which may escape without operation. Less unanimity reigns in the case of gallstones, and it is the object of this paper to attempt to formulate some ideas upon the various cases in which operation is necessary, advisable, or can be dispensed with.

PATHOLOGY.

It will be best to give a brief recapitulation of the present status of gallstone pathology as a foundation for our arguments.

Gallstones are formed by deposits of the biliary constituents around a foreign body, usually a clump of mucus produced by slight catarrhal inflammation of the gallbladder. This inflammation is due to infection, which reaches the gallbladder by ascending the ducts from the duodenum; by penetrating the walls of the bladder from some neighboring focus (suppuration of the kidney, or abscess around the vermiform appendix, for instance); or, finally, by way of the blood vessels. The last mode of infection is supposed by Chiari and Councilman to be the most frequent. It is analogous to the cases of osteomyelitis of a bone of the extremities secondary to an abscess of the tonsil.

Stones very rarely form in the gall ducts, those which are found there having originated in the bladder. Obstruction to the free outflow of the bile hastens the growth of the calculi.

When a stone becomes lodged in the neck of the bladder or in the cystic duct, it blocks the outflow of the vesical contents, and the intravesical pressure is increased by secretion of mucus and by inflammatory exudate. There are three modes of termination in such a case:

A. The stone remains in place, blocking the passage, resulting in

(1) permanent distention of the gallbladder with mucus, serum, or pus;

(2) perforation or gangrene of the gallbladder; or in

(3) subsidence of the attack when the bladder walls become accustomed to the pressure, and resume their powers of absorption, thus removing a portion of the fluid contents.

B. The stone becomes dislodged, falling back into the bladder, and all the symptoms are relieved.

C. The stone passes on into the common duct, with the result that

(1) the stone passes on into the bowel;

(2) the stone remains in the common duct, causing chronic biliary obstruction, or not obstructing the duct, and causing few or no symptoms (becoming latent in the last case); or that

(3) perforation of the duct occurs, which may

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* Read before the Central New York Medical Association, September 22, 1903.

result in escape of the stone into the bowel or elsewhere by the fistula.

In any position of the stone, and at any time in the course of the case, the so-called "latency" may ensue if the stone does not obstruct the biliary passages, and if there is no active infection of the biliary system. This latency may be terminated at any time by infection setting up inflammation, or by traumatism altering the position of the stone.

In gallstone pathology there are two main features, obstruction of the biliary passages at some point, and inflammatory complication due to infection; and although the majority of cases combine the two, it is possible to divide them into two practically distinct classes, according to the presence or absence of infection. Infection is at the beginning of the formation of the calculi, and it is also the principal source of the dangers arising from them. If a gallbladder containing stones becomes infected, suppuration, ulceration, and perforation, with all their disastrous consequences, are more likely to take place than in a bladder free from stones. This is true whether the stones are so placed as to obstruct the outlet of the bladder or not, although obstruction increases the danger. The same is true of a stone lying in the common duct, for infection greatly enhances the dangers of that serious condition.

CHOLECYSTITIS.

A mild cholecystitis, then, may cause the formation of gallstones, and the presence of calculi predisposes to a grave cholecystitis with perforation, peritonitis, etc. These consequences of cholecystitis should be borne in mind by the practitioner, who is rather inclined to underrate the importance of this inflammation, and in fact often overlooks its existence, for it is much more common than is generally supposed. When he meets an attack of colicky pain in the upper part of the abdomen, without jaundice and without a previous history of attacks of "biliary colic," he thinks the trouble cannot be in the biliary system, and talks vaguely of "taking cold," or of gastric or intestinal colic. But the reasoning is incorrect, for a cholecystitis may exist before gallstones are formed, and jaundice is not a usual symptom of cholecystitis. Not infrequently, cholecystitis is brought to the surgeon with the diagnosis of appendicitis, and my first case of gallstones was operated on under that diagnosis. The gallbladder lay low down in the iliac fossa, and the unusually low area of liver dulness was supposed to be caused by a collection of fæces in the transverse colon. The recognition of cholecystitis, however, is easy, for the pain and tenderness correspond to the position of the gallbladder, and the latter can often be distinctly felt. Every case of cholecystitis demands energetic treatment whether gallstones are present or not; and, if the symptoms are violent or do not soon yield to treatment, surgical aid should be invoked.

SEPSIS FROM CHOLELITHIASIS.

Few will disagree with the general statement that all cases of gallstones complicated with sepsis require surgical treatment. The seriousness of these conditions is illustrated by the following cases:

CASE I.—Charles N., twenty-nine years of age, admitted to St. Luke's Hospital October 28, 1900, had general peritonitis of obscure origin. An immediate operation was performed, an incison being made over the vermiform appendix, which was found normal. A median incision higher up, with a transverse cut across the right rectus, showed advanced cholecystitis. The gallbladder was isolated, aspirated, and secured in the wound with a drain in it. The abdomen was full of seropus and was also drained. The patient rallied, but died of sepsis forty-eight hours later.

CASE II.—Christine S., sixty-seven years of age, who had been ill for some days with acute cholecystitis, was admitted to St. Luke's Hospital on January 18, 1900, in a threatening septic condition, with high fever and rapid pulse. An incision was made over the gallbladder, which could be felt plainly, and revealed that organ distended with mucus, and its walls sloughing. It was opened, six small stones removed, and a drain secured in it. The patient did not improve, and died in forty-eight hours with the signs of a septic bronchitis or bronchopneumonia.

CASE III.—Vincent D., sixty-five years of age, was transferred to my service from the medical side of St. Luke's Hospital. He stated that one year ago he had had an acute attack of pain over the abdomen, growing worse at night and lasting to the present time with vomiting at intervals, but he never vomited blood. He had lost flesh and strength, and had a dark-greenish jaundice, the mucous membranes appearing very pale. No changes could be detected in the liver or gallbladder. He coughed continually, and subcrepitant râles existed on both sides of the chest. The patient had a high septic fever with chills and was in a miserable condition. He had extensive endarteritis. An exploratory laparotomy, done December 1, 1900, showed no great external changes in the gallbladder or liver. The bladder was distended with bile, but not tense, and without marked inflammatory changes in the walls. No calculi were found. Drainage of the gallbladder was established. Cultures from the bile revealed growths of streptococci and staphylococci. The patient died thirteen days later, of continued sepsis. Autopsy showed simply inflammation of the bladder and ducts without abscess formation.

CASE IV.—A latent case of great interest is the following: Edward S. B., fifty-three years of age, was admitted to St. Luke's Hospital, November

1, 1896. He had never had any symptoms referable to the biliary system. About one month before, he had had a sudden attack of fever with chills, and pain in the sciatic nerve, lasting two weeks. An abscess formed in the back, another in the axilla, and the right testicle became swollen. The axillary abscess was drained after entering hospital, the other was already draining, but the sepsis was far advanced and the patient died four days later. The autopsy showed, as the only possible source of the general sepsis, a cholangeitis and cholecystitis. The gallbladder was adherent, distended with thin pus, and contained a large number of gallstones. In the kidney were a number of small foci of pus in the cortex and pyramids. There was a large pus cavity in the right testicle. The abscesses in the chest had no direct connection with the gallbladder, and must have originated from embolic infection.

OBSTRUCTION OF COMMON DUCT.

Next in gravity to the septic cases are those of continuous complete, or nearly complete obstruction of the common duct without infection. These cases are also generally referred to the surgeon, although even yet surgical aid is frequently not sought until the patient's conditon is so impaired that in spite of the most skilful treatment death follows from cholæmic failure of the heart or uncontrollable hæmorrhagic oozing. Good results from operative measures in such cases can only be expected when the patient is still in good condition. Even without the shock of operation, fatal consequences may ensue. Cholæmia is dangerous, and so is the exhaustion of the patient from suffering, fever, and limited diet; while long-continued obstruction will hasten the progress of the hepatic cirrhosis and interstitial nephritis, which are such common accompaniments of cholelithiasis. In one case of stone in the common duct, operated upon by me in private, a successful convalescence from operation (choledochostomy with removal of a single stone) was followed by only temporary relief, and death ensued about five months later from extensive cirrhosis of the liver and interstitial nephritis. The patient, a woman fifty years of age, had endured almost complete obstruction of the common duct for some months, and although both liver and kidney disease must have antedated the beginning of the jaundice, and were doubtless too far advanced even then for a complete recovery, there can be no question that the degenerative changes were greatly hastened by the biliary obstruction.

CALCULI IN BLADDER OR CYSTIC DUCT.

Turning now to the simple cases of biliary colic, or cholecystitis due to gallstones in the bladder or in the cystic duct, without septic complications, it must be granted that the great majority of the patients pass safely through the attack without surgical assistance. But the same questions often arise here as in appendicitis—Shall we operate during the attack? Shall we operate after the attack has passed?

During the attack the immediate danger of the patient is decidedly less than in acute appendicitis. The severity of the symptoms furnishes the grounds for the decision as to the necessity for operation. The usual symptoms are pain in the epigastrium, sometimes radiating, more or less febrile disturbance, with or without leucocytosis, nausea, vomiting, abdominal tenderness, most marked over the gallbladder (which may be displaced), and rigidity of the right rectus muscle. The distended gallbladder can often be felt. It used to be thought that jaundice never occurred in these simple cases, and even such a good authority as Robson (*On Gallstones*, London, 1892, p. 81) has stated that it is an indication of cancer. More recent experience has demonstrated that jaundice is tolerably common. Riedel holds (*Pathogenese, Diagnose, und Behandlung des Gallensteinleidens*, Jena, 1903, S. 14) that this jaundice is due to infection traveling to the ducts from the infected contents of the inflamed gallbladder, alleging that he has always found clearly marked evidence of such infection in the softened and altered character of the liver tissue observed in the frequent opportunities afforded in his operations upon such cases. The general view, however, is that the jaundice is due to a mechanical cause, the pressure of the stone lying in the cystic duct or neck of the gallbladder, or the pressure of the distended gallbladder itself. The distended gallbladder can obstruct the common duct by direct pressure, or by traction especially when adhesions exist as they commonly do. The following cases can be related in favor of the mechanical causation of jaundice in non-septic conditions:

Case V.—Margaret M., a patient of Dr. L. A. Coffin, twenty years of age, was operated on by me at her house for suppurative appendicitis, March 31, 1900. She had well-marked jaundice at the time, and stated that she had had frequent previous attacks of jaundice, but never any symptoms of appendicitis before this attack. The attacks of jaundice had the ordinary character of catarrhal jaundice. She had a brother, of about the same age, who was also liable to attacks of jaundice, and, further, her mother had been liable to jaundice all her life, and had died of some liver affection when thirty years old. The appendix was removed at the operation, the abscess cavity drained, and the symptoms referable to the appendix gradually ceased. The temperature fell to normal, but the pulse continued rapid and feeble. Jaundice and vomiting continued for a week. The wound was healing well, but the patient gradually failed, and died twelve days after the operation. Autopsy showed the liver and spleen greatly enlarged. The gallbladder, much distended, was obstructed by a single stone at the entrance of the cystic duct. The cystic duct made a sharp S-curve and the protruding neck of the distended gallbladder lay in contact with and compressed the common duct, and also pressed distinctly upon the pylorus. The abscess cavity had filled up and the operation wound was granulating. There was no peritonitis, and no cirrhosis of the liver. If we had known these facts we should have operated upon the gallbladder, but the patient was too feeble for an extensive operation, and the frequent recovery from similar attacks, and the fact that these had always seemed to be ordinary catarrhal jaundice are sufficient excuse.

CASE VI.—A woman, fifty-four years of age, with chronic jaundice, was operated on, November 9, 1897, at St. Luke's Hospital. I did a cystotomy, finding a single large stone in a contracted gallbladder pressing upon the choledochus, and removed the calculus. Bile flowed through the drainage sinus for three weeks, then the patient left the hospital cured.

In cases of gallstone in the gallbladder or cystic duct, none of the symptoms enumerated above precludes a safe recovery by the passage or by the disengagement of the stone, or by relief of tension when absorption of the contents of the gallbladder takes place. The ordinary measures of palliative and expectant treatment are allowable up to a certain point. But in our judgment, if the symptoms persist unaltered for a long time (two or three days in the severe cases, a week in the milder ones), there is serious danger of gangrene or perforation of the bladder, peritonitis, or other grave septic complications.

The special signs of danger of septic accidents are increasing rigidty of the abdominal muscles, and an increasing leucocytosis, blood examinations being made at intervals of a few hours. A rising temperature is less threatening, and the pulse is valueless as an indication of danger. The same must be said of nausea and vomiting, for they are so common in this condition that they lose the usefulness as danger signals which they possess in appendicitis. In all cases with undue persistence of ordinary symptoms, or with the development of such signals of danger, operation should be undertaken if possible before serious complications develop. The risks of delay in suspicious cases are far greater than those of operation.

When the acute attack is over, the patient may be entirely free from symptoms, whether the stone has passed, or has been dislodged, or the bladder has been relieved by absorption of its contents, and often it is impossible to say which of these modes of recovery has prevailed in the particular case. But even when the stone has been proved to have passed by being recovered in the fæces, there is a probabilty that others remain which may give occasion to trouble later. According to Riedel *(loc. cit.*, p. 2) in forty-four per cent. of his cases in which gallstone colic attacks had occurred, there was a calculus in the bladder too large to pass the cystic duct, the attacks having been abortive; therefore we may assume that nearly one half of the patients still retain the offending calculus in the gallbladder after an attack of biliary colic. Mayo states *(Boston Med. and Surg. Jour.*, 1903, cxlviii, p. 545): "We have never operated upon a patient who has passed calculi that we have not found more in the gallbladder." I should not, however, be willing to make the extreme statement that all such cases must have stones remaining. It St. Luke's Hospital, December 12, 1900, I operated on a gentleman fifty-five years of age, with chronic obstructive jaundice which had lasted in variable degree for a year. A stone in the common duct was considered certain, and the diagnosis was confirmed by Dr. E. G. Janeway. The gallbladder was contracted and adherent, but contained no stones. The common duct was opened and explored, no stone was found, and the passage was demonstrated free to the bowel, having a diameter of ⅜ inch at the papilla. The duct was drained, the gallbladder freed from adhesions and left in place. Bile flowed only nine days and the sinus closed in about four weeks. The patient had remained perfectly well when last seen, two years and a half after the operation. We concluded that the obstructing calculus had passed through the papilla just before the operation. In another case, which was operated on at my clinic at Bellevue Hospital, last spring, by a visiting surgeon from Europe who has had a wide experience in gallstone surgery, after he had agreed in the diagnosis of stone in the common duct, half a dozen minute stones were found in the bladder and none in the common duct. The duct was found widely dilated, and it was considered probable that the stone had passed just before the operation. The patient was a woman, forty-nine years of age, with no previous attacks of jaundice, who had had pain in the region of the gallbladder and jaundice for several weeks. The gallbladder was contracted and surrounded with dense adhesions. All the stones seen were too small to have caused obstruction of the common duct. These cases show that a single stone may cause obstruction for a long time, and yet may not be so large but that it may be passed, and passed on the eve of operation.

In the great majority of the cases, however, calculi will be found after the attack has passed off, even if the originally obstructing stone has reached the bowel safely. A careful study of the patient will often disclose slight and rather indefinite symptoms, such as various forms of "indigestion" or "dyspepsia," requiring them to be very careful in their diet, or even reducing them to actual invalidism, just as one finds various slight ailments in patients with chronic appendicitis which disappear after removal of the appendix. I have usually found that removal of gallstones which had given no symptoms improved the health, or at least the sense of well-being, of the patient. They often exclaim with joy: "I find that I can eat everything now." After the attack has been recovered from, a careful examination of the patient may also reveal signs of remaining stones, or of an inflamed gallbladder, such as continued resistance in the rectus muscle, or a little tenderness over the bladder; or possibly the calculi can actually be felt against the vertebral column (Riedel). If symptoms persist, or even when there are no symptoms in the interval but frequent recurrent attacks take place, it may be considered certain that calculus or some serious lesion of the gallbladder exists which can be definitely cured by operation.

CONCLUSIONS.

The advantages of operation performed while the stones still remain in the gallbladder or cystic duct and before grave infection has developed are numerous:

First.—The serious accidents of infection are avoided and any inflammatory condition which may exist can be improved or cured, just as drainage cures urinary cystitis.

Secondly.—The stone is removed before it enters the common duct, thereby preventing all the dangerous consequences likely to follow the presence of a stone in that passage.

Thirdly.—Further attacks of cystitis and colic are prevented.

Fourthly.—Further calculus formation is prevented or impeded, for the stones are formed in infected gallbladders, and the latter may be removed by operation or rendered so healthy by drainage that no more calculi will form. Kehr *(Münchener med. Wochenschr.*, 1902, Nos. 41, 42, and 43) estimates the recurrence of stone, adhesions, and other complications after operation in his cases, at ten per cent. Schott *(Beiträge zur klin. Chirurgie*, xxxix, 1903, S. 427) gives the final result of 180 cases from Czerny's clinic, followed for five or six years after operation, and including serious conditions requiring choledochotomy cholecystenterostomy, etc., and finds that only five per cent. had symptoms referable to the biliary system. Not a single case had another gallstone form after operation.

Fifthly.—It must be remembered, also, that latent cases are by no means free from danger, so that the individual who has recovered from an attack of colic cannot be considered cured, even if he is entirely free from symptoms for years, as it is probable that stones remain behind, or that some chronic cholecystitis persists. The possibility of secondary pancreatitis must be kept in mind, and also that of cancer of the gallbladder, which is more common than has been supposed. Riedel states that he has observed in his practice over fifty cases of cancer of the gallbladder, and it is to be noted that, while the presence of gallstones is universally accepted as the principal cause of this disease, the stones have generally existed without previous symptoms, the first sign of trouble being given by the tumor of the gallbladder itself.

Sixthly.—Without reference to more important results, it is the general feeling of those with experience in the surgery of cholelithiasis that in the latent cases, while the patients do not present symptoms pointing directly to the biliary system, they are afflicted with various dyspeptic complaints, and that the latter can be relieved or permanently cured by operation.

THE SURGICAL TREATMENT OF MALIGNANT AND NON-MALIGNANT DISEASES OF THE STOMACH.*

By ALBERT VANDERVEER, M. D.,

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I scarcely think there is any portion of abdominal surgery that has brought to the surgeon doing work in this department, so much encouragement and satisfaction as the treatment of the so-called surgical lesions of the stomach.

The time is not so far distant since the surgical treatment of lesions of the pelvis, of the right iliac region, and what has been called gallbladder surgery, were looked upon as serious problems; yet these problems have been solved and recognized operations now presented to the profession at large and to the public, in such a way as to command their confidence, the willingness of the patient to undergo any operation being also demonstrated daily.

Traumatisms of the stomach have presented brilliant recoveries through all the various decades of surgery. Gradually non-malignant growths have been brought under the control of the surgeon; but it is in the malignant type, more particularly, that a recent much more substantial progress has been made. Cases are now approached and proper diagnosis made of the condition present, such as malignant growths, sufficiently early for the operator to render surgical relief, and the patient to go on to recovery or a prolonged life of great comfort.

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* Abstract of a paper read at the meetings of the Herkimer County Medical Society, Herkimer, N. Y., March 3, 1903, and of the Broome County Medical Society, Binghamton, N. Y., April 7, 1903. At the former Dr. Leo H. Neuman, of Albany, presented a paper on the medical treatment, and at the latter Dr. Andrew McFarlane, of Albany, one on the same subject.

Non-malignant diseases of the stomach are much more easily recognized and diagnosticated to-day than ever before, and the surgeon is constantly being aided by the general practitioner. The physician's own diagnostic skill is constantly becoming more perfect, so that the surgeon can approach these conditions at an early date, and with a degree of confidence that brings recovery to our patients in so large a percentage of operations.

In the study of malignant growths it is within our own sphere of work that we derive our greatest assistance from such men as Dr. Neuman, Dr. MacFarlane, and others, who are making a specialty of diseases of the stomach from a medical standpoint. The investigations made by them have been of great help, and I look forward to the time when I believe it will be possible by our combined efforts to make a diagnosis sufficiently early, so that as surgeons we can operate before the disease has advanced to the danger line.

Ever since such an impetus was given to stomach surgery, a period of a little more than one decade, the term exploratory incision has been made use of at times, and the employment of the measure indicated thereby in locating obscure trouble of the stomach has resulted in much good. It can be said that exploratory incision has accomplished much in diagnosis, and much will result in the future from its being employed more frequently than it has been in the past; yet, as our methods become more perfect and we are able to lessen our number of doubtful cases, it is very apparent that we shall be permitted to approach our cases with a greater degree of certainty as to what we are to do than has been heretofore deemed possible.

Physicians who are not conversant with abdominal work are often very reluctant in permitting their patients to come under this method of diagnosis, but more and more is it being realized that a simple exploratory incision at the proper time presents a mortality that is almost nil; therefore, I would say that this is a point upon which to dwell, and that the medical profession at large have this to consider in their serious cases of stomach difficulties in which a diagnosis has not been reached, and in which the patient is receiving no benefit from medical therapeutics.

As the cases of diseases of the stomach are reached earlier, so will resection for cancer become more and more successful. The new methods employed in the study of surgical lesions of the stomach, compared with those of but five or ten years ago, give a most decided addition to our knowledge of the subject. We approach a case now with a proper understanding of the term congenital atresia or stenosis of the pylorus.

Medical writers have described with earnest care the pathological changes and location of the stomach, and as an illustration the term gastroptosis brings to the mind of the surgeon a condition in which he realizes that surgical intervention is to be of great help to the patient.

To one whose recollection of abdominal surgery goes back as far as my own, it is a source of satisfaction to remember the distinct terms that were given us at one time, now classified as gastrostomy, gastrotomy, and gastrectomy, all meaning a separate line of work, and each suited to its own particular case.

We have for many years read of the marvellous number of foreign bodies removed from the stomach; we have observed the progress made in the operation of opening the stomach to find present a fibroma, a pedunculated form of tumor, a foreign body in the nature of deposits of phosphates or other chemical conditions, the accumulations of hair or other substances, the removal of which has brought about such brilliant results in the recovery of the patients.

I shall ever remember, when visiting Dr. Murchison's clinic years ago, his presentation of cases of malignant growths that had resulted in fistulous openings, through which fistulous tract, in imitation of Beaumont's celebrated case, the patients were being fed. At the present time I scarcely know of a more pleasing and satisfactory operation than that of opening into the stomach, inserting a tube, and feeding the patient in this manner, when all access has been closed from the cardiac end upward. To see a patient improve in health in this way, gain in flesh, and be more contented with life, is one of the pleasures of operative surgery.

Exploratory incisions have stamped upon surgical literature the names of certain operators, and many of us here present will call to mind how much at one time was expected from the so-called Loretta's operation, i. e., incision and then distention of the pyloric end of the stomach; yet its results frequently caused hæmorrhage and peritonitis, and it is now a procedure almost obsolete, because of the more recent advanced methods. The same also may be said of Hahn's operation. Then, again, we have the term Bernay's operation, for opening the stomach and cleaning and curetting out malignant growths from within. This, in itself, is not likely to hold a place in surgery, because of the more permanent good likely to result from a gastrointestinal anastomosis.

Billroth's brilliant operation of pylorectomy and Senn's operation of gastrostomy are progressive steps toward a better classification, and a more solid presentation of facts for the operator of to-day to make use of. It is by means of the exploratory incision even yet that we must approach the stomach and be ready to do such an operation as pyloroplasty-resection of the stomach; gastrogastrostomy, gastroplication, gastrectomy, or that one operation which I believe to-day to be the leading one, i. e., gastroenterostomy, an operation that is likely to relieve gastroptosis or stenosis of the pyloric end of the stomach, and to afford to the patient more permanent relief, if not cure, in inoperable malignant growths, than any other method, either medical or surgical, known at the present time.

If we look into the pathology of gastrorrhagia very carefully, we shall find that it is only since the advances in surgery have demonstrated the feasibility and safety of exploring the abdominal cavity that the question of surgical treatment of hæmatemesis has been a subject that can be discussed with advantage.

When it is borne in mind that gastric ulcer occurs in 5 per cent. of the community, and that, according to Brinton, Habershon, Muller, Dreschfeld, Lebert, and others, the mortality from all causes, in all cases of ulcer, is from 10 to 50 per cent., it must at once be allowed that the consideration of the subject is a matter that should claim the attention of the profession to a greater degree than it has heretofore done.

When it is fully grasped that many of the complications can only be dealt with successfully by surgical means, and that even in the mildest cases of gastric ulcer some of the most serious complications, such as perforation and hæmorrhage, may suddenly supervene, I think all will agree with the opinion that physicians and surgeons should, in the treatment of these serious cases, be in closer touch and have a more perfect understanding, so that valuable time may not be lost when surgical interference is required.

The treatment of perforating ulcer is the one desperate condition that is, at times, relieved by surgical intervention, when medical treatment offers no hope for the patient. I now look forward to the more complete relief of the complication which sometimes presents in surgery of the stomach, i. e., the perigastric abscess, and, when we shall approach it in a more intelligent manner we shall give greater and greater relief, as our experience becomes more and more accurate.

Some of the most impressive surgery of the cardiac end of the stomach and of the œsophagus, has been brought about by the operation of gastrotomy, working from below upwards, for the relief of strictures, the confirmation of the diagnosis of suspected malignancy, and possibly the conversion of the operation into a gastrostomy.

Let me elucidate a little more fully my reference to the term gastroenterostomy, or more correctly speaking gastrojejunostomy, a term indicating a new opening between the stomach at some point and the upper part of the small intestine, in its benefit and employment, by some of the plates I here present. This is an operation that is being studied so carefully that new suggestions are constantly being made, and entirely new methods offered. To confirm this statement one has but to think of the work of Mayo, Phinney—see the *Proceedings of the American Surgical Association,* held in Albany, New York, in May, 1902—and others, presented during the past year. The more one studies Phinney's operation, the more one becomes impressed with the belief that it is a valuable addition to our surgical knowledge, and is destined to become a well-recognized procedure in this line of work. It appears complicated, but its results are ideal.

Fig. 1 illustrates a schematic drawing of malignant growths, where, if possible, resection should be done; but if the adhesions are serious, and invasion of the lymphatic tract too great to admit of complete removal, then the safer operation of gastrojejunostomy should be done. The latter operation does not exhaust the patient so serious-

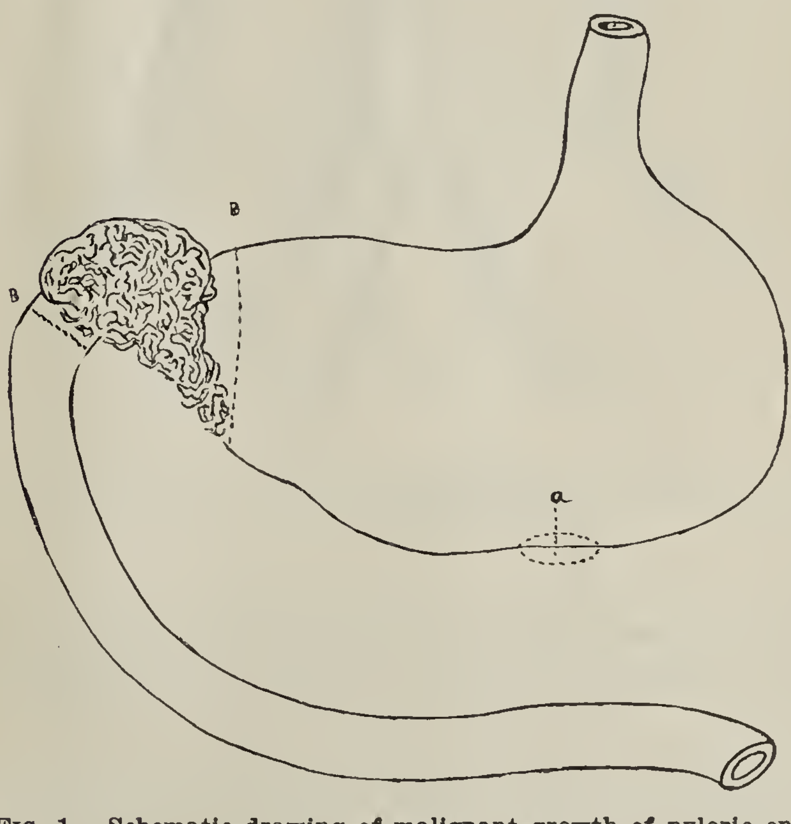

Fig. 1.—Schematic drawing of malignant growth of pyloric end of stomach, calling for resection.

ly, and the immediate mortality is certainly less. Having once decided upon the operation of gastrojejunostomy there are certain steps to be followed which my experience leads me to endorse and place on record. I like, in all my abdominal work, not to handle the peritonæum any more than is really necessary, therefore, I try quietly and slowly to find the duodenum, then the upper portion of the jejunum, as near to the duodenum as possible, letting the distance between where I am to make the opening in the stomach and where I am to place the Murphy button in the two portions of the jejunum, average from ten to twelve inches; then, making the incision a free one in the superior portion of this loop of the jejunum, it takes but a moment, with forceps, to introduce the two portions of the Murphy button, as seen in Fig. 2, so that when the peritoneal surface of the intestine is made tense with the cylinder of the button, and pricked with the sharp point of a scalpel, by introducing the handle of the scalpel in the slit, the intestine is easily slipped over; then closing the slit, and only occasionally using a Lembert's suture, I bring the loop out through the incision and, letting it rest upon gauze or wet, soft towels, so as to avoid any possible soiling of the peritonæum, I proceed with the further steps of the operation. Should the patient be one in whom procrastination has taken away the best of chances, being very weak so that time is an element to be seriously considered, then I bring at once into the field of operation the anterior wall of the stomach, and proceed to do the anastomosis as quickly as possible by the continuous silk suture. I can now do this operation almost as quickly as by using the Murphy button. At first I did use the button, but its occasional non-appearance has led me to abandon it in this stage of the operation. If conditions permit, I much prefer to make the anastomosis with the posterior wall of the stomach, see Fig. 3. Making the opening in the transverse mesocolon takes but a moment, and little time is lost in finding the portion of the posterior wall most desirable for the operation. I am sure that in this way we secure much better gastric drainage, and that when this is accomplished there is no development of the so-called vicious circle.

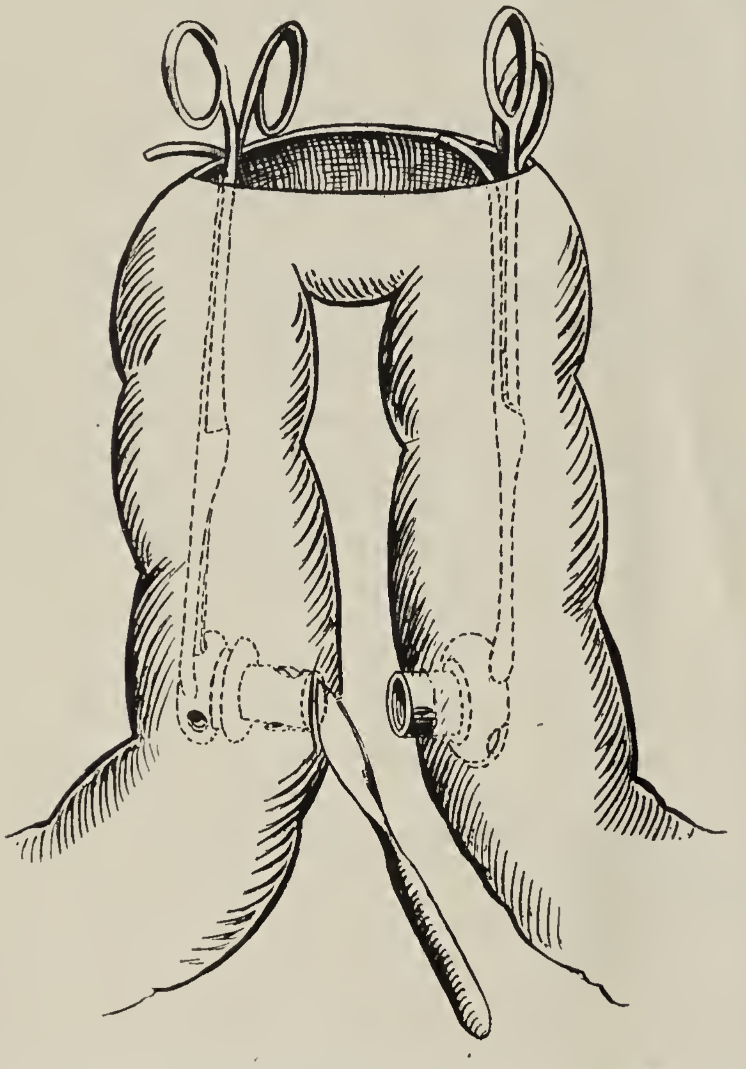

FIG. 2.—Method of introducing the two parts of Murphy's button by means of forceps.

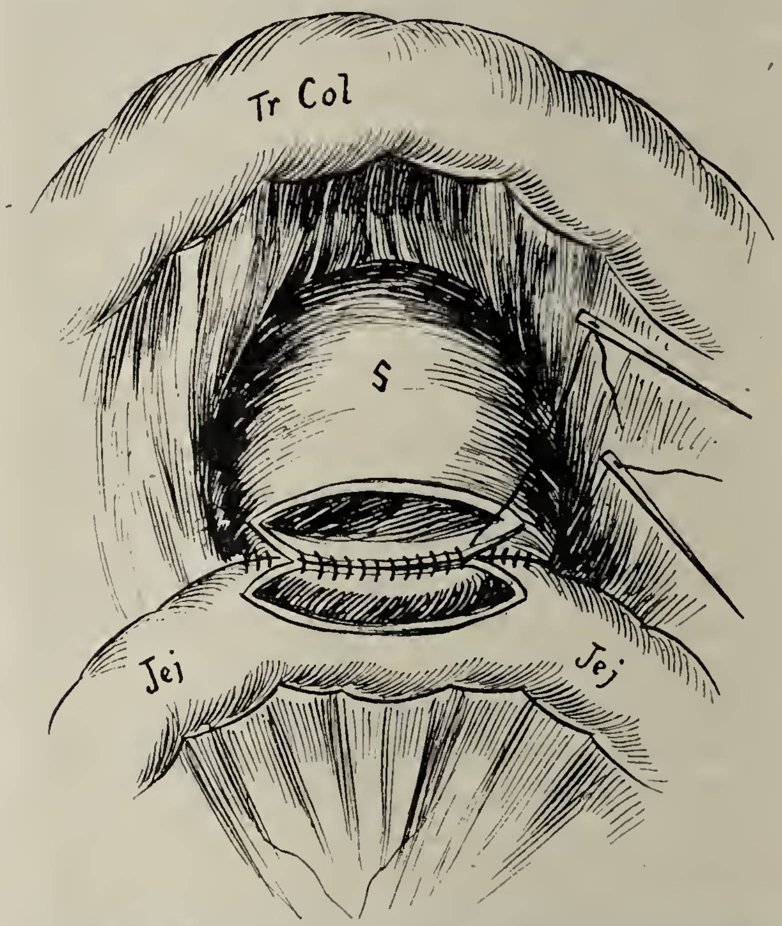

FIG. 3.—Posterior gastroenterostomy, showing suture of jejunum to stomach, a fold of which has been drawn through the slit in the transverse mesocolon. (From Robson.)

Fig. 4 (schematic) shows the operation as completed.

In my early operations, with and without the use of the decalcified bone plates, I did not make the anastomosis between the portions of the jejunum, and frequently the patients would suffer from intermittent vomiting. When the tract is continuous from the opening of the bile and pancreatic ducts into the dependent portion of the jejunum this scarcely ever occurs. At the point where the Murphy button is inserted, the adhesions in a short time become very firm and the opening shows little evidence of contracting, as I have observed years after the operation.

I am indebted to Dr. A. W. Elting, of Albany, N. Y., for the following translation from The Results of Operative and Non-Operative Surgery in the Treatment of Carcinoma of the Stomach. A Comparative Study (Ueber den Varlauf des Magencarcimons bei Operativer und bei nicht Operativer Behandlung), by Professor Kronlein. *Archiv. für klinische Chirurgie.* 67 Band. 3 Heft.

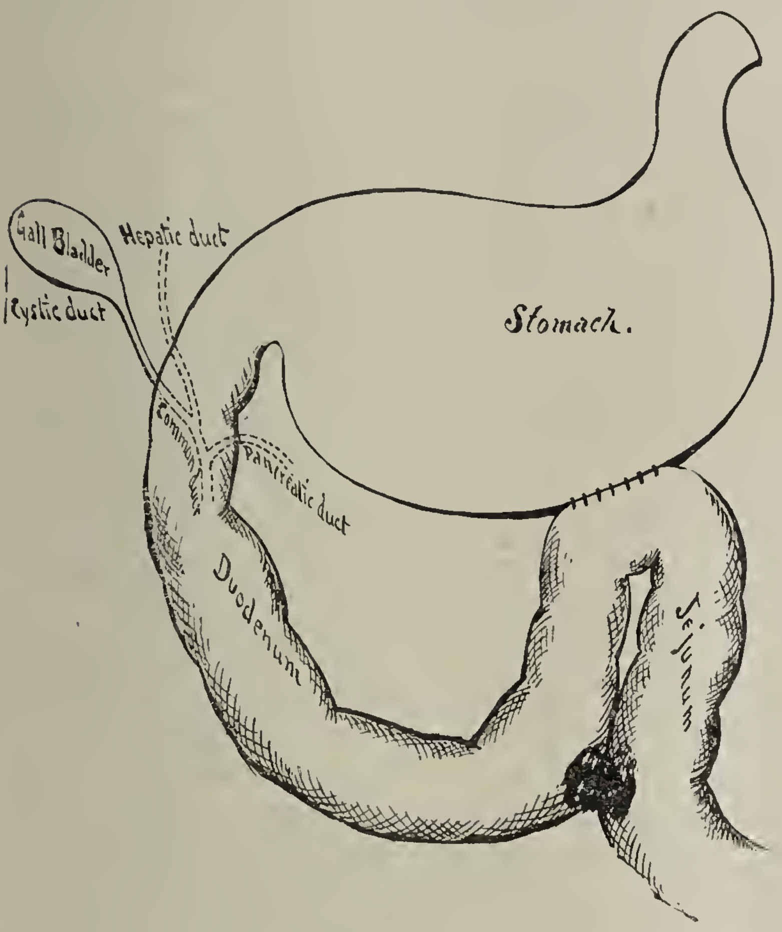

Fig. 1.—Gastrointestinal anastomosis (schematic).

The most important question relative to carcinoma of the stomach is as to whether it can really be cured by the knife of the surgeon, or whether every operation performed for this condition should be considered only as a palliative procedure.

The writer presents the results in 264 cases of carcinoma of the stomach, seen at his clinic, in Zurich, between the years 1881 and 1902. The ultimate results of all but 13 cases of this number have been obtained and tabulated. Of the 264 cases 197 were operated on, 53 were considered inoperable, and 14 refused operation. Of the 197 cases operated on, in 73 only an exploratory laparotomy was done, in 74 a gastroenterostomy was done, while in 50 a gastrectomy was done.

The mortality from operation was 9.5 per cent. after exploratory laparotomy, 24.3 per cent. after gastroenterostomy, and 28 per cent. after gastrectomy.

The writer has practised gastroenterostomy only in those cases which presented either definite symptoms of stenosis or stagnation of the gastric contents, resulting from motor insufficiency. He calls attention to the fact that this is the position assumed by von Mikulicz and other surgeons of large experience in connection with the stomach. The writer prefers, and in the majority of instances uses, a second type of the Billroth operation. A very important question to be settled in this connection is the average duration of life in cases of untreated cancer of the stomach. In the writer's cases this appeared to be about twelve months and a half after the development of the earliest symptoms. In all the cases great care was taken to determine, if possible, the time the earliest symptoms presented, and the period which elapsed before they appeared at the clinic. This averaged about nine months. The average duration of life, after exploratory laparotomy, was thirteen months, after gastroenterostomy fifteen months and a half, and after gastrectomy twenty-six months and a half.

Professor Kronlein concludes as follows:

First, that carcinoma of the stomach without operation results in death in about one year; secondly, that gastroenterostomy prolongs life, on the average, about three months; and, thirdly, that gastrectomy, when followed by recurrence, prolongs life, on the average, about fourteen months. The writer emphasizes especially the fact that the average patient who presented at the clinic had practically only three more months to live, nine months of the expected year of life having already elapsed.

Twenty-two patients were still alive, nine cases of gastroenterostomy and thirteen of gastrectomy. All the subjects of gastroenterostomy will probably die in the not too distance future; of the thirteen subjects of gastrectomy 1 is well at the end of eight years, 1 at the end of four years, 2 at the end of three years, 3 at the end of two years, and 6 at the end of one year. The writer believes that advance in the treatment of this disease can be made only in two ways; first, by improvement of the technique, thereby lessening the operative mortality, and, secondly, by the more radical extirpation of the growth. He does not believe that the technique can be very much improved, but he does believe that the statistics can be greatly bettered by inducing physicians to refer the cases earlier to the surgeon. Operations upon cancer of the stomach must be made popular, both with the physicians and with the laity, and he calls attention to the important and beneficial results which have followed the popularizing of the operation for appendicitis, as an instance of what may be accomplished to a lesser degree in cancer of the stomach.

Finally, my own conclusions at the present time, based upon a variety and number of operations, are as follows:

1. That gastroenterostomy can be applied to all kinds and conditions of stenosis of the pyloric end of the stomach.

2. That it is a preferable operation to that of resection of the stomach, in many cases, the immediate mortality being less and the possibility of the extension of life being quite as great, with as much comfort.

3. Next to gastroenterostomy I believe gastrectomy to be the most reasonable and satisfactory operation, yet this operation will necessarily

be limited to but few cases. In doing it great attention should be paid to removal of the lymphatic glands, as in this rests much of the permanent success of the operation and non-return of the malignant growth.

28 EAGLE STREET.

HYSTERECTOMY FOR INFECTIOUS DISEASE OF THE UTERUS AND UTERINE APPENDAGES.*

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This short paper which I have to contribute, I base mostly on the knowledge and experience gained in my practice. Perhaps, in starting out, it is best to consider the usual avenues of infection, viz.: First, by absorption into the vascular and lymphatic circulations from some focus of decomposition in the uterine cavity. Second, by direct infection from microorganisms being introduced by the phyiscian, either in making examinations, or in operating in the region of the uterus, such as curetting or the removing of growths from the uterus. Third, gonorrhœal infection.

The most frequent cause of infection, no doubt, is from decomposition of fragments of placenta, retained membrane, lochia, or blood clots.

The absorption of the toxines resulting from the decomposition of the above mentioned gives the symptoms known as sapræmia. When the uterine mucosa has been injured, thereby opening up direct avenues for infection, sepsis may develop, and may at once spread and infect the uterine appendages and peritonæum through the lymphatics.

When the infection has extended beyond the uterus, surgical treatment of the intrauterine condition does not suffice, and where this treatment alone is practised it is very apt to aggravate the intrapelvic condition. As long as the infection is confined to the uterus alone, our efforts should be spent to prevent its spread; and this infectious condition should be met with dilatation, curetting, and drainage of the endometrium. In the majority of these cases this is a simple procedure. I have found it seldom necessary to exercise any force by the use of instruments in dilating the uterine canal. I have always been able to dilate the cervix with my index and middle fingers; and by making pressure with my left hand above the symphysis pubis, I thus fix the uterus so that I am able to easily empty it simply with my fingers. I am in the habit of curetting the uterine cavity with broad bladed forceps covered wtih iodoform gauze; I think we are less liable to injure the uterine mucosa by this procedure and believe it to be less dangerous than the use of the sharp curette. Still, the sharp curette in careful hands and its thorough application in properly selected cases, have been followed by prompt decrease in toxic poisoning and other grave symptoms.

Where the uterine wall is soft and boggy it is a very easy matter to penetrate it. I have seen cases, brought to me in my hospital experience, where the uterine wall had been penetrated, and in which there followed a purulent peritonitis and death. In one instance I recall a case where several feet of intestine had been pulled through the rent in the wall of the uterus and strangulated, with gangrene of the intestine following.

The majority of cases of puerperal infection are due to the streptococcus, and the resulting invasion of the general system is rapid. For this reason, this variety of infection offers a strong indication for early interference, but we also know that the streptococcus germ in two or three hours may pass beyond the uterus, where no curette can reach it. The serum therapy from a theoretical standpoint would seem the ideal treatment, but as yet, I have found no value from it.

Unfortunately this virulent infection is not limited to the placental site or wounded surface. After a time the whole endometrium becomes involved, clots in the uterine sinuses become infected, forming the condition known as thrombophlebitis. The uterine muscle may be riddled with pus through the infection of the uterine lymph spaces, and infection may take place also through the lymphatics of the broad ligament, producing a septic lymphangeitis. As a result of this septic condition there is a peritonitis of greater or less severity, with the formation of lymph or pus on the free surface of the peritonæum.

The ovaries are often involved through the continuity of the lymph channels, producing ovarian abscess. The fimbriated extremity of the Fallopian tubes become involved, producing a pyosalpinx. The characteristic general result of this form of infection is septicæmia.

Unfortunately, the remote lesions which we might expect from such a condition are, septic pneumonia, endocarditis, or nephritis. In such cases the post mortem findings are pyogenic microorganisms in the walls of the uterus, the pelvic lymphatics, the blood vessels, and the complicating foci.

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* Read before the American Association of Obstetricians and Gynæcologists, Chicago, September, 1903.

When the uterus becomes infected during examination or in operations upon the uterus, the same pathological conditions may take place, but not usually in such a marked degree. Fortunately, gonorrhœal infections confine themselves chiefly to the endometrium and lining membrane of the tube; but if infection reaches the fimbriated end of the tube, a local peritonitis results and the tube becomes closed by agglutination of the peritoneal surfaces, and the result of the inflammation is at first purulent, with the formation of purulent salpingitis. A greater or less degree of peritonitis is always present in these cases and all the pelvic viscera may become involved, producing dense adhesions. After the acute inflammatory symptoms have subsided, the patient may be comparatively comfortable and apparently well for a considerable time, when there may be a renewed attack with a repetition of symptoms, followed by the formation of strong and dense adhesions with involvement of the uterine muscle.

The symptoms arising from infection of the uterus depend upon the virulence of the infection, the nature of the tissues attacked, and the resistance of the organism to the absorption of septic products. The most common type of infection is the simple sapræmia from the absorption of toxines produced by putrefying blood clots and retained secundines.

The symptoms of infection usually appear about the second or third day after labor, but may not come on until the tenth day, or even later. They are usually ushered in with a chill, fever rising from 102° to 104° F., with a pulse of 100, or more. On local examination the uterus is usually found to be tender over its body, with tenderness extending to one or both sides along the course of the broad ligaments. The early recognition of the condition and prompt operative treatment by the thorough cleansing of the vagina and uterus and the establishing of uterine drainage with iodoform gauze, and drainage of the posterior cul-de-sac by free vaginal incision and the introduction of gauze, will usually arrest these symptoms and prevent further infection.

Where the infection has passed beyond the uterine cavity, involving the lymphatics and blood vessels in one or both broad ligaments, in addition to these symptoms we have those of a pelvic peritonitis: viz., rigidity of the lower abdominal muscles with tenderness and distention. Vaginal examination reveals tenderness and rigidity of the vault of the vagina with induration, or a mass of exudate in one or both broad ligaments.

It is in this latter class of cases that a fairly large collection of pus forms in the pelvis and lower abdominal cavity. Every one is agreed that here the surgical principle of giving exit to pus, wherever and whenever it exists, should be adhered to; and yet, it is in these very cases that a conservative course finds its justification. If the collection of pus is so situated that it can readily be evacuated by an incision in the vagina, or above either of Poupart's ligaments, so that the peritoneal cavity is not entered, no time should be lost in making it.

The practice of aspirating in these cases through the vagina I have always considered a most dangerous procedure, as the needle may enter a knuckle of intestine. A better procedure is to open freely the cul-de-sac by an incision through the posterior vaginal vault, and thus be able to see as well as feel.

In a certain percentage of these cases the collection is so placed that it cannot be reached by either of these incisions. The fact that a pelvic abscess has formed shows that the inflammatory infectious process is localized and judicious delay is therefore not attended with any great danger. We know that the pus in acute puerperal sepsis is highly virulent and that the slightest soiling of the peritonæum is almost certain to be followed by general septic peritonitis. I am in the habit of keeping these cases under close observation in the way of careful feeding the patients and not purging them at all, but moving the bowels by gentle enemata until the general inflammatory symptoms subside. If the pus collection is in the upper part of the broad ligament, and if it is doubtful whether it can be reached by incision above Poupart's ligament, I make an incision in the median line at a point just above the upper margin of the mass. I first of all carefully inspect the relation of the mass to the abdominal walls and viscera, then place gauze packing above and to each side of the mass, after which the abscess may be evacuated without danger of soiling the peritoneal cavity, and the collection may be mopped out with iodoform gauze while exercising care not to destroy any adhesions.

Where the infection has passed into the tube, forming a pyosalpinx or tuboovarian abscess, I always operate through the abdominal route, tying off the ovarian vessels as close to the pelvic wall as possible, and rapidly excising the tube and ovary with scissors, following the incision right into the horns of the uterus, and closing the resulting wound with a continuous suture. I then drain with gauze, being especially careful to place the gauze along the line of sutures.

There is another class of cases, the most unfavorable of all, where the infection manifests itself as a phlebitis of the uterine sinuses and veins of the broad ligament and is associated with small and multiple abscesses of the uterine walls, as well as with acute peritonitis. Here, the constitutional symptoms are pronounced; rapid and weak pulse, high temperature, with moderately distended and exquisitely tender abdomen and with diarrhœa. Associated with this infectious condition there is an endometritis giving rise to an offensive discharge, often blood stained. Local examination here reveals a hot vagina, an enlarged, painful, and movable uterus, which offers more or less resistance to touch; and this condition, with the absence of fulness in the retrouterine or vesicouterine pouches is suggestive of infiltration. It is in this grave class of cases, which I have just described, that the question of hysterectomy presents itself.

If in spite of the early treatment which has been outlined in this paper, the patient grows profoundly more septic, as manifested by the pulse, high temperature, and general constitutional depression, and upon examination no exudate can be detected in the pelvis to account for increased septic manifestations, and it is, furthermore, evident to the experienced observer that the patient is losing ground rapidly, I deem it a justifiable procedure to open the abdomen and be guided by the condition there existing.

In most of these cases it will be necessary to perform total hysterectomy. I am convinced that an early operation can save the patient in some of these highly virulent and rapidly fatal forms of septic peritonitis. I would say that this grave pelvic condition is similar to the fulminating forms of appendicitis, and surgical intervention, to be successful, must be prompt in this class of cases, just as it must be prompt in gangrenous and perforating forms of appendicitis without limited adhesions, for a delay of some hours may turn the balance aginst a successful termination.

When infections of the uterus occur from gonorrhœa and dermoid cysts, and from interligamentary and ovarian cysts, I am in the habit of performing a supravaginal hysterectomy. In the great majority of cases of gonorrhœal infection, especially where there have been repeated attacks of pelvic peritonitis, adhesions take place between the surrounding viscera, and especially of the tubes and ovaries to the posterior layer of the broad ligaments, and these attachments are so dense and strong that it is impossible to dislodge them without tearing the posterior layer of the broad ligament as well as the vessels therein. When we leave raw surfaces exposed, we favor the formation of new adhesions to the omentum and intestines, which local mischief too often produces chronic invalidism, and at the same time exposes these unfortunate patients to the risk of intestinal obstruction, as well as to a secondary operation.

Supravaginal hysterectomy in badly infectious cases with dense adhesions I consider the ideal operation, for it thoroughly removes all the diseased condition and we can leave the floor of the pelvis with a serous covering by neatly stitching the apposed serous surfaces together.

THE TREATMENT OF THE CARDIAC TOXÆMIA OF PNEUMONIA.

By HENRY L. ELSNER, M. D.,
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The great mortality of pneumonia, due to the resulting cardiac toxæmia, is appalling. In private practice patients, as a rule, offer greater resistance to the baneful effect of the pneumococcus toxine than do those who are brought to our hospitals often after prolonged debauch, after exposure, and reduced by depressing conditions due to unfavorable environment and mode of living. This frequent helplessness to combat the cardiac asthenia of pneumonia has caused many visiting physicians to large hospitals, and clinicians generally, to resort to innumerable plans of heart stimulation that the patient might be carried safely beyond the critical period.

Hospital experience with a large number (comparatively speaking) of alcoholic pneumonias, has given abundant opportunity to test various methods of treatment, and it is largely from this experience that I have formulated the plan of treatment which I present in this paper. With few modifications, the details are the same as those to which I called the attention of the profession a number of years ago in a paper on this subject read before the American Climatological Association.[1] My experiences in hospital and private practice have been so encouraging that I do not hesitate to present the subject for your consideration on this occasion.

The cases which are exceedingly discouraging, and which stagger the therapeutist, are those in which the toxæmia is overwhelming and the heart muscle often seems to suffer out of all proportion to the lung tissue involved.

Some of the methods of treatment which have become time-honored and routine, rob the patient of resistance which is absolutely needed to combat successfully the poison, at once malignant and destructive.

Clinical and bacteriological experiences, after faithful observation and experiment, teach that, to prevent circulatory embarrassment and to relieve this condition when present in acute pneumonia requires a radical departure from the empirical practices of the past and the substitution of rational and natural methods of treatment. In the treatment of this form of toxæmia the heart is not the only organ to consider—the condition of the vessels, particularly the arteries, must guide the therapeutist as well. Sphygmographic tracings, presented by Riegel, have demonstrated that most infections are associated with reduced arterial tension. Rosenbach has emphasized the importance of the vasomotors in infectious endocarditis, experimentally produced, and Bouchard proved, at the Tenth International Congress, the malignant influence of bacterial poisoning on the vasodilating centres. Romberg, after a series of painstaking experiments, associated these positive facts with clinical data, and, as a result, we may with safety conclude that the treatment of circulatory failure in pneumonia has been placed upon a scientific basis. Experimenting with the *Bacillus pyocyaneus* and the pneumococcus of Fraenkel, for the purpose of determining the relative importance of the heart and the vasomotor system in the production of circulatory failure in these infections, he reached the conclusion that the circulatory symptoms, which we had considered due entirely to cardiac weakness, were, in fact, intimately associated with demonstrable changes in the vasomotors.

I may be permitted to quote a literal translation of Romberg's concluding sentence: "We must consider with the heart weakness the weakness of the vasomotors and with the cardiac paralysis, that of the vasomotors also."

Before the Fourteenth Congress for Internal Medicine, in 1896, and at the meeting of the German Naturalists and Physicians in Lübeck, Passler and Romberg reported a series of experiments in which not only did they prove beyond peradventure that circulatory embarrassment in pneumonia was due to the baneful effects of the toxines on the heart, but also charged the changes in the vasomotor system with contributing to this serious complication. Animals were inoculated with pneumococci and the change in the arterial tension carefully measured. It is not necessary to give the many experiments in detail. These were decisive. The experiments made with pneumococci and the *Bacillus pyocyaneus*, in which rabbits were inoculated, proved conclusively that the vasomotors were weakened and showed evidences of paralysis. The sphygmomanometer used at the bedside proves the existence of corresponding changes in blood pressure in man. These experiments were carried to a logical conclusion after many days of painstaking work, and as the result, we are to-day in a position to teach that the toxines exert positive baneful influences upon the vasomotor centres in the cord.

In this report, these experimenters speak of the characteristic behavior of the heart as branding the infections experimentally produced. Arterial tension in pneumonia is for a time kept up by what they call "excited heart action." Infection with the pyocyaneus bacillus proved that the heart action was seriously retarded. These observers, and all who worked with them, including Bruhns, agree that the circulatory disturbances found in the vasomotor system are due to the effect of the toxines on the vasomotor centres in the cord, and are of far greater import than the condition of the heart.

In this country, Van Santvoord has done excellent work in this same field. Sphygmographic tracings were taken in eighteen cases of pneumonia and these confirmed the conclusions of the German observers. While the experiments to which I have thus fully referred establish the great importance of the vasomotor system, more particularly the vasomotor centres in the cord, in pneumococcus toxæmia, the practical clinician will always, in formulating the rational treatment of these changed circulatory conditions, keep before his mental vision the association of an enfeebled heart with dilated peripheral vessels and changed blood pressure.

The prime factor in pneumonia is a toxæmia with obstruction in the pulmonary circuit. This leads to cardiac asthenia, in which we are likely to have, not only marked changes in the right half of the heart, but far-reaching degenerative changes in the muscle, heart clots, and vasomotor paralysis. This toxæmia is short-lived, but too often exceedingly malignant in its effect on heart and vessels, and when these suffer, the treatment must be radical, prompt, and sustaining. We must oppose with all our force the indiscriminate use of such remedies as lower the vitality of these patients, though they may reduce fever.

As a rule, antipyretics (except cold), which suddenly depress temperature, do so at the expense of vital force, and are apt to rob the patient of needed resistance, or they may cause sudden and fatal collapse. It is never safe to give at any time in the course of the disease any drug which is a cardiac depressant. From the beginning the treatment must be tonic.

The indiscriminate use of nitroglycerin is a growing evil with the profession of this country. If it is true that in pneumonia there is lowered arterial tension from paralysis of the vasomotors, why give a drug which aggravates that condition? The paralyzing effect of this drug on the vasomotor system no one denies, and this, too, may be proved by blood pressure study. Furthermore, it has been demonstrated that the vagus is also paralyzed; thus inhibition is removed from the heart by large doses of the drug, and it is assumed still further by Brunton, that the blood loses its power of conveying and absorbing oxygen. These are the very conditions which we seek to prevent.

Often we have seen patients treated with some one of the numerous cardiac tonic tablets now found in profusion in the market—all of these containing nitroglycerin with digitalis and a variety of other so called heart tonics—in which the patients have had most alarming cardiac and respiratory insufficiencies, with rapid lowering of blood pressure; in which, finally, the firm believers in nitroglycerin have, with pernicious activity, given increasing doses of the drug, only to aggravate the symptoms and produce paralysis. Nitroglycerin may have its uses in overcoming obstruction in the periphery due to tense arteries, sclerosed and narrowed, against which the heart is laboring. This condition is occasionally found in elderly subjects with pneumonia, with or without interstitial nephritis. Experience with these cases has been very unfortunate; with slight lowering of arterial tension and a slow pulse as the result of nitroglycerin administered, I have been unable to hold the heart under control; cardiac asthenia was not prevented. These cases are well-nigh hopeless.

In pneumonia where we already have paralysis of the vasomotors, it would seem that nitroglycerin is a dangerous drug, in spite of the fact that several authorities of note have recommended it to relieve the overtaxed and dilated right heart—a condition which it would be far better to relieve by the treatment which I shall suggest, or by venesection in rare and selected cases, than by the use of a drug which causes still further paralysis.

We have given this subject careful attention and can produce no authority, founded upon physiological experiments, which justifies the use of nitroglycerin as it is to-day administered by many, without an appreciation of one or more of the factors which underlie and aggravate the obstructed circulation. Van Santvoord's convincing tracings prove the baneful effects of nitroglycerin in combating the heart weakness of pneumonia. It may be quite æsthetic to picture to the student and practitioner the ready method of depleting the patient "into his own veins" by the use of veratrum viride, but such teaching is fallacious and dangerous. A case recently seen demonstrated the great harm to which such irrational teaching leads. The patient was seen in consultation on the seventh day of the disease. For seven days this unfortunate victim had received one drop of tincture of veratrum viride every hour, and when I saw him *in extremis*, blue from carbonic acid poisoning, he was still receiving what the young doctor had been taught to consider his "concealed lancet." Too many have been misguided and lives have been sacrificed because of the persistent use of this cardiac depressant. Never have I seen a case of pneumonia recover which has been rigorously treated with veratrum viride.

Whatever the general treatment may be, whether we adopt the use of creosote carbonate, so much recommended to overcome toxæmia, or any other so called antitoxic remedy, the secret of success in threatening cases will be found in the use of such drugs as restore and sustain heart strength and arterial tone.

There are three remedies which, when properly administered, meet the indications presented by the circulatory changes of pneumonia due to paralysis of the vasomotor centres, the dilated condition of the arteries, and the weakened heart. These are strychnine, digitalis, and suprarenal extract, or adrenalin, its active principle. On the use of strychnine and digitalis, I will not dilate; they should be used hypodermically. Adrenalin acts on the heart and blood vessels favorably; it does not act on the vasomotor centre. Hence, it may be used to assist strychnine. When the vasomotor centre is exhausted and blood pressure study proves the inefficiency of strychnine, adrenalin may still be administered, and, in some cases which seem unpromising, when combined with the method of stimulation about to be suggested, we may carry the patient beyond the critical period to a safe recovery. Suprarenal extract, or adrenalin, has seemed to me to act as a needed food in all infections where there is danger of myocardial degeneration. While writing this paper, I saw a case of pneumonia, in consultation with Dr. Doust, in a woman, the mother of five children, in whom it had been impossible to raise a continually lowering blood pressure with strychnine. The systolic blood pressure was almost immediately raised by the repeated administration at short intervals of fifteen minims of a one to one thousand solution of adrenalin hypodermically, and the patient was saved.

With the large doses of digitalis recommended originally by Petresco, I have had no experience. To treat the cardiac insufficiency resulting from pneumococcus toxæmia, the heart and vessels must be guarded against unnecessary wear and tear during the hours of imminent danger while the spinal centres are being exhausted. To bring to your notice the method of accomplishing this end is the object of this paper.

I may be permitted at this point to quote from my original paper.

"The profession has long since learned the value of the diffusible stimulants. Unfortunately, their effect is evanescent; hence my plan of treatment includes the administration of these at very short intervals during the continuance of cardiac asthenia. The stimulating effect must be continuous during the critical period. The remedy must be administered before the preceding dose has lost its effect. In no other way can we accomplish the desired result.

"During the past I have treated this condition by administering every fifteen minutes, fifteen drops each of the compound spirit of ether, aromatic spirit of ammonia, the compound spirit of lavender, and the tincture of valerian. This is kept up day and night until the pulse shows improved tone and the heart action is decidedly better.

"The valerian is added because of its quieting effect when administered in these small doses with the diffusible stimulants. Occasionally, we meet patients who are unable to retain the mixture when it contains valerian, hence we have been forced to omit it and to substitute either pure whiskey or brandy in corresponding doses. If the compound spirit of ether is distasteful it has been omitted, and the dose of the ammonia and lavender has been doubled. The frequent administration of the compound has not seemed to annoy the patients, for, as a rule, they are not awake longer than is necessary to swallow the remedy. I have still further insisted upon the internal administration every two, three, or four hours, according to the urgency of the symptoms, of 0.015 gramme (one quarter grain) doses of sparteine sulphate, with from 0.24 to 0.36 (four to six grains) of caffeine. Both of these drugs must be administered in larger doses than are usually prescribed if desirable results are to be obtained. They affect favorably the weakness of the right heart.

"Finally, the alcoholic stimulant upon which I depend is Tokay wine. I know of no stimulant with which I have accomplished so much, and which, in my hands, has saved so many patients, as this Hungarian wine. This is administered in tablespoonful doses every half hour, and is given with the etheral stimulant when due."

Occasionally, it is necessary to use high rectal injections of coffee and whiskey, and hypodermic injections of ether sterilized oil and camphor during periods of collapse—with subcutaneous or intravenous injections of saline solution according to the method recommended by Henry.

The administration of the diffusible stimulants as above recommended, with the numerous other remedies suggested, will appear to you, I can readily understand, to be bordering upon polypharmacy. To this charge I plead guilty, but in extenuation I would say that we are dealing with a condition of extreme danger—one which must be met by rigorous and continuous medication. The remedies are not antagonistic.

Because of these facts we must be ready to supply the remedy anew before the heart and arteries have again lapsed into a condition which, if allowed to continue, will favor the formation of heart clot, pulmonary œdema, and carbonic acid poisoning.

Oxygen has been used in many cases in a sort of routine fashion. I have never been able to settle, in my own mind, the relative value of this remedy. Pulmonary œdema with heart weakness presents a very serious complication. Thus the lungs are flooded with a bloody serum, death following speedily in spite of any known remedy. Of the faithful administration of ethereal stimulants, a treatment which cannot be carried out without skilled and faithful attendants, the writer feels justified in speaking with great confidence.

Equally gratifying and satisfactory have been the experiences of my colleagues on the hospital staff, and of those met in consultation practice. If time permitted, we might present abundant clinical proof in the records of desperate cases ultimately saved, in many of which the general condition of the patient hardly seemed to justify the great labor of carrying out the treatment. In the treatment of pneumonia, it will always be rational to follow the teachings of Wunderlich and Liebermeister; these authorities hold that the temperature requires less consideration than does the pulse. To sustain the heart and vessels, to give to these the resistance needed that all may continue functionally active beyond the critical period, fortunately not long postponed, must be the object of the therapeutists in combating pneumonia toxæmia; and we hold that the treatment with ethereal stimulants, given at short intervals with the other remedies suggested, leads to results which are life-saving and at times agreeably disappointing. However desperate the condition, we recommend persistence in the use of the diffusible stimulants, always administered with the idea of meeting the fading effects of the preceding dose.

SOME INVESTIGATIONS OF A BACTERIAL TREATMENT OF TUBERCULOSIS.*

By STEPHEN J. MAHER, M. D.,
NEW HAVEN, CONN.

It is now seven years since I began to annoy my acquaintances among the farmers of New Haven County, with requests for samples of milk from a tuberculous cow. Most of the replies were rather warm, and were to the effect that all milk from tuberculous cows was immediately destroyed, and that there were no tuberculous cows about New Haven anyhow.

Finally, through the good offices of Dr. E. H. Jenkins, of the Agricultural Station, and of Dairy Commissioner R. O. Eaton, I received one morning in my mail the following letter from the State Veterinarian:

Dr. J. E. GARDNER, D. V. S.,
34 Summer Street,
Telephone 424-3.
HARTFORD, CONN., June 17, 1897.

S. J. MAHER:

MY DEAR DOCTOR:

I will send you day after to-morrow by express a gallon of milk from cow suffering from pulmonary and intestinal tuberculosis. Could find no evidence of udder lesions.

She is near dry, only giving about the four quarts daily, and I think will be just what you are looking for.

I have to go to Farmington to procure it, as I could not at present time find any in immediate vicinity.

The case reacted to tuberculin, but was not killed, hoping she was with calf. Will probably now be destroyed, so I can give you definite lesions. I know the case to be one of two years' standing.

Hastily,
GARDNER.

As soon as the precious fluid arrived, I took it to the dairy of Frederick Daab, in Montowese, where, in accordance with a previous arrangement, Mrs. Daab made it into cheese, the simple hand cheese of the German farmer. The naturally formed curd was twice pressed through the cloth by hand before being put under a weight. I had the fluid resulting from these different pressures kept separate, and sent to me with the cheese.

My original theory was that I should find something of interest in the cheese; therefore, I put it aside to ripen. I transferred the curdy whey to sterilized glass stoppered bottles and labelled them and placed them in the same closet with the cheese, for future examination. When I returned from my vacation the following October, I immediately set myself to learn something of the bacterial contents of my cakes of hard cheese. I soon decided that there were not only no tubercle bacilli in the cheese, but also no other kind of microorganisms, save a few moulds on the surface. Disappointed, I turned my attention to the thickish sour fluid contained in the glass stoppered bottles. Here I was more successful. Although I found in the whey no tubercle bacilli, I did find in all the bottles an organism of nearly the same size and shape as the tubercle bacillus, but differing therefrom in that it did not retain fuchsin when treated with acid.

I had Dr. Archibald McNeal, the bacteriologist to the board of health, grow some of this organism for me on various culture media, while I myself began experimenting with it on rabbits. Before the following May, I had come to these conclusions:

I. This germ, which I had named the X bacillus, was the only form of life now left in the whey.

II. This X bacillus produced spores; liquefied gelatin; grew in the presence or absence of air, in acid or alkaline media; grew readily at room or blood temperature; and seemed to prevent the development of other bacterial life in test tubes on ordinary culture media.

III. Pure cultures of this X bacillus were incapable of harming rabbits, whether injected into their tissues or into their veins, or rubbed into an abraded area of their skin.

Herewith I give reports of some cases of tuberculosis treated with cultures of the bacillus:

CASE I.—On May 10, 1898, I was called to see a married nullipara, aged thirty-three years, who had been sick with cough, night sweats, weak spells, and hæmorrhage from the lungs, during the preceding three months, and who was then bleeding sharply. A few days' rest in bed and small doses of morphine allayed the severe hæmorrhages, but she continued to raise blood with every coughing spell. I found that she had dulness and many fine and medium moist râles at the left apex, more marked in the subclavicular region near the sternum. The microscope revealed many tubercle bacilli in her sputa. At half past four in the afternoon of May 16th, I injected deep into the connective tissues of her right groin, about 60 minims of a mixture of equal parts of a blood serum culture of X bacillus and glycerin and boiled water. Half an hour after the injection she experienced a queer prickly sensation all over the body. This lasted until midnight. Then she had an annoying itching of the skin for an hour before she fell asleep. She awoke in the morning refreshed and hungry, but with a painful little lump in her groin. She passed some blood-stained stools during the next twenty-four hours. That very day, she went out of doors for the first time in five weeks. She walked five blocks. She described herself as "feeling like doing an immense amount of work." She raised no more blood. She had no more night sweats or fever or chills. She continued to cough, but not so hard or so painfully as before. She expectorated as profusely and the sputa contained as many tubercle bacilli. I could detect no changes in her physical signs.

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* Read before the New Haven Medical Association, December 16, 1903.

Ten days later, I gave her a second similar injection. The reaction was not so sharp as after the first. The cough moderated somewhat, but the tubercle bacilli were still present in lesser number. She gained seven pounds in five weeks; but I advised her to go to Saranac Lake, and gave her a letter to Dr. E. R. Baldwin, who secured her admission to the sanitarium, where she put on ten pounds in four months and then returned to New Haven. She spent the winter at the sanitarium and worked at one of the mountain hotels in the summer. She spent the following winter and fall at home. She got an attack of the grippe the following spring and I sent her back to Saranac for a few months, where she worked every day. She has now been home in New Haven for several years, as well and happy as she ever was. The stethoscope reveals the old scar in her lung.

The fact that the tubercle bacilli were not cleared out of her sputa by the injection of X bacillus made me hesitate about giving this treatment to other patients, and I decided for the future to confine myself to using it occasionally in my office with an atomizer or on throat swabs. But during the year, in two other cases I was tempted late in the course of the disease to try an injection.

Case II.—The first was that of a young married woman, a multipara, who had been sick with a very acute pulmonary tuberculosis for five months and who was melting away very fast. After a first injection given in July, 1898, her cough lessened, and she was able to do her house work without fatigue. She was very enthusiastic over the effects of the treatment; but at the end of a month her symptoms grew worse and a second injection had no effect on them. The application with atomizer and swabs helped her not at all, and she died after sixteen months' sickness.

Case III.—The second case was that of a young man, three of whose brothers had recently died of tuberculosis. He was in bed with active trouble in the lungs. I gave him two very small injections, not more than a drop of the culture in glycerin and water. He also said that it acted on him as a stimulant, but it did him no good. He died in a few months.

There was only one case during that summer of 1898 that showed any striking result after local treatment.

Case IV.—This patient was a widow who worked in the rubber shop. Her husband had died of tuberculosis of the lungs about a year before. She used to come to my office that summer, panting for breath, because of the exercise of walking one block and a half from the trolley cars. She had trouble at both apices and a pleuritic involvement at the left base. She had fever and sweats and anorexia. Her cough was very distressing, not only to herself, but to the other patients in the waiting room. One afternoon she presented herself, complaining of an ulcer on the tongue, another on the inside of her cheek. I scraped off the white top from the cheek ulcer and rubbed some X into it. That night her whole mouth became very sore and swollen; when she appeared at my office the next afternoon there was a white membrane over the tonsils and vault. I bade her use boric acid. Two days later she returned without fever, with the cough lessened, and feeling that some great change has been effected in her condition. She continued to improve; her cough disappeared; she gained in weight; and without any other treatment recovered her normal condition. In the fall she returned to her old bench in the rubber shop and worked there for two years, when she was taken down again with her former complaint and died after a few months' sickness. At this time I made no attempt to treat her with X.

I had then become discouraged with my results and had decided that work with the X bacillus was too dangerous to follow further; in fact, I had about reached that conclusion in the fall of 1898, and I gave no more injections of X for four years. As I looked back at my year's experience at the beginning of 1899, it seemed to me that my most encouraging result was in the case in which such marked improvement had followed rubbing X into the ulcer of the mouth, and I resolved to make a few more essays along that line before admitting failure. It was at this time that I made the mistake of thinking that my X bacillus was identical with another more common bacterium, and which, for the present, I will call pseudo X. This error led me so far afield that I came to the conclusion that bacterial treatment of tuberculosis was a failure. In the summer of 1899, my interest in the subject waned; nor did it wax again until a year ago.

One afternoon in October, 1902, the woman whom I had first treated with X, called on me for some trifling ailment. I embraced the opportunity to examine her lungs and to get her to tell me the story of her escape from consumption. As I listened I could not resist the pleasing conviction that the X bacillus was entitled to a share of the glory of her cure. That very night, I began to overhaul my laboratory paraphernalia and records, in an endeavor to learn how and where I had got off the right road four or five years before.

A few weeks' work taught me: (1) That the X bacillus and the bacillus with which I had formerly identified it, were very different organisms. (2) That X bacilli were still alive in the glass stoppered bottles of whey that had been kept in the closet in my office all these years; (3) that X was also to be found in a cotton plugged centrifuge tube that had stood in the office for four years, half full of a mixture of glycerin and blood serum culture of X; and (4) that there was no other organism than X in the centrifuge tube.

CASE V.—On January 1, 1903, a pallid, eighteen year old factory girl called at my office. Judging from signs and symptoms she was the most desperate case of ambulant phthisis that I had ever had to do with. Her mother's death had been caused by consumption, and she herself had been sick with the disease for more than three years. She had run the gamut of all the severe symptoms: hæmorrhage, chills, fevers, night sweats, clubbed nails, incessant cough, weakness and dyspnœa on exertion, loss of appetite and weight. She was unable to walk from the trolley car to my office without leaning heavily on a companion for support, and it was necessary for her to stop several times to rest. She was so weak and short of breath that she frightened the other patients in my waiting room. I forbade her to come any more. In fact, I was afraid she would die before she reached home. I called at her house the next day. The people with whom she lived considered her moribund. She did not eat and could hardly breathe, although she had been sitting up most of the day. On January 9th, I gave her a small injection of X in the groin. The X had been scraped off a growth in an agar tube and mixed with a little boiled water and a couple of drops of glycerin, and permitted to stand at room temperature for eighteen hours. Not more than twenty minims of this were injected. There was not much reaction. She complained of some uneasiness that night and of some itching of the skin, particularly about the wrists. But the next day she began to take a little food and her appetite increased day after day, and her other symptoms improved so much that in a week she came up to my office. I was encouraged, and I sent her the next day, not without some misgiving, to the Tuberculosis Annex of the Hartford City Hospital, on Cedar Mountain. She was terribly exhausted when she arrived there. In a few days I telephoned to the resident physician about her. I was notified rather authoritatively that she was very weak, that her lungs were full of holes, and that she could not last long. A couple of weeks later, I telephoned again and learned that she was no worse. A third telephone message made it clear that the hospital physicians were realizing the fact that she was improving. She came home from Hartford for a few days at Easter, and I gave her a second injection of X on April 10, 1903. She remained at Cedar Mountain until May 30th. During her stay there her weight had increased from eighty-nine pounds and a half to ninety-eight pounds, and her cough had almost disappeared. She had become strong enough to walk long distances and to climb hills. I tried to persuade her to stay longer at the sanitarium, but she would not listen to me. She felt well, she said, and the hospital life had become irksome to her. She has remained here since, not so well nourished in her tenement home as at Cedar Mountain, and with her lungs still a pathological curiosity. She has lost between four and five pounds since May 30th, but she feels well, eats well, sleeps well, coughs little. Last week I found tubercle bacilli in her sputa and I immediately gave her another injection of X.

CASE VI.—On the twenty-sixth of January, 1903, I injected X into the groin of another patient. He was fifty-three years old; born in Ireland; at first, a laborer in this country, but for twenty years a saloon keeper; married; six children; one daughter dead of phthisis contracted later than the beginning of the father's sickness. He had been sick with tuberculosis of the lungs for three years and a half. I had sent him to Saranac on May 20, 1900. He had remained there until October 25, 1900, and had returned January 2, 1901. Came home the following May under advice. Since then, he had tried resorts in the hills in Massachusetts and Connecticut, without benefit. His maximum weight in health had been 160 pounds. At the time of this first injection of X he weighed 142 pounds. He had been doing badly for many months. Night sweats, small hæmorrhages, clubbed finger nails, poor expansion over both lungs. Flat chested and showing recession of chest wall over both apices. A big crackling cavity in the right upper lobe. Areas of consolidation and retraction and inflammation over both lungs. On account of his Saranac training, he had been living out of doors as much as possible. He had not attended his saloon for three years, but he was now growing greatly discouraged on account of loss in weight, return of day fevers and night-sweats and, worst of all, increase of dyspnœa on exertion. He was expectorating profusely. Lately, the sputa were becoming blood-stained. He had to climb two flights of stairs to his apartments and on reaching the top landing, he had to sit down and cough and gasp for breath in great distress.

The exertion of undressing himself in preparation for my treatment, on this evening of January 26th, brought on a very severe coughing spell, during which he raised some thick ochre-colored sputum. I secured some of this and examined it. It was full of tubercle bacilli. The injection that I gave him consisted of a pure culture of X from the surface of agar tubes, scraped off and mixed with boiled water. The microscope showed X in rods and spores, rather more spores than rods.

He spent an uneasy night, his sleep disturbed with uncanny dreams, and his wakeful periods with tiny chills along his spine and queer bumpings in his head. Even the next day, he felt unnerved, and there were some soreness, redness, and swelling at the site of the injection; but he walked about the house and ate his meals. From that time, however, the reaction disappeared and he began to show signs of improvement. The expectoration became foamy, less in amount and paler. In two days he could climb the stairs without noticeable dyspnœa and without his usual coughing spell, but not without limping, due to the lump in his groin. He had no more fever or sweats. His appetite slowly increased and also his weight. He described himself as feeling "clearer."

About two weeks later he began to have an occasional hard coughing spell. I gave him another injection of X; the cough improved. Since that time, whenever he has shown a tendency to retrograde, I have given him an injection of X. Uniformly the injections have been followed by improvement, although not always by the same degree of reaction. He now weighs 156 pounds, a gain of 14 pounds since the first injection, and within four pounds of his maximum weight. The cavity at the top of his right lung is nearly dry. There are a few medium and fine moist râles at the top of his left lung. There are still tubercle bacilli in his sputa.

(To be continued.)

THE SURGERY OF THE DAY.

By CHARLES B. KELSEY, M. D.,

NEW YORK.

Dr. Van der Warker's arraignment of the gynæcology of the day in the *New York Medical Journal and Philadelphia Medical Journal* for October 10, 1902, should not be allowed to pass without comment. As a simple statement of cases under the observation of one man, it is appalling; and that he may not stand alone, we will add one more in his own line, worse perhaps than any of his.

Being summoned to a neighboring city to operate upon "a case of ruptured uterus with fœtus free in the abdomen," the following facts were learned at the bedside. The patient was a magnificently strong, recently married, young woman. The uterus had been ruptured in curetting nine hours before. The doctor was sure she was pregnant and the fœtus lost through the rupture, but assured me there was "not a single bad symptom." I found the abdomen rigid and tender, pulse 120, temperature 101° F., pelvis dull and full of blood. The sound passed full length into abdomen through a false passage in the body of the uterus beginning in the cervical canal just outside the internal os and ending at the fundus. Under most unsatisfactory surroundings as to light and asepsis the abdomen was opened, the blood removed, and one third of the body of the uterus found gouged out by a sharp curette, which had never entered the uterine cavity. The fact that one ovary was cystic, the other cirrhotic, and the bleeding from the uterus impossible to check; together with the fact that the woman was, to my mind, already septic; led to a complete hysterectomy, with favorable result in saving life. The doctor "could not understand it at all," having "taken a course in gynæcology at a postgraduate hospital and done the operation at least a hundred times." There was no sign of pregnancy; and the operator was not well regarded, I afterward found, in his own community.

But of what use is it to record these things unless a remedy can be found? They cannot be told to the laity without discrediting the whole profession, and telling them to the profession is useless—because they are already known; though few, perhaps, could make such a deadly presentment as Van der Warker. And this, alas! is not only his arraignment, but is coming to be the accepted opinion of the surgical world—that America furnishes some of the best and most of the worst surgery of the day.

The point to which we wish to take exception is the author's explanation of this condition, which he attributes to the textbooks on special surgery written for students and general practitioners.

Where do the *amateur* surgeons of to-day gain the superficial knowledge which emboldens them to attempt the most difficult surgical feats? Not from textbooks, but from postgraduate medical schools. To these it is due that surgery has become much the same sort of mechanical art as plumbing, only practised without any apprenticeship or restrictions.

And this, be it distinctly understood, is not because the surgery taught is not good in itself and taught by masters, but because it is taught to those incapable of understanding, and with no restrictions upon their use of it.

Not many years ago it was found necessary to call upon the legislature to protect the public from the manufacture of doctors; now, as a rule, in this and many other States, a man has to know something before he is even allowed to study medicine, and the State examines into his fitness to practise after he has his diploma. The time was not long ago when every doctor was a legalized vivisectionist, and the most ignorant physician in the State could commit its greatest statesman to the lunatic asylum. The simple fact is that the postgraduate schools of to-day are perpetuating all the worst features of the undergraduate schools of a few years ago—no preliminary examination, no compulsory attendance, no examination for what answers all the purposes of a diploma.

It has been found necessary, wise, and practicable, within a few years, to establish by law that, merely because a man has obtained a diploma he should not be allowed to practise or to do brutal vivisection or commit citizens to the lunatic asylum; and it would seem that more needs to be done.

What would be the effect of legislation which should demand that an utterly unknown person from Central America, with a diploma of unknown value, desiring postgraduate instruction in New York, should submit to the same preliminary examination required of undergraduate students? And, since no postgraduate school has the legal right to issue a diploma, what would be the effect of prohibiting the issuing by them of certificates of attendance, made intentionally to look as much like diplomas as possible, eagerly sought and paid for by the student for business purposes at home, and requiring merely a matriculation fee and a graduation fee, but not demanding actual attendance as an indispensable condition from each recipient of a certificate?

If, in the opinion of the majority, it is for the honor of the profession and the good of the public whose lives are in their keeping, that any "*legalized*" practitioner from Patagonia to Maine absolutely without identification or question as to his mental attainments, moral character, or the conditions requisite where he becomes a *legal* practitioner, should be able to come to New York, deposit five dollars for matriculation, twenty more for six weeks' instruction, disappear, and return at the end of the six weeks; pay five dollars more, and carry away an imitation diploma on imitation parchment, which says he "has attended a full course" in general surgery or gynæcology or anything else he has paid for, at, say, the Royal College of Surgeons, and which is signed with an imposing list of names of president, secretary, and professors, and is intended to convince his patients that he is fully endowed to practise these branches—why, let the work go merrily on?

There are many who think, however, that this condition of affairs should be brought under legislative control.

THE OCULAR COMPLICATIONS OF MUMPS.

By J. H. WOODWARD, B. S., M. D.,

NEW YORK.

In the *Archives d'Ophtalmologie* for October, 1903, are published two papers discussing the ocular complications of epidemic parotiditis. The one is a portion of the report made to the Ophthalmological Section of the International Medical Congress at Madrid, in 1903, by Dr. A. Antonelli, entitled, *Les Névrites optiques au cours des Infections Aiguës (Oreillons,* pages 642, 643). The other is a general dissertation entitled, *Complications oculaires des Oreillons,* by Dr. H. Le Roux (page 655 et seq.). Both are carefully prepared reports, and they may be assumed to present the important available facts bearing upon the subject. A condensed *résumé* of them is both instructive and interesting, showing the wide range of effect produced by mumps upon the visual apparatus, facts that are not generally known.

Abscess of the eyelids was noted once by Strzeminski; and bilateral conjunctivitis, without suppuration, accompanied by œdema of the eyelids and by lacrymation, was observed by the same author.

Inflammation of the cornea, sometimes in the ulcerative form, has been noted in rare instances.

Pechin observed one case of iritis in both eyes, complicated by keratitis in the right eye, nine weeks after an attack of mumps.

According to Le Roux, Hatry was the first, in 1876, to direct attention to this subject. Le Roux subdivides his observations into three groups: *(a)* Cases of simple and slight dimness of vision; *(b)* cases of dimness of vision accompanied by hyperæmia of the papilla; *(c)* cases of marked dimness of vision associated with intense hyperæmia of the papilla, difficulty in distinguishing colors, and attacks of vertigo. In all, the symptoms were transient.

Leriche and Strzeminski describe an inflammation of the lacrymal glands which may precede, or be coincident with, or may follow an attack of mumps.

Paralysis of the accommodation was observed by Baas. Paralysis of the accommodation and of the soft palate was noted in a child aged nine years by Mandonnet, who searched for, but did not find, other evidences of diphtheria in his patient.

Amblyopia of both eyes, occurring fifteen days after the onset of mumps, was observed by Le Roux. Two weeks later, ophthalmoscopic examination revealed slightly enlarged retinal veins. The optic discs were somewhat hyperæmic, but they were not œdematous. The fields of vision presented central scotomata for red and green, as in toxic amblyopia, but they were normal in other respects. Improvement began in about three weeks, and in about six weeks, complete restoration of vision was noted and it continued permanently. Tobacco, alcohol, syphilis, and rheumatism were positively excluded.

According to Antonelli, eighteen cases of optic neuritis due to mumps have been reported. This optic neuritis is slow in developing, becoming manifest about one month after the attack of mumps.

Talon, in 1883, reported a case of unilateral optic neuritis occurring one month after mumps, accompanied by headache, nausea, coryza, and convulsive attacks, which ended in atrophy of the optic nerve and blindness of the affected eye.

Blanchard published, in 1899, the case of a soldier, twenty-three years of age, manifesting no traces of syphilis, alcoholism, nephritis, or diabetes, who developed a neuroretinitis in both eyes one month after a severe attack of mumps, that terminated in white atrophy of both optic nerves, and was complicated by transient paralysis of the right internal rectus muscle.

Strzeminski published the observation of an optic neuritis of the left eye with absolute central scotoma, which could be attributed only to an attack of mumps that occurred a few days prior to the onset of the ocular symptoms. Treatment by sweating, the administration of iodides, and hypodermic injections of strychnine was followed by a complete cure.

To these observations, I am able to append the following history of a case of optic neuritis due to mumps, which has been under observation now some eighteen months, and which presents certain features that are not reported as existing in any other similar case, the details of which have come to my notice.

CASE.—Katherine C——, eleven years of age, was brought to me April 5, 1902, by advice of her physician, Dr. M. H. Eddy, of Middlebury, Vt., with the following history: In February, 1902, she had had mumps. At the beginning of the disease, her physician had not seen her; but after the swelling in the parotid regions had begun to subside, she became feverish and delirious, and then he was called. Within a few days, the fever and delirium subsided and the case progressed toward recovery, but with persistence of noticeable tumefaction in both parotid regions. About three weeks after she was taken ill, she was able to resume her school work. While studying, she had attacks of vertigo, and from time to time momentary failure of vision of her left eye occurred. During this period, lacrymation and suffusion of her left eye were added to the symptomatology. Notwithstanding these symptoms, she continued her attendance at school four or five weeks. During the last week, after reading fine print by artificial light, she had an attack of severe pain in her left eye for half an hour; and after that the left pupil remained permanently dilated. Dr. Eddy was then consulted for her ocular condition, and he referred the patient to an experienced ophthalmologist, who, on March 27, 1902, found "general redness of the left eye, the cornea hazy, the pupil dilated, the intraocular tension raised (+ 2), and numerous large blotches in the fundus which looked like hæmorrhages. It was much the picture of thrombosis of the central vein, but the cornea was so hazy that no details of the fundus were really seen. The lower part of the fundus gave a whitish reflex. Vision was perception of light; the upper part of the field of vision was blind. Anterior sclerotomy was performed. On April 3rd, the cornea was less hazy, the fundus was a little more distinct, and here and there a blood vessel was visible."

These facts were given me in a letter from the oculist on April 5th, when I made my first examination of this case. I found the girl's right eye normal in every respect. The vision of her left eye was perception of light. The conjunctiva was congested, and the veins in the ciliary region were engorged. The left eye diverged a little and was a little more prominent than its fellow, but neither paralysis nor paresis of any extrinsic ocular muscle was discovered. The pupil was completely dilated and immovable. The retinal veins were larger than normal and tortuous, and breaks in the dark line of the veins were distinctly seen. A number of apparently normal retinal arteries were visible, and a number of whitish streaks were found in the fundus that seemed to be empty arterial twigs. The greatest disturbance was in the region of the optic disc, which was so œdematous as to be unrecognizable. No disease of the kidneys was discovered at any time in this case; and the anæmic heart murmur which was present at the examination on April 5th, was not detected at any subsequent examination. There was no systemic taint of any sort.

On July 10, 1902, the patient came to me for the second time. Her right eye was normal. The vision of her left eye was perception of form in the temporal part of the field of vision. The sclera was clear and not injected. The pupil was fully dilated, but it contracted slightly in bright daylight. The pupil was oval with the long axis vertical, giving an appearance as though a small iridectomy had been performed above; but no operation save the paracentesis already mentioned had been performed upon the eye. Floating particles were visible in the vitreous. The optic disc was not defined. The retinal arteries and veins were pretty well obliterated. A large white-streaked patch occupied the macular region; and white spots were scattered about the optic disc. These white areas were taken to indicate atrophy of the retina and chorioid. The intraocular tension was plus ½. The patient had had no subjective symptoms.

November 28, 1902. The right eye was normal. The left eye counted fingers at one foot. The pupil was in the same state as at the previous examination. The eyeball was normal in size and in position, but it was tender to pressure under the supraorbital foramen. Exploration of the orbit with the finger, which could be pushed behind the equator of the eyeball, failed to reveal the presence of an intraorbital growth. The excursion of both eyeballs was unrestricted, and both eyes moved together normally. The patient had not suffered from pain, but had enjoyed good general health.

July 16, 1903. Since her last visit the patient has had chickenpox, whooping cough, and a severe attack of grippe. During the spring, she attended school six weeks; but she discontinued school work then, because when she studied hard she was dizzy. She has had no pain in her eyes or head. The right eye is normal. The left eye flushes when she is tired, at other times it is clear; the sclera is clear to-day. The pupil is dilated as before; the cornea is dull, but perfectly transparent. There is very little fundus reflex, and it is not possible to distinguish detail in the interior of the eye. The loss of fundus reflex is probably due to the several constitutional diseases that as-sailed her during the winter. The intraocular tension is plus ½. The eyes move together normally. Her general health is perfect. It seems fair to conclude that, in spite of the severity of the inflammation in this case, the eye will maintain a sufficient degree of health to ensure the preservation of the globe.

58 WEST FORTIETH STREET.

Therapeutical Notes.

Enterocolitis.—A. Robin (*Bulletin de thérapeutique,* November 5, 1903; *Revue française de médecine et de chirurgie,* December 14, 1903) states that medication should aim at making the gastric contents alkaline before they reach the intestine:

℞ Precipitated calcium carbonate } of each..6 grammes
Calcined magnesia } (90 grains);
Sodium bicarbonate.........4 grammes (60 grains).
M. For 12 powders; one after each meal.

Between meals, for pain:

℞ Lactose ....1 gramme (15 grains);
Hydrated magnesium oxide............1½ grammes (22½ grains);
Bismuth subnitrate } of each.......80 centigrammes
Prepared chalk } (12 grains);
Codeine ....5 milligrammes ($^3/_{40}$ grain);
Sodium bicarbonate..........1 gramme (15 grains).
M. For one powder.

Milk alone is not a good diet, which may comprise bouillons, thin soups, broiled or roasted meat without sauces, boiled fish, and boiled vegetables, seasoned just before serving with a little salt and butter. A glass of ale is permissible at dinner. Copious enemata of boiled water should be given daily and very slowly. Saline purgatives are contraindicated and castor oil is best with extracts of belladonna and hyoscyamus. For those who cannot take castor oil, the following is recommended as an admirable, if somewhat complicated formula:

℞ Cape aloes.................2 grammes (30 grains);
Jalap }
Scammony } of each........1 gramme (15 grains);
Gamboge }
Extract of belladonna } of each....15 centigrammes
Extract of hyoscyamus } (2¼ grains);
Almond soap...................a sufficient quantity.
M. Make 50 pills; one to three at bedtime.

Cold compresses should be applied to the abdomen and allowed to remain all night if well borne. Massage along the colon is good. Showerbaths act well. In prolonged, painful paroxysms, avoid opium, substituting cannabis indica:

℞ Extract of cannabis indica }
Extract of hyoscyamus } of each..3 centigrammes ($^9/_{20}$ grain);
Extract of belladonna }
Menthol ....10 centigrammes (1½grains);
Alcohol........................a sufficient quantity;
Syrup of acacia...........150 grammes (5 ounces).
M. Tablespoonful every hour.

The following liniment may be applied to the painful spots:

℞ Chloroform ....20 grammes (5 drachms);
Extract of belladonna }
Extract of hyoscyamus } of each......4 grammes (1 drachm);
Extract of cannabis indica }
Soap liniment...........80 grammes ($2^2/_3$ ounces).

Graves's Disease.—Kimberger, according to *Revue médico-pharmaceutique,* for September 15, 1903, considers sulphanilic acid to be indicated symptomatically in this disease, and the following formula is presented:

℞ Pure sulphanilic acid...10 grammes (2½ drachms);
Sodium carbonate.........8 grammes (2 drachms);
Distilled water..........200 grammes ($6^2/_3$ ounces).
M. Three to six teaspoonfuls daily, preferably in two doses.

Morphine and Ether Hypodermically.—*Journal des praticiens,* cited by *Nord médical,* for November 15, 1903, states that Auber has found that ether combats the depressing influence of morphine in the later stages of tuberculosis. Alcohol and water must be used to dissolve the morphine:

℞ Morphine hydrochloride............10 centigrammes (1½ grains);
Distilled water } of each....4 grammes (1 drachm);
Alcohol, 90° }

Dissolve and add:

Sulphuric ether............6 grammes (90 minims).
M. Inject about ten drops.

A little camphor may be added to the solution and is stimulating.

Tapeworm in Children.—*Nouveaux remèdes,* for November 24, 1903, offers the following treatment: Put the child on a milk diet for two days. The night before administering the vermifuge, give a purgative enema of sodium sulphate. The following morning, give:

℞ Oleoresin of aspidium...............2 to 6 grammes (30 to 90 minims);
Calomel. .25 to 50 centigrammes (3¾ to 7½ grains);
Powdered sugar.......25 grammes (6¼ drachms);
Gelatin, enough to make a bolus.
M. Give in four doses at intervals of half an hour.

While the worm is being expelled, another purgative enema may be given, if the parasite threatens to break; or, better, the movement should be received in a bucketful of warm water.

Asthma.—*Journal des praticiens,* for March 21, 1903, gives Huchard's treatment, from which we abstract the opinion that a strictly milk and vegetable diet is advisable for the asthmatic. Iodides should be administered for twenty days in each month, and arsenic the remaining ten. The eupnœic effects of the latter are well known. For the asthmatic crisis, morphine, one third of a grain, may be injected hypodermically, or the smoke from the following powder may be inhaled:

℞ Powdered belladonna leaves } of each..30 grammes
Powdered stramonium leaves } (1 ounce);
Potassium nitrate..........5 grammes (75 grains);
Powdered opium.......2½ grammes (37½ grains).
M. Burn a teaspoonful in a saucer and inhale the fumes.

A Toothpowder.—*Journal des praticiens,* for November 11, 1903, advises the use of the following toothpowder for those suffering from pyorrhœa alveolaris:

℞ Prepared chalk...........90 grammes (3 ounces);
Finely powdered pumice stone } of each..5 grammes
Salol } (75 grains);
Peppermint oil } of each........a sufficient quantity.
Carmine }
M. To be used mornings with a stiff brush and followed by an antiseptic mouth wash.

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NEW YORK, SATURDAY, JANUARY 2, 1904.

THE ATLANTA MEETING.

Atlanta is deservedly getting to be more and more popular as a place for holding national medical meetings. The *esprit de corps* of the local profession is such as to practically guarantee a successful meeting at almost any time, and the social resources are sure to make it enjoyable, even to those whose interest in the scientific proceedings may not be profound. The sixteenth annual meeting of the Southern Surgical and Gynæcological Association, held on the 15th, 16th, and 17th of December, was, as may be gathered from the condensed account of the proceedings which we give elsewhere in this issue of the *Journal,* no exception to the rule. In the first place, the programme was one of the best that, so far as our observation goes, a similar occasion has ever brought out. It is true that the original programme was cut down, but not to a greater degree than is often the case with such meetings, so that the list of papers as it finally stood was such as to command attention in a very marked degree.

The next meeting is to be held in Birmingham, the scene of the chief professional labors of the late Dr. W. E. B. Davis, whose recent tragic death sent a pang through the profession of the entire country. The council had recommended that an appropriation of two thousand dollars be made for the establishment in the City Hospital of Birmingham of a ward to serve as a memorial of the association, but at the Atlanta meeting this action was rescinded, and as a substitute it was recommended that the same sum be appropriated to the erection of a monument to the memory of Dr. Davis. This recommendation was adopted. The sum voted, two thousand dollars, represents, we understand, accumulated salary due Dr. Davis, which he had declined to accept, for performing the duties of secretary. It seems eminently fitting, therefore, that, now that he is gone from among us, his own devotion should be proclaimed by the monument.

A GOSPEL OF HOPE AGAINST TUBERCULOSIS.

The importance of the admirable work done by the Henry Phipps Institute was rendered manifest by the third lecture delivered under its auspices, on December 29th, at Philadelphia. The calibre of the men whose services the institute has been able to secure is in itself evidence of the estimation in which the leading minds of the medical profession hold the enlightened and wise philanthropy of the generous founder of the institute, Mr. Henry Phipps, of Pittsburgh. The inaugural lecture was delivered a month or two ago by Dr. E. L. Trudeau, of Saranac, and who could have been found more fit for the duty? Dr. Trudeau was followed by Professor Osler, undoubtedly an admirable selection; and now comes Dr. Sims Woodhead, professor of pathology at the University of Cambridge, England, to put before the laity, in terms suited to the non-technical mind, so much of the pathological history of tuberculosis as will enable the public to grasp more understandingly the great lessons as to individual treatment and public prevention that will proceed in ever widening circles from this excellent educational centre.

Nothing could be more gratifying than the evidence of progress and public interest in the work of the institute afforded by the attendance. The first lecture, while fairly attended, left much to be desired. The second lecture showed a decided increase. At Dr. Woodhead's lecture the large hall of the Witherspoon building was filled almost to its entire seating capacity. Scarcely a vacant seat was to be seen. The audience, too, was representative, and consisted mainly of intelligent lay people of all classes.

The subject matter of Dr. Woodhead's lecture need scarcely be gone into here. Necessarily it presented nothing very new. It was not addressed to the profession, but was directed to the bringing home to untechnical minds the leading facts of the rise, progress, and dissemination of tuberculosis, so that in course of time the tuberculous patient and his friends might learn to cooperate with the physician toward the double end of individual cure and public prevention. That way extermination lies.

Dr. Woodhead struck a true note when he made hopefulness the *motif* of his address. It may be well known to us of the medical profession, but how few of the laity are aware, that a very large proportion of autopsies—Dr. Woodhead says, in his experience, and it is very great, one in three—show that at some previous period the subject has been the victim of tuberculosis which has subsequently been entirely cured, leaving him to die eventually of some other complaint, or even of a ripe old age? And what a striking text is that whereon to preach the gospel of hope! If Nature alone and unaided—often indeed unsuspected by the patient—can so frequently resist successfully the attack of the deadly foe, what splendid results may we not look for in the not far distant future, when the public, spurred out of the apathy engendered by the pessimism of the earlier pathologists, shall have learned to avoid those predisposing causes without which the bacillus will seek in vain to establish a permanent lodgement; when it shall have learned the importance of calling in Nature's aid and the guidance of her ministers at the first sign of a threatened invasion; and when it shall awake to the fact that both self interest and public duty demand the rigorous exercise of those simple precautions which can prevent the dissemination of the foe and ultimately effect its extermination. There is no special evil genius protecting the tubercle bacillus. It is no type of a "chosen people." What headway it makes is made through the inherent weakness, or far more often through the supineness, of those whose dominions it lays waste. Fortify the weak, then, beginning even before birth, by a fitting ancestry; lend no traitorous assistance to the enemy when he is in the midst of us; cut off his supplies of unhygienic conditions, personal and public, and soon he will be but a memory like other vanquished victors of the past.

One other point in Dr. Woodhead's lecture deserves special notice. That sanatoria for consumption have effected and are effecting great results is indisputable; but the climatic conditions upon which so much stress is laid, though certainly desirable adjuvants, form only a small portion of their resources. Their chief value lies in their missionary capacities—a public benefit even greater than their individual results. But to place sanatoria on too exalted a pedestal is to ring a knell to the many, instead of preaching to them a gospel of hope. Only a small proportion of the tuberculous can have the advantages of sanatorium life; but it cannot be too frequently or too loudly insisted on, that to practically all a sanative regimen, an outdoor treatment, a hygienic practice, especially as regards the avoidance of dissemination of the bacilli, lie open, the results of which shall finally convince even the most skeptical how very curable a disease tuberculosis is! In the part taken in bringing about this desirable end we may surely echo the concluding words of Professor Woodhead, and "congratulate the Henry Phipps Institute on what it has already achieved," joining him in hoping "for it and those associated with it a still more beneficent and brilliant future."

IS IDIOPATHIC EPILEPSY AN ORGANIC DISEASE?

At a recent meeting of the Philadelphia Neurological Society Dr. M. Allen Starr, of New York, discussed the subject of the pathogenesis of epilepsy. Basing himself on statistical data, he endeavored to prove that the time had come for considering the idiopathic, or so called essential, epilepsy as an organic disease, and that the old established view of its being a functional neurosis could be no more maintained. The quintessence of his discourse consisted of the fact that in a certain (small) percentage of his cases minute areas of the cortex were found to be sclerosed, that the majority of his patients, although not examined histologically, presented *intra vitam* some undefinable peculiarities in their mentality and character, hence their cortex must have not been entirely normal, and finally in some cases the pathological changes were probably so minute that either the microscope had not yet been able to show them, or no pathologist had yet ever taken the trouble to work over the cortex a sufficiently long time to discover those changes. With all due respect to the teachings of one of our most prominent neurologists, this view of epilepsy can be accepted only *cum grano salis*. The tendency of searching for a material basis in explaining the so called functional diseases is certainly the expression of a scientifically trained spirit, but the investigator is apt sometimes to become too radical in his deductions. The writer knows of cases of idiopathic epilepsy coming on once a month, once in three months, and once a year, in individuals whose mentality leaves nothing to be desired, in individuals occupying highly responsible positions, for which high mental qualifications are required. He also knows of cases of unilateral convulsions, hemiplegic in type, in which operations revealed either a slight hyperæmia of the motor area or absolutely nothing at all. He also knows of cases of post mortem examination which revealed absolutely nothing macroscopically or microscopically. He also knows of very carefully carried out pathological researches on the cortex by reputable neuropathologists, whose great knowledge, technical ability, and painstaking labor cannot be questioned, and still not the slightest trace of a pathological lesion could be detected. If some investigators have found some changes in the cells of the cortex in certain cases, no inference, nevertheless, can be drawn to solve the problem of essential epilepsy. On the other hand, it is not difficult to conceive of an alteration of a cell, if a constant irritation is kept up by repeated attacks, but this irritation may be due to various causes, such as circulatory disturbances or toxic influence, etc. The latter circumstance certainly does not mean an organic lesion from the standpoint from which Dr. Starr views the subject.

Supposing some patients suffering from epilepsy do present peculiarities of mentality. A question naturally arises: Is this peculiar mental state dependent upon the repeated irritation of the cortex resulting in convulsions, or is it due to the "supposed malformation" (in its broader sense) or to "undiscoverable sclerotic plagues of the cortex?" The majority of cases of insanity have a personal and family history of the so called "stigmata of degeneracy" or symptoms of deviation from normal mentality, and still the pathological findings are absolutely nil. It is therefore impossible to infer from some mental peculiarities observed in some epileptics that for this reason idiopathic epilepsy is an organic disease.

In my opinion the history of epilepsy has proved with sufficient evidence that pathology alone is unable to solve the problem, and that the mind of the scientific investigator must be directed toward an entirely different channel. Suffice it to give a glance at the important clinical observation, viz., the fact that no drug can remove or even diminish the number of seizures, unless certain hygienic and dietetic measures are added to the first. I shall say, indeed, that the latter are the more important of the two. I shall also say that in the experience of every man there are undoubtedly some cases in which the latter means alone without the drugs were sufficient to reduce the number of seizures. If nitrogenous food is avoided to a great extent, if the gastrointestinal tract and the kidneys are in good condition, if the elimination is in perfect order, if the quality of the wasting and eliminated materials is such that their toxicity is reduced to a minimum, we always succeed in ameliorating the condition. This is a fact recognized by all progressive therapeutists. Does it not imply that the faulty chemical reactions in the system are the main factor in the irritation of the cortex?

If the distinguished and learned neurologist places himself on the field of scientific speculations by asserting that probably the microscope has not yet revealed the minute sclerotic plagues, and that the peculiarities in the mental sphere of certain epileptics probably mean a deviation from the normal construction of the brain, with equal right is permissible a speculation in regard to a possible toxæmia of the cerebrum. The latter view is fully borne out by the clinical observation mentioned above.

It is plausible, however, to admit a special makeup of individuals suffering from epilepsy, as we very frequently meet with patients whose personal or family history will show the presence of other functional neuroses, such as chorea, hysteria, migraine, etc., and in whom any one of these neuroses is replaced some time during life by another. This constitutes a sort of degenerative basis upon which may develop any functional disease. But degenerative condition does not necessarily mean an organic change of the cortex.

As was intimated above, pathology alone is incapable of solving the problem. Chemistry and bacteriology, which have brought out very important though complicated points in the life of the cells, are the two great sciences that are gradually taking the place of pure histology in explaining various phenomena in physiological and pathological life. The chemical reactions of the normal and abnormal metabolism, the history of the toxines, and antitoxines—these are the studies to which we must look for the solution of various obscure phenomena.

ALFRED GORDON.

THE CAUSES OF SMALLPOX.

It will be remembered that at the meeting of the Association of American Physicians and Surgeons, held in Washington in May, 1902, Dr. Councilman, of Boston, described certain bodies discovered by himself and his pupils in the study of smallpox which, it was suggested, might prove to have something to do with the causation of this disease. In the discussion of this paper, as reported in our columns at the time, Dr. W. T. Howard, Jr., of the Western Reserve University, Cleveland, Ohio, stated his conviction that these bodies were really the cause of the disease. We learn from Dr. Howard that further study has strengthened his conviction on this head. The premature and unauthorized publication in the *Cleveland Plain Dealer* of what purported to be the results of Dr. Howard's studies caused us to make inquiry as to the present condition of his investigations. To our inquiry as to whether he really had announced the discovery of the cause of smallpox, as quoted, he replied as follows:

" I write to say that I have made no such discovery. I have never made such a statement, nor have I, directly or indirectly, authorized any one to do so. I have not been able, yet, to find out who gave out the recent newspaper reports that I had made such a claim. I am convinced that the bodies discovered and described by Councilman and his pupils, last spring, are the cause of smallpox, as I stated in the discussion of Councilman's paper in Washington last May. Further study since then has further confirmed and strengthened my earlier opinion. The results of our work will not be published until Dr. Councilman's full report has appeared, for we owe to his kindness, in a personal communication, our knowledge of his methods, without which we would probably not have been able to see and study the bodies he first described.

" I repudiate entirely the claims made in the recent newspaper publications. The *Cleveland Plain Dealer* published a column of jargon concerning the supposed discovery, evidently written by some one with a very elementary training. My efforts to discover the author of the statements have as yet been futile. In view of the wide publicity given the matter, I will be obliged if you will publish this letter in your valuable journal."

We have already frequently expressed our strong objection to the way in which scientific investigations are treated as ground for news " write-ups " in the lay press. They do incalculably more injury to individuals, the public, and the cause of true science, when, as is almost always the case, they are inaccurate or garbled, than their premature publication could possibly do good, even if the statements made were substantially accurate.

HYSTERICAL ASTHENOPIA AND MYOPIA.

Those conservative guides, the textbooks, have little to say yet in regard to the induction of asthenopia and myopia by hysteria, but contemporary literature shows that it is attracting attention, even though a consensus of opinion such as is greatly to be desired is still wanting. At the recent meeting of the German Ophthalmological Society, at Heidelberg, hysteria was suggested as the cause of intractable spasm of the accommodation sufficient to change the refraction of the eye from hypermetropia to a high degree of myopia, though no other symptom of hysteria was discovered. Gradle, in an article published in the *Archives of Ophthalmology*, last July, says that many patients with hysterical asthenopia complain of continual pain all day long, in and around the eyes. This symptom has attracted the attention of Dr. H. Manning Fish, of New Orleans, who, in a paper we have had in hand for some months and hope to publish at an early date, advances the somewhat novel view that many cases diagnosticated as hysterical asthenopia are really cases of acute or subacute inflammation of the frontal sinus, and that this sinusitis can be considered an ætiological factor of myopia, for reasons given. It may confidently be expected that there will be found grouped together under the term hysterical, affections of varying ætiology, that such will be separated, classified properly and then, we hope, be rendered more amenable to treatment.

A MODIFIED GIRDLING OPERATION FOR VARICOSE ULCERS OF THE LEG.

Incomplete " circumcision " of the leg appears to have proved decidedly efficacious in the treatment of varicose ulcers in the hands of Brault (*Gazette des hôpitaux*, 1903, No. 89; *Zentralblatt für chirurgie*, October 31st). He cuts through the skin and fascia for about three quarters of the circumference of the limb, the incision beginning at the inner edge of the tibia and ending at the fibula, and then stitches the lips of the wound together. The ulcers usually heal in from fifteen to twenty days.

News Items.

Society Meetings for the Coming Week:

MONDAY, *January 4th.*—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society.

TUESDAY, *January 5th.*—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, *January 6th.*—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; New York Genitourinary Society (annual meeting); Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (annual meeting), (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, *January 7th.*—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, *January 8th.*—New York Academy of Medicine (Section in Neurology); Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, *January 9th.*—Obstetrical Society of Boston (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending December 26, 1903:

	Week end'g Dec. 19.		Week end'g Dec. 26.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	566	9	438	6
Diphtheria and croup	405	40	379	50
Scarlet fever	281	18	277	30
Smallpox	..	..	1	0
Chickenpox	132	..	116	0
Tuberculosis	318	144	217	161
Typhoid fever	46	13	61	14
Cerebrospinal meningitis	..	6	0	4
Totals	1,748	230	1,489	265

The Death Rate in New York City, during the year 1903 (18.15 per mille), is the lowest known since scientific records have been kept.

The Nassau Hospital, at Mineola, L. I., has received from Mrs. Clarence H. Mackay a gift of an ambulance equipped with a complete outfit of surgical instruments and other emergency accessories.

A Successful Woman Bacteriologist.—Dr. Ellen L. Lowell, of this city, has been appointed chief bacteriologist to the Graves Pathological Laboratory of the Orange, N. J., Memorial Hospital. Dr. Lowell is a graduate of Leland Stanford, Jr., and Johns Hopkins universities.

The Chair of Experimental Zoology in Columbia University, will, it is said, shortly be occupied by Dr. Thomas Morgan, of Lexington, Ky., who has been connected with the faculty of Bryn Mawr college for the past three years.

Columbus Hospital, 226 East Twentieth Street, which is in charge of the Sisters of the Sacred Heart, desires to warn the public that they have authorized no one to collect money or food for the institution, and persons representing themselves to be collectors are frauds.

The New Norwegian Hospital at Fourth Avenue and Forty-sixth Street, South Brooklyn, will be ready for occupancy about February 1st. The top floor will be occupied by the operating theatre and fifteen private rooms, and the roof will support a garden to which patients will be carried by elevator in the summer months. The present building will henceforward be occupied by the sisters.

The New York Academy of Medicine.—A stated meeting will be held in Hosack Hall on Thursday evening, January 7th, at 8 o'clock, when a paper on Guides to the Prognosis in Epilepsy, with Remarks on the Curability of the Disease, will be read by Dr. William P. Spratling, superintendent, Craig Colony for Epileptics. The paper will be discussed by Dr. M. Allen Starr, Dr. Charles L. Dana, Dr. L. Pierce Clark, Dr. Pearce Bailey, and Dr. Frederick Peterson.

The List of Officers of the Medical Society of the Borough of the Bronx, published in a previous issue of the *Journal*, was for the year 1903. The officers elected for 1904 are: President, Dr. Gustave H. E. Starke; vice-president, Dr. Henry Roth; second vice-president, Dr. William A. Boyd; treasurer, Dr. Ernst Wilkens; secretary, Dr. Albert C. Geyser, 352 Willis Avenue; trustee for five years, Dr. W. G. Eynon. The society will meet the second Wednesdays, at 8.30 p. m., in the council room of the Metropolis Theatre Building, Third Avenue and One Hundred and Forty-second Street.

The Late Dr. Edward Fridenberg.—The Associated Alumni of the Mount Sinai Hospital through their committee, have adopted the following:

Our honored president and companion, Dr. Edward Fridenberg, has passed from among us in the fulness of life and activity. We recall with pride the fame he had achieved in the practice of his profession and the esteem in which he was held by his patients. We recall his unusual kindness, his generous courtesy, his sweet companionship, his broad fairmindedness, his remarkable breadth of character, his great love of humanity, and, above all, his great love for children. His culture and his love of the beautiful dominated his life and thought. These qualities made his life an example which we shall always cherish.

A copy of this shall be sent to the family and to each of the New York city medical papers.

For the association,

[*Signed*] { SAMUEL M. BRICHNER, M. D.,
EDWIN STERNBERGER, M. D.,
WILLIAM H. LUCKETT, M. D.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g Dec. 19.		Week end'g Dec. 26.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	90	22	66	14
Diphtheria	97	16	62	22
Scarlet fever	126	9	89	6
Typhoid fever	82	12	131	10
Consumption	..	61	..	59
Cerebrospinal fever	..	..	..	..

Camden Free from Smallpox.—It is reported that not a single case of smallpox exists in Camden, N. J., located directly across the Delaware River from Philadelphia, in which the disease is epidemic.

Scientists Meet in Philadelphia.—The following societies met this week in Philadelphia: Association of American Anatomists, Society of American Bacteriologists, the Society for Plant Morphology and Physiology, and the American Physiological Society.

The Typhoid Epidemic at Butler.—Dr. John W. Adams, a representative of the Pennsylvania State Board of Health, is reported as having stated that the typhoid fever epidemic in Butler, Pa., has spent its force. Only a few new cases are developing and only a few more deaths are expected.

Philadelphia County Medical Society. — A stated meeting of the society held on Wednesday, December 23d, included the following papers: The Value of Histological Examinations in Carcinoma of the Uterus, by Dr. Brooke M. Anspach; The Serum Treatment of Hay Fever, by Dr. Lewis S. Somers; Atrophic Rhinitis and Erysipelas, by Dr. Valentine Levi.

A New " Doctorate."—The coroner of Philadelphia recently investigated a fatal case of diphtheria, which was said to have been attended by a man, who called himself a " ceropath." When the department had been notified of the fact by a regular practitioner, it was found that this " doctor " had the letters D. S. T. after his name, which was explained by him as meaning " Doctor of Suggestive Therapeutics."

The Pathological Society of Philadelphia.—The annual exhibition meeting of the Philadelphia Pathological Society will be held on Thursday evening, January 14, 1904, at 8 p. m., at the Mutter Museum of the College of Physicians. This exhibition includes extensive gross and microscopic exhibits embracing every department of human and animal pathology. Members of the medical profession are invited to attend. D. J. McCarthy, Secretary, 1342 Pine Street.

Professor German Sims Woodhead's Lecture.—This lecture, which we shall reproduce in our next issue, was delivered at Witherspoon Hall, Philadelphia, on the evening of December 29th, under the auspices of the Henry Phipps Institute. The lecturer dwelt particularly on the hope there now exists for the consumptive, and was followed with interest by a crowded audience of intelligent people. The lecture was handsomely illustrated with admirable stereopticon reproductions of microphotographs.

To Increase the List of Communicable Diseases in Philadelphia.—Pneumonia may soon be placed on the list of infectious diseases by the Philadelphia Department of Public Health. The list of diseases which physicians must report to the health authorities is being revised and enlarged, and may include, in addition to pneumonia, chickenpox, whooping cough, tuberculosis, measles, and several other maladies. The present list has needed revision for a long time and Director Martin proposes to bring it up to date with the most recent researches in medicine. In this he has asked the cooperation of the county medical society and the College of Physicians.

" Shepherd " Crowdy Located.—In a recent issue we called the attention of the profession to a colored person, known as " Shepherd " Crowdy, who dominated over a sect in Philadelphia styling themselves as representatives of " The Church of God and Saints of Christ." In their midst several cases of smallpox had been smouldering, and these cases had been without medical care or even supervision, until through the efforts of the police, all members of the sect were vaccinated and the infected persons quarantined, as well as the places they had inhabited. Suddenly Crowdy disappeared, and it had been reported that he had fled to Europe. On December 22d the chief of police of Richmond, Va., telegraphed to the Philadelphia authorities that the " Shepherd " was found in Richmond. No formal charges against him are supposed to exist in Philadelphia, as the authorities of that city do not want him. Wherever found, he should be closely watched that he does not harbor diseased persons.

The Value of Vaccination.—The following statistics covering the years 1901 and 1902 in Philadelphia are quite significant. During that period there were admitted to the Municipal Hospital 1,878 persons suffering from smallpox. Of these only fourteen were under 14 years of age. Eight of these fourteen had good or fair vaccination marks, while six of them showed very poor marks. Not one of these fourteen children died of the disease. There were 1,532 persons over 14 years of age admitted to the hospital. Nine hundred and one of these had been vaccinated in infancy, but not since. Six hundred and eighty-eight of them had good or fair marks, while 213 had only poor vaccination scars. The percentage of deaths among those adults who had fair marks was 5, while 12 per cent. of those that had bad marks died. There were 631 people over 14 years of age admitted who had never been vaccinated in their lives. Of these 27.7 per cent. died. These figures illustrate very strikingly the value of vaccination, not only in preventing the disease, but likewise in modifying its severity. They also show that the preventive influence of vaccination is not permanent, for among these persons there were fourteen children less than 14 years of age who had been vaccinated more or less perfectly in infancy.

The Reading Railway Company's Crusade Against Smallpox.—The Philadelphia and Reading Railway Company has put itself on record as an admirable assistant to the Philadelphia health authorities for the prevention and eradication of smallpox. An order which the company has recently issued reads in part as follows: "Passenger train conductors, agents, and other employees should watch carefully for persons on trains and about stations who have a suspicious eruption on the face, and when any such are noticed, notify at once the superintendent's office, also the medical examiner, if he is within reach. If the medical examiner is not within reach, a reputable physician of the town should be called to make an investigation. The car in which a case of smallpox is discovered should at once be locked; then the names and addresses of the other passengers in the car should be taken, in order that the health authorities in their respective places of destination can be at once notified, in order that they may be kept under observation for two weeks; all unvaccinated persons should be vaccinated if the means are at hand; the car must be sidetracked as soon as possible and the other passengers allowed to proceed, but the patient and his luggage detained until proper refuge can be found for him through the health authorities of the nearest city or town. The car must then be disinfected. All employees should be vaccinated, and, in addition, any employee exposed to this disease, for his own personal protection, and in order to prevent the spreading of the disease, must be guided by such instructions as may be given by our medical examiners. In places where the disease prevails epidemically no passenger should be taken on the train without a certificate from the health officials or other authorities that they have not been exposed to the contagion."

List of Successful Candidates in the Examination Before the State Medical Board, at Philadelphia, December 15-18, 1903:

Gurdon Spicer Allyn, St. Joseph's Hospital, Lancaster, Pa.; Walter Leon Angle, Milford, Pike County, Pa.; Benjamin Franklin Baer, Jr., No. 1618 Summer Street, Philadelphia, Pa.; Ralph Bernstein, No. 1621 Chestnut Street, Philadelphia, Pa.; William Milton Biehn, Quakertown, Bucks County, Pa.; Enoch Blackwell, Pennington, Mercer County, N. J.; John Fox Blecher, Bachmanville, Dauphin County, Pa.; George Boehm, No. 6422 Howe Street, Allegheny, Pa.; Lee Boyce, No. 2513 North Thirty-first Street, Philadelphia, Pa.; George Monroe Brown Bradshaw, Hyattsville, Prince George County, Md.; John Frampton Bryson, Watsontown, Northumberland County, Pa.; Alexander J. Carroll, No. 1444 South Thirteenth Street, Philadelphia, Pa.; William Armor Copeland, No. 1431 Page Street, Allegheny, Pa.; James Hay Cunningham, No. 2021 Brandywine Street, Philadelphia, Pa.; Richard H. V. Dann, Elmira City, Chemung County, N. Y.; George Anthony Davis, No. 656 North Eleventh Street, Philadelphia, Pa.; Arter W. Deal, City Hospital, Baltimore, Md.; Henry P. Deitrick, Samaritan Hospital, Philadelphia, Pa.; Oliver V. Emery, Internal Revenue Bureau, Treasury Department, Washington, D. C.; William Samuel Evans, City Hospital, Baltimore, Md.; Raleigh Claude Farquhar, California, Pa.; Earle Clyde Glenn, No. 1417 Elk Street, Franklin, Venango County, Pa.; Max Green, No. 737 South Ninth Street, Philadelphia, Pa.; Daniel Chester Groves, Hastings, Cambria County, Pa.; James L. Harrington, Mystic, New London County, Conn.; Harry Triebner Hollmann, No. 1830 Market Street, Philadelphia, Pa.; Smith Hamill Horne, No. 1616 Pacific Avenue, Atlantic City, N. J.; Alfred Herman Johansson, No. 124 North Fifteenth Street, Philadelphia, Pa.; Albert George Kern, German Hospital, Philadelphia, Pa.; Rudolph Alexander Kern, No. 1016 Peach Street, Erie, Pa.; Joseph Packard Laird, No. 1836 Pine Street, Philadelphia, Pa.; Everett A. Lockett, No. 928 Seventeenth Street, Altoona, Pa.; Clarence Wilbur Lurting, City Hospital, Baltimore, Md.; Charles La Forge Manning, No. 804 Preston Street, Philadelphia, Pa.; John Reboe Bitner Martin, Gap, Lancaster County, Pa.; Edwin Bosworth McCready, No. 616 Chestnut Street, Philadelphia, Pa.; John R. Minehart, No. 248 West Logan Square, Philadelphia, Pa.; Darius Carrier Moore, Summerville, Jefferson County, Pa.; Edward Ralph Myers, No. 17 London Street, Pittston, Pa.; Philip Norris, No. 2122 Pine Street, Philadelphia, Pa.; Charles Wilson Parsells, No. 1221 O Street, N. W., Washington, D. C.; Guy Egbert Patterson, No. 205 North Main Street, Washington, Pa.; William Leven Powell, Polyclinic Hospital, Philadelphia, Pa.; William Pusey Roberts, No. 2323 North Eighteenth Street, Philadelphia, Pa.; William Henry Rodgers, Allegheny County Hospital, Woodville, Pa.; Amos Bowman Schnader, Pottsville Hospital, Pottsville, Pa.; Caroline Marian Francis Self, No. 2031 Oxford Street, Philadelphia, Pa.; Frederic C. Sharpless, Haverford, Montgomery County, Pa.; Lawrence A. Sheridan, Mercy Hospital, Wilkes-Barre, Pa.; Andrew Jackson Sherwood, Union City, Erie County, Pa.; Clark Monroe Smith, Grange, Jefferson County, Pa.; Andrew Franklin Snively, Samaritan Hospital, Philadelphia, Pa.; John Joseph Stanton, St. Joseph's Hospital, Philadelphia, Pa.; Benjamin Webster, No. 1147 Erie Avenue, Williamsport, Pa.; Emil M. Welty, Philadelphia Hospital, Philadelphia, Pa.; James Osborne Wilson, Wick Haven, Fayette County, Pa.; Florence Belle Wyant, Adrian, Armstrong County, Pa.

GENERAL

Statement of Mortality in Chicago, Ill., for the Week Ending December 26, 1903, compared with the preceding week and with the corresponding week of 1902:

	Dec. 26, 1903.	Dec. 19, 1903.	Dec. 27, 1902.
Total deaths, all causes	514	550	598
Principal causes of death—			
Acute intestinal diseases	14	20	36
Apoplexy	8	15	19
Bright's disease	30	40	35
Bronchitis	26	21	22
Consumption	49	53	50
Cancer	21	21	19
Convulsions	14	18	14
Diphtheria	15	15	18
Heart disease	53	43	50
Influenza	2	3	4
Measles	4	0	7
Nervous diseases	25	33	29
Pneumonia	139	95	91
Typhoid fever	7	11	39
Scarlet fever	2	7	11
Suicide	8	11	4
Violence, other than suicide	20	40	15
Whooping cough	1	1	12

The Utica General Hospital, at a meeting of its medical staff on December 21st, elected Dr. George Seymour president.

The Atlanta, Ga., Society of Medicine has elected the following officers for the coming year: President, Dr. A. W. Sterling; vice-president, Dr. E. B. Block; secretary, Dr. W. B. Emery; treasurer, Dr. E. Van Goldtsnoven.

The Carroll County, Ky., Medical Board, at its meeting at Carrollton on December 17th, elected these officers: President, Dr. N. C. Brown; vice-president, Dr. B. L. Holmes; secretary, Dr. F. M. Gaines; treasurer, Dr. John Adcock.

The Medical Union of Buffalo, at its regular meeting on December 23rd, elected as officers: President, Dr. Henry D. Ingraham; vice-president, Dr. Harry Mead; secretary and treasurer, Dr. Vertner Kenerson.

The University of Vermont, whose medical building was recently destroyed by fire at Burlington, is prepared to spend $100,000 to replace the structure in a style comparing well with the other handsome buildings of the institution. Plans and specifications will be received from architects.

The Officers of the Milwaukee County, Wis., Medical Society for the coming year are: President, Dr. Gilbert E. Seaman; vice-president, Dr. R. J. Teschan; secretary, Dr. A. W. Gray; treasurer, Dr. Joseph Culin.

The Mercer County, Ky., Medical Society elected the following officers on December 11th: President, Dr. C. W. Sweeney; vice-president, Dr. J. H. Tripp; secretary, Dr. W. D. Powell; treasurer, Dr. C. B. Van Arsdall.

Book and Journal Club of the Medico-Chirurgical Faculty of Maryland.—At a meeting in the faculty hall on December 16th, Dr. William Osler read a paper on Gleanings Among the Old Bookshops in Paris and London.

The Allen County, Ind., Medical Society elected officers for the coming year at their meeting on December 8th, as follows: President, Dr. E. E. Morgan; vice-president, Dr. A. E. Van Buskirk; secretary, Dr. J. C. Wallace; treasurer, Dr. W. P. Whery.

The Daviess County, Ky., Medical Society met on December 15th and elected officers for the coming year: President, Dr. J. P. Heaverin, of Owensboro; vice-president, Dr. McDonald, of Whitesville; secretary and treasurer, Dr. J. J. Rodman, of Owensboro.

The Shelby County, Ind., Medical Society, at its meeting on December 16th, elected the following officers: President, Dr. F. E. Ray; vice-president, Dr. J. W. Parrish, of Fenns; secretary, Dr. Bayard G. Keeney, of Shelbyville; treasurer, Dr. H. E. Phares, of Shelbyville.

The Jefferson County, Ky., Medical Society held its fifth regular meeting in the Galt House, Louisville, on December 15th, and elected the following officers: President, Dr. H. H. Grant; vice-president, Dr. Hobson; treasurer, Dr. Sidney J. Meyers; secretary, Dr. Henry Tuley.

The Northwestern Ohio Medical Association, at the meeting on December 12th at Toledo, elected officers as follows: President, Dr. H. B. Gibbons, of Tiffin; vice-presidents, Dr. E. Greenfield, of Toledo; Dr. L. A. Fast, of Paulding; secretary, Dr. A. S. Rudy, of Lima; treasurer, Dr. T. M. Gehrett, of Deshier.

Double Epidemic in Boone County, Ky.—Business in this county is at a standstill, owing to a double epidemic of measles and chickenpox, about 500 cases of each having been reported. So serious is the situation that the judge of the circuit court has had to postpone cases on account of the inability of important witnesses to appear.

At the Columbia Hospital, Washington, D. C., on December 19th, the resignation of Dr. Julian M. Cabell as superintendent was accepted, and Dr. J. O. Skinner was appointed to fill the vacancy thus created. Dr. Cabell has been superintendent for many years, and on his desiring to take up private practice, he was honored with a letter from the board of trustees commending highly his administration.

South Dakota Board of Medical Examiners.—The regular semi-annual meeting of the South Dakota Board of Medical Examiners will be held January 13 and 14, 1904, at Sioux Falls (Cataract Hotel), when examinations of applicants for license to practice will be held. H. E. McNutt, Secretary.

McLean Asylum, of Waverly, Mass.—Dr. Edward Cowles, after twenty-four years of active service as superintendent of this institution, has decided to retire, and will be succeeded by Dr. George E. Tuttle. Dr. E. Stanley Abbot, now assistant superintendent of the Boston City Hospital, and formerly connected with the McLean Asylum, will return as first assistant physician to resume a kind of work in which he has always been interested.

The New Management of the Cincinnati Lancet-Clinic has appointed the following physicians members of its editorial staff: Dr. Joseph Eichberg, Dr. Mark A. Brown, and Dr. W. Muehlberg, general medicine; Dr. H. W. Bettman, digestive diseases; Dr. P. S. Connor, Dr. H. A. Ingalls, Dr. John C. Oliver, and Dr. Horace J. Whitacre, surgery; Dr. Rufus B. Hall, Dr. John M. Withrow, Dr. Charles L. Bonifield, and Dr. Magnus A. Tate, obstetrics and gynæcology; Dr. M. L. Heidingsfeld, dermatology; Dr. C. E. Caldwell, orthopædic surgery; Dr. E. W. Mitchell and Dr. Alfred Friedlander, diseases of children; Dr. F. W. Langdon and Dr. David Wolfstein, nervous and mental diseases; Dr. D. T. Vail, ophthalmology; Dr. C. R. Holmes, otology; Dr. J. A. Thompson and Dr. W. E. Murphy, laryngology and rhinology; Dr. Julius Eichberg, therapeutics; Dr. W. J. Taylor, electrotherapeutics; Dr. Byron Stanton and Dr. Benjamin F. Lyle, hygiene and public health, and Dr. Albert O. Zwick, foreign literature.

American International Congress of Tuberculosis.—United States Senator S. S. Elkins has accepted honorary membership in this body, and the governments of Buenos Aires and Jamaica have promised to send delegates to the convention. The following gentlemen have also accepted the office of vice-president, honorary or active:

> Dr. Edwin Walker, president of the Mississippi Valley Medical Association, of Evansville, Ind.; Dr. G. W. McCaskey, of Fort Wayne, Ind., ex-president of the Indiana State Medical Association, and Dr. Jonas Stewart, of Anderson, president of the State Medical Society of Indiana; Governor George C. Pardee, of California; Dr. Denslow Lewis, of Chicago; Dr. William E. Quine, of Chicago; Professor Dr. Herman Kornfeld, of Gleiwitz, Silesia, Germany; Dr. T. G. Roddick, M. P., of Montreal, Quebec; Sir William Hingston, M. D., of Montreal, Quebec; Honorable Senator George A. Drummond, M. D.; James Loudon, president of the University of Toronto; Dr. W. P. Caven, of Toronto, Ont.; Dr. Daniel Clark, of Toronto (vice Henry B. Baker, not qualified); Dr. R. W. Powell, of Ottawa, Ont.; Dr. W. H. Moorehouse, of London, Ont. (vice Dr. C. S. Wilbur, not qualified); Honorable L. A. Emery, of the Supreme Bench of Maine, and Professor of Medical Jurisprudence; Professor F. N. Whittier, of New Brunswick, Me.; Professor Dr. Norman Bridge, of Los Angeles; Professor Bert Ellis, of Los Angeles; Dr. S. M. Pottinger, of Los Angeles; Dr. A. K. Foster, of Sacramento, Secretary of the State Board of Health; Dr. Winslow Anderson, of San Francisco; Professor John T. Moore, of the University of Texas, and Dr. Charles Wood Fassett, of Missouri.

Pith of Current Literature.

DEUTSCHE MEDIZINISCHE WOCHENSCHRIFT.

November 19, 1903.

1. Diagnosis of Gastric Ulcer by the Presence of Hidden Blood in the Fæces, ... By I. Boas.
2. Prophylaxis of Gastric Cancer, By W. Alexander-Katz.
3. Mobility of the Heart, By H. Silbergleit.
4. Isolated Rupture of Lateral Ligaments of the Knee, By F. Pagenstecher.
5. Tuberculosis in a Hernia, By W. Abel.
6. Perforation of the Stomach by a Gallstone, By O. Fleck.
7. Prophylaxis of a Malaria Epidemic by Quinine (*Concluded*), By P. C. Korteweg.

1. **Diagnosis of Gastric Ulcer.**—Boas says that a negative blood examination of the fæces does not exclude the existence of an ulcer of the stomach. The stool of a suspected person should be examined several times before a final decision is reached. The positive presence of blood in the fæces found by chemical examination, is, however, of great, but not of decisive, value in the diagnosis of gastric ulcer. Boas recommends Klunge and Schaer's method of testing for the blood. A small quantity of aloin is placed in a reagent glass and from three to five c. c. of sixty to seventy per cent. alcohol is added, and the whole gently shaken. An extract of the fæces, prepared with glacial acetic acid and ether, and having twenty-five drops of turpentine added to it, when mixed with the aloin solution, will give a bright red reaction if blood is present. If no blood is present, the aloin becomes rose-red in an hour or two, and later assumes a yellowish color.

2. **Prophylaxis of Gastric Cancer.**—Alexander-Katz recommends making the burden of the stomach as light as possible. Thorough chewing of the food is the first essential, its thorough preparation comes next, and the drinking of abundant water with dry meals is another important element. For the avoidance of ulcers and scars in the gastric mucosa, which might lead to malignant degeneration, the author recommends the thorough treatment of chlorosis anæmia, and hyperacid disturbances, the avoidance of excesses and errors in diet, such as the eating of very hot and very cold food, irregular, too frequent and too rich food.

5. **Hernial Tuberculosis.**—Abel reports a case in which a hernial sac was found to be tuberculous. The diagnosis of this condition is very difficult, eighty per cent. of the cases not being correctly diagnosticated. A diagnostic point of value consists in the presence of fluid in a hernial sac which presents a thickened, nodular appearance: the fluid can be returned into the abdominal cavity by pressure with the patient in the recumbent posture, but returns into the sac when he sits up. The prognosis is favorable, if other organs are not deeply involved. The treatment is surgical. The ætiology of such cases is similar to that of peritoneal tuberculosis.

LYON MEDICAL.

December 6, 1903.

1. Treatment of Syphilis (*Continued*), By Gailleton.
2. Malignant Tumor of the Parotid Gland, By G. Leclerc.

1. **Treatment of Syphilis.**—Gailleton now turns his attention to the eliminatory medication, comprising purgation, diuresis, and sudorific drugs; plenty of water or bland drinks should be taken to favor the process, and sulphur or alkaline baths, followed by friction of the skin are valuable. The tonic treatment is then taken up, and advice is given to avoid fatigue, hard work, late hours, and particularly the use of alcohol in any form. Anæmia and a loss of nerve force often accompany the disease throughout its course and the system must be kept up. Worry from overstudy or business troubles should be warded off, if possible. Iron in almost any form is valuable, the phosphates particularly for young subjects. Cod liver oil is used with advantage in northern countries. Hydrotherapy may be employed. A warm climate is beneficial to those who can travel. There is no doubt that long and careful treatment of the secondary stage prevents serious trouble in the tertiary. (*To be continued.*)

PRESSE MEDICALE.

November 28, 1903.

1. Action of Iodine on Lymphoid Tissue, By Marcel Labbé, and Lortot-Jacob.
2. Ankylostomiasis in France, By J. P. Langlois.

1. **Iodine and the Lymphatic System.**—Labbé and Lortot-Jacob found by their experiments on animals that the effect of iodine was invariably to cause great activity of the cells of the spleen and ganglia, but never necrosis; pure iodine causes a disappearance of the eosinophiles, but the iodides develop a real eosinophilia; the latter also cause much greater congestion than iodine. Iodine is therefore of value when these organs are threatened with infection, and in subacute and chronic adenitides and ganglionic tuberculosis. The good effects are due not to an attenuation of the poison, but to the stimulation of healthy reaction. Perhaps we may find iodine useful in the future to protect the organism against toxic infection generally.

2. **Ankylostomiasis.**—Langlois sums up the prophylaxis as requiring better ventilation and drainage where underground work is proceeding; examination of workmen before engaging them; keeping them under careful observation; treating them in special dispensaries when attacked; obligatory registration of all new cases; establishment of surface water closets and shower baths; education of workmen as to personal hygiene, and the particularly bad influence of alcoholic excess.

December 2, 1903.

1. Removal of the Crystalline Lens in the Treatment of Myopia, By A. Trousseau.
2. Reticulation of the Sigmoid Valves of the Heart in Man, By Charles Garnier.

1. **Removal of Lens in High Myopia.**—Trousseau points out that removal of the lens in a highly myopic eye causes a hyperopia of 15 to 20 dioptres, more than would be expected a priori, if the corneal condition and length of the optic axis are not taken into account. It may be done where myopia is progressive or where it produces ocular weakness apart from the mere myopia, but it is a dangerous operation.

REVISTA DE CINCIAS MEDICAS DE BARCELONA..

Year XXIX, No. 8, 1903.

1. Cancerous Degeneration of Simple Ulcer of the Stomach, By A. LLORET.

1. **Cancerous Degeneration.**—Lloret believes that cancerous degeneration of gastric ulcers is of more frequent occurrence than generally supposed; the difficulty in diagnosticating this change during life, and the infrequency with which autopsies are performed in such cases, accounting for the apparent rarity of the complication. Cancer may develop in a cicatrized ulcer or during the period of its activity; and its site may be the borders of the ulcer, the ulcer proper, or its cicatrix. In a limited number of cases, the distinction between the active gastric ulcer and the period of its cancerous degeneration may be made in life, according to the author, before well-marked symptoms of the fully developed cancer make their appearance. A characteristic of cancerous change occurring in a chronic ulcer, is the pain; this latter being at first the intermittent pain of gastric ulcer coming on after ingestion of food, and relieved by evacuation of the stomach, by vomiting, and during the period of cancerization becoming constant and of an intensity far greater and more constant than the pain of a fully-developed cancer. This feature Lloret considers pathognomonic of the process of cancerization. Absence of appetite is pronounced, the patient becomes emaciated, anæmic, and exhausted, but not cachectic. Vomiting is frequent, not fœtid; and the vomitus may be tinged with blood, or gastrorrhagia may be severe. Melæna may be seen, but is less marked than in gastric ulcer, and is of longer duration; lasting for days rather than hours, as it does in gastric ulcer. Though hyperchlorhydria is present in ulcer and achlorhydria in cancer, in the author's experience the condition of hyperchlorhydria persists in cancer which follows gastric ulcer.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

September 20, 1903.

1. An Epidemic of Typhoid Fever, By FRANCESCO MINELLA.
2. A Case of Chickenpox with Accompanying Monoplegia of the Right Arm, By GINO ROSSI.
3. Röntgen Rays in Surgical Diagnosis, By F. FUMAIOLI.
4. Baccelli's Method of Treating Tetanus, By ENRICO ECHARDT.
5. Methylatropine Bromide, By G. CAMPANELLA.
6. Bilateral Keratoconjunctivitis Secondary to Articular Rheumatism, By CESARE ORTALI.
7. Some Observations Upon the Biology and Morphology of the Tubercle Bacillus in Media Adopted to Its Development, By G. GUYOT.

4. **Baccelli's Treatment in Tetanus.**—Echardt reports a case of tetanus in a child in which the treatment consisted of injections of carbolic acid, according to Baccelli's method. The patient received 142 injections of three per cent. carbolic acid within thirty-eight days, consuming in all 4.17 grammes of carbolic acid without any inconvenience. The maximum daily dose was 18 centigrammes, the weight of the child was 19 kilogrammes (41 lb. 14 oz.). The case was a very severe one, and during the first few days after the treatment had been begun, there were intense symptoms of carbolic acid poisoning, which disappeared in spite of the fact that the treatment was continued with higher doses. The child recovered.

5. **Methylatropine in Asthma.**—Campanella reports good results with subcutaneous injections of methylatropine bromide in asthma. In two cases severe paroxysms were relieved within two minutes by the injection of a syringeful of a one per cent. solution of the salt mentioned. In one patient there followed ischuria, dryness of the mouth, and vertigo; in another vomiting on the following morning. In a third patient the paroxysm was relieved, but reappeared within fifteen hours. In another case there were persistent vomiting, excitement, and loss of vision due to dilatation of the pupil. The new salt, therefore, does not produce such marked cerebral symptoms as the sulphate, but it does at times produce some disturbances. It is very prompt in its action in asthmatic paroxysms.

6. **Conjunctivitis After Rheumatism.**—Ortali describes a case in which there was a catarrhal conjunctivitis and a peripheral keratitis after a severe attack of rheumatism. The cornea was infiltrated at its margin, the opacity extending inward for some distance, but merging gradually into the normal transparent centre of the cornea. This secondary purulent keratitis may be found as the result of a number of infectious diseases, but in this instance it was the result of rheumatism. The keratitis improved as the condition of the joints got better. The author is inclined to accept the infectious theory of rheumatism, and to consider the conjunctivitis and keratitis as an infection in this case.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

September 27, 1903.

1. On the Pathogenesis and Treatment of Common Goître, By GIOVANNI MIGLIACCI.
2. Morton's Disease, or Metatarsalgia, By GIACOMO BAZZOCCHI.
3. Contribution to the Treatment of Tuberculous Peritonitis by Means of Iodine Injections (Durante's Method), By NAZARENO PALOMBARI.
4. A Case of Medullary Leucæmia Studied in the Blood Reports, By CARLO CAVALIERI DUCATO.

3. **Treatment of Tuberculous Peritonitis by Durante's Method.**—Palombari reports three cases in which he treated tuberculous peritonitis with success by means of subcutaneous injections of iodine (Durante's method). One gramme of the Durante's solution was given daily in the region of the abdomen. It consists of one part of

metallic iodine, ten parts of potassium iodide, twenty parts of guaiacol, as an anæsthetic, and eighty parts of sterilized glycerin. In one case, after eighty injections the fluid in the abdomen completely disappeared and there were no symptoms on the part of the intestines. Palombari thinks that the action of the iodine in these cases is to counteract the general infection by raising the resistance of the tissues and increasing their nutrition.

RIFORMA MEDICA.

October 21, 1903.

1. The Bacillus of Yellow Fever in the Peritonæum. In the Course of an Experimental Infection, By G. Q. Ruata.
2. The Treatment of Varicose Veins and Ulcers by Means of Circular Incisions of the Leg. Practical and Experimental Observations, By U. D'All Acqua.
3. Mixed Typhoid and Diplococcus Infection. A Clinical and Bacteriological Study ,with Special Reference to the Widal Reaction (*Concluded*), By C. Quadrone, and E. Cler.

1. **Sanarelli's Bacillus in the Peritonæum.**—Ruata finds that Sanarelli's yellow fever bacillus possesses a remarkable antipathy for the peritoneal cavity, and is distinguished thereby from other germs, such as the typhoid bacillus and the colon bacillus. It scarcely ever appears in the peritonæum when inoculated into animals, although a general infection of the various organs follows. On the other hand, the typhoid bacillus and the colon bacillus show marked preference for the peritonæum in experimental infection. The fact that the yellow fever germ finds no favorable ground in the peritonæum constitutes a biological distinction between it and the germs that resemble it in morphology—the colon bacillus and the typhoid bacillus.

2. **Circular Incisions in Varicose Veins.**—D'all Acqua reports eight cases of varicose veins and ulcers of the leg that had been operated upon by Moreschi's method. Moreschi holds that, in order to cure varicosities, it is necessary to divide the column of blood, which, by its weight, distends the veins, to prevent collateral venous return after this interruption; to diminish the lumen of the vessels and, if possible, to obliterate them. A circular incision is made through all the tissues down to the aponeurosis, about four centimetres above the highest ulcer. Thus all the veins are cut and the larger ones are then ligated. The edges of the wound may be approximated with a few stitches, but preferably are left to heal by second intention. A second circular incision is made about one centimetre above the malleoli, down to the aponeurosis, and the veins, even the deep ones, are cut and tied. Finally the ulcers are treated by skin-grafting. A variety of modifications of this operation have been introduced, such as the ligation of the vein in the saphenous opening, in addition to the incisions, the subcutaneous ligation of all veins by means of a circle of cat gut, etc. D'all Acqua sums up his results as follows: Moreschi's operation does not do any of the things that it was expected to do. It does not interrupt the communication between the superficial and the deep circulation, does not offer any impediment to new collateral ways. Hence the many cases of recurrence. It does, however, cause the disappearance of the pain in the limb for a time, and causes the cicatrization of the ulcers. Moreschi's method is not founded upon exact scientific premises.

AMERICAN MEDICINE.

December 26, 1903.

1. Typhoid Fever and Tuberculosis, By William Osler.
2. Retrodisplacements of the Uterus, By J. M. Baldy.
3. The Results of the Surgical Treatment of Ascites Occurring in Cirrhosis of the Liver, with the Report of a Case, By Herman B. Allyn.
4. Sarcoma of the Abdominal Wall, and Probably of the Pelvic Viscera, which Has Disappeared Under the Use of the Röntgen Rays, By George Erety Shoemaker.
5. The Islands of Langerhans in Congenital Syphilitic Pancreatitis, By Richard M. Pearce.
6. Some Experiments with Radium on Bacteria, By Frederick Van Beuren, Jr., and Hans Zinsser.

1. **Typhoid Fever and Tuberculosis.**—Osler reports two cases, in order to illustrate the important relationship which may exist between typhoid fever and tuberculosis. (1) The diseases may be concurrent. Of 80 autopsies in typhoid fever, 4 presented marked tuberculous lesions. (2) Typhoid fever may be mistaken for tuberculosis. This probably rarely occurs. (3) Tuberculosis may be mistaken for typhoid fever. This mistake is probably fairly frequent. There are five types of tuberculous infection that may simulate typhoid fever: *(a)* The acute miliary form; *(b)* tuberculous meningitis; *(c)* tuberculous peritonitis; *(d)* the acute toxæmia of certain local lesions; and *(e)* forms of pulmonary tuberculosis. The profession is not fully alive to the importance of keeping in mind the last two types of tuberculosis mentioned. (4) In rare cases pulmonary consumption follows typhoid fever. The statement is often made that patients recovering from typhoid fever are prone to develop tuberculosis. Osler does not believe that this statement is borne out by the facts; it is more likely that many of the patients that have been thought to have developed phthisis were tuberculous from the outset. The cases reported by the author show how difficult it is at times to make a correct diagnosis, even when one can command the aid of trained assistants and laboratory experts, as Osler can at Johns Hopkins.

2. **Retrodisplacements of the Uterus.**—Baldy lays stress on the fact that retrodisplacements of the uterus are, with few exceptions, not independent conditions, but symptoms. He announces this rule: "Retrodisplacements of the uterus are most coincident with other lesions, and when such is the case, the symptoms almost universally come from the associated disease." As to pessaries, the author asserts, that it would be better for women if the profession could forget that there were such things. Very occasionally they may do good, not by what they do to the uterus, but by raising prolapsed ovaries. The only form of treatment that meets the

author's approval when it becomes necessary to give a woman who has a prolapsed womb relief, is intraabdominal operation on the round ligaments. By this operation the uterus can be restored to its normal position and, what is more important, an accurate diagnosis can be made and all pelvic conditions corrected. It will only be a short time before Alexander's operation, hysterorrhaphy, ventrosuspension, and similar operations become matters of history. To those who think that opening the abdomen is too dangerous a procedure for the relief of the condition under discussion, the author answers: "With any one who sees this (opening the abdomen) as a serious danger or objection under the circumstances I do not care to discuss the subject; I simply have no faith in his surgical judgment or skill."

3. **The Results of Talma's Operation.**—Allyn reports one case of his own and reviews the statistics so far published. The patient, whose case the author reports, died ten days after operation. The author, speaking as a physician (he is not a surgeon), asserts his belief that in suitable cases Talma's operation deserves further trial.

6. **Radium.**—Van Beuren and Zinsser report six experiments with 12 milligrammes of radium of an estimated radioactivity of 300,000. Their results disagree with those which other observers have published. The authors conclude: "The failure in this little series of experiments to adduce positive evidence of any bactericidal or tissue-altering properties of radium may have been due to the interposition of glass between the active substance and the matter to be acted upon, or to the interference of light, or, more probably, to the shortness of the exposures. Keeping this in mind, it seems, however, fair to say, that these observations tend toward the conclusion that radium, in the amount and of the radioactivity at present obtainable, gives promise of achieving the brilliant bactericidal and therapeutic results prophesied for it by the enthusiastic paragraphers of the public prints."

BOSTON MEDICAL AND SURGICAL JOURNAL.

December 24, 1903.

1. The Responsibility of the Medical Examiner, By Herbert Parker.
2. Diffuse (Combined) Degeneration of the Spinal Cord, By E. W. Taylor, and G. A. Waterman.
3. Historical Notes on the Laws Governing Civil Malpractice in the Ancient Times and Middle Ages, By Charles Greene Cumston.
4. The Bitzer Homicides, By George P. Twitchell.
5. Malaria and Mosquitoes of Worcester. A Year's Observations on the Habits of Culex and Anopheles (*Concluded*), By William W. McKibben.

2. **Diffuse Degenerations of the Spinal Cord.**—Taylor and Waterman report their two cases as a contribution to the subject of combined lesions of the spinal cord. There is so much confusion in the classification of such cases that the authors deem it important that as many as possible be placed on record, so that in time a satisfactory basis for classification may be reached. As the value of the article depends on the minuteness with which the two cases are reported it is not expedient to furnish an abstract.

5. **Malaria and Mosquitoes of Worcester.**—McKibben concludes in this number his article on Worcester mosquitoes. Incidentally he gives a fair account of the culex and anopheles varieties of mosquitoes, describes their habits, and illustrates, by numerous plates, their development from the egg to the full grown insect. What happened in Worcester was this: First a lot of Italians, from the malarial districts of Italy, were imported to serve on various public works. Secondly, a number of malaria-infected soldiers arrived from Cuba and elsewhere. This was about five years ago. Worcester is surrounded by many swamps and ponds and has also a number of small streams. With such a favorable combination of circumstances it is not surprising that malarial fever became endemic. A crusade of words was undertaken and prosecuted with laudable zeal. It appears to have excited interest but not organized action, and of course malarial fever in Worcester continues endemic.

MEDICAL NEWS.

December 26, 1903.

1. Predispositions to Tuberculosis, By John B. Huber.
2. The Indications for the Ligation of the Internal Jugular Vein in Lateral Sinus Thrombosis, By Seymour Oppenheimer.
3. Chorda Venerea, By G. S. Peterkin.
4. On the Reflex Eruptions of the Skin from Morbid Alterations in the Male Urethra. By A. Ravogli.
5. The Treatment of Some Diseases of the Eye by Warm Medicated Sprays, By David T. Marshall.

1. **Predispositions to Tuberculosis.**—Huber divides his subject into three parts: (1) Hereditary factors; (2) factors that act perniciously between conception and birth, and (3) postnatal predispositions. (1) The inheritance of physiological peculiarities, the author asserts, is more frequent and more important than the inheritance of mere anatomical peculiarities. Tuberculous parents may not bequeath definite stigmata; nevertheless they often do impart a pernicious nutritive habit to their offspring. It is this degenerated condition of the tissues and organs that makes the offspring a fruitful soil for microbic germination. (2) Congenital infection with the tubercle bacillus does rarely occur. It is not of much importance. What is of importance is, that bodily or psychic disorders in the parents, even when slight and transient, may induce a state of vicious nutrition in the child, making its organism receptive to infection, tuberculous or otherwise. (3) The postnatal conditions that favor tuberculosis are many. The author believes that infection occurs most frequently through the intestinal canal. Many disturbances of digestion which prevent the destruction of the bacilli in the stomach, will favor the absorption of the live bacilli. The changes produced by alcohol and syphilis favor the development of tuberculosis. The other postnatal factors that favor the development of tuberculosis are so well understood that they need not be reviewed.

2. **Sinus Thrombosis.**—Oppenheimer considers the indications for the ligation of the internal

jugular vein in lateral sinus thrombosis under three heads. (1) Primary ligation before exposure of the sinus or operation on the mastoid. (2) Ligation after the sinus has been exposed but before it has been opened. Under these circumstances there are two indications for ligation: *(a)* When there is a clot whose lower portion has begun to disintegrate. *(b)* When the movements of respiration are seen transmitted to the sinus. (3) Ligation after the sinus has been exposed and opened. The author sums up his views thus: "From the cases of sinus phlebitis, both with and without involvement of the jugular vein, that have come under my observation, it has seemed advisable for the best interests of the patient to ligate the vein whenever local symptoms indicating its involvement were present. When the patient presented evidences of sepsis and especially irregular temperature and rigors and when after the mastoid has been opened, the presence of pus was evident in the vessel."

3. **Chorda Venerea.**—Peterkin gives his views on the treatment of gonorrhœa in general. This part of his paper does not differ materially from similar contributions. The one point, for which he claims originality, is this: Massage of the prostate and seminal vesicles in acute gonorrhœa will prevent chordee. "In conclusion, I will state that this paper is the result of a clinical observation of 54 cases of gonorrhœa, 20 of which were acute primary gonorrhœas, and of 10 circumcisions (uncomplicated by gonorrhœa), 5 of which were massaged to prevent erections. Of the 5 massaged, none were troubled with erections. Of the 5 unmassaged, 3 were. With this number of cases, I consider my experience to date sufficient only to warrant the advocacy of this treatment of chorda venerea in the hope that time and the experience of others will demonstrate its practical utility."

4. **Eruptions Due to Alterations in the Male Urethra.**—Ravogli asserts that there are two forms of skin lesions that are often due to alterations in the condition of the urethra—herpes and pruritus. He details at great length the treatment he usually employs in overcoming the chronic urethral conditions that have given rise to the skin symptoms. The results he has obtained have been very gratifying.

5. **Treatment of Some Eye Affections by Sprays.**—Marshall asserts that spraying with warm medicated sprays is indicated in almost all diseases of the conjuctiva, such as acute catarrhal, chronic, epidemic, gonorrhœal, trachomatous, and phlyctenular conjunctivitis; in diseases of the cornea, such as ulcer; infiltration and interstitial keratitis, and in iritis. The method is simply this: a steam atomizer, such as is commonly used in spraying the throat, is filled with water, the alcohol lamp is lighted and a solution of the remedy indicated is put in the cup. The patient is seated in front of, and close up to the atomizer, at such a level that his eye looks directly into the tube. When the spray is well started the lower eyelid is pulled down and the patient is directed to hold his eye wide open. The spray is directed alternately into one eye and then into the other, the duration of the treatment being from five to ten minutes. After spraying, the eye may be touched with bluestone or alum stick or applications of drops or ointment may be made as is indicated. These agents seem to act more effectively when applied immediately after the warm spray.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

December 26, 1903.

1. The Causes of the Occasional Failure of Operation to Cure Gallstone Disease, By William J. Mayo.
2. Intestinal Antiseptics; Their Uses and Limitations, By J. A. Storck.
3. Notes on Pulp Technic, By Martha Anderson.
4. A Simple Method of Treatment of Hæmangeioma, By Carl Beck.

1. **Gallstone Disease.**—Mayo considers that, on the whole, surgery of the gall bladder is one of the most satisfactory branches of our art. The following are some of the chief causes of the occasional failure of operation to cure gallstone disease: (1) Delay in seeking surgical relief leads to complications. (2) Failure to remove all the stones. Stones in the cystic duct frequently escape detection. In most cases where a stone is impacted in the cystic duct cholecystectomy is indicated. (3) Secondary obstruction of the cystic duct occasionally occurs after cholecystotomy. (4) The fistula is at times allowed to close too quickly. (5) Stones are at times overlooked in the common duct and may lie quiescent for years. (6) Chronic pancreatitis may exist at the time of operation. In such cases drainage must be continued for a long time. (7) After cholecystotomy the gall bladder is at times attached too high up. (8) Postoperative adhesions at times cripple the function of the gall bladder. (9) Hernia may at times follow operation on very fat subject. If the incision has to be made very long, as in cases where the appendix is also removed, it is wise to close completely the abdominal wound and make a separate lateral wound for drainage.

2. **Intestinal Antiseptics.**—Storck reviews the various drugs that have from time to time been suggested as intestinal antiseptics and does not seem to consider any of them of any great value. One of the best is perhaps calomel. He concludes his paper as follows: "(1) Never lose sight of the patient. (2) Holt says that no matter how much we believe in drugs, if they continue to disturb the stomach they are worse than useless. (3) Care should be exercised in the selection of a proper antiseptic; it should be non-toxic and non-irritating. (4) Care should be exercised in the selection of the diet, that it be of such a character as not to favor bacterial growth."

4. **The Treatment of Hæmangeioma.**—Beck recommends the following method for the treatment of hæmangeioma: "The method consists in the general principle of transforming the masses of vessels gradually into connective tissue. Gradually means in several sittings. This is done by a subcutaneous suture. A thread of catgut is passed in a zigzag manner, first below the skin, then underneath the base of the tumor; then,

again, underneath the skin, underneath the tumor, etc., until the tumor mass is included in this continuous suture. This suture is drawn tight and closed at the point of the entrance of the needle. In this manner the circulation is shut off within the tumor, but no gangrene follows, inasmuch as some blood can yet reach the parts not included in the suture. After about a week the mass of the tumor seems much smaller. The normal epidermis, however, outside of it, which had been stretched, sometimes to considerable tension, becomes soft and elastic again and grows. This procedure is repeated until the tumor has been diminished to the smallest possible nodule of connective tissue, and the healthy skin enlarged to the utmost. Then the hard connective masses are excised and the skin is brought together by fine stitches."

MEDICAL RECORD.

December 26, 1903.

1. Tumors of the Ponto-Medullo-Cerebellar Space. Acoustic Neuromata. (Central Neurofibromatosis), By Joseph Fraenkel, and J. Ramsay Hunt.
2. The Present Status of the Treatment of Lateral Curvature, By Jacob Teschner.
3. Intestinal Fermentation, as It Interests the Surgeon, By Robert T. Morris.
4. The Submucous Resection of the Nasal Sæptum, By Felix Cohn.

1. **Central Neurofibromatosis.**—Fraenkel and Hunt report five cases, with autopsies, of neurofibromatosis of the cranial nerves. Three were cases of tumors of the acoustic nerve; one a case of bilateral tumor of the acoustic, and one was a case of tumor of the trigeminus. A number of very good illustrations add interest to the paper. The prognosis, unless operative intervention is invoked, is hopeless. Removal of the growths, though dangerous on account of their location near vital centres, should not be considered hopeless. The loose attachment of the tumors and their non-malignant character would seem to justify the hope that with improved technics the prognosis in such cases may become more favorable. The diagnosis of the condition should present no insurmountable difficulties to the neurologist. The authors discuss at length the ætiology, pathology, symptomatology, and diagnosis of these tumors. The five case histories and autopsy protocols conclude the paper.

2. **The Present Status of the Treatment of Lateral Curvature.**—Teschner asserts that it is high time that the general practitioner should be concisely informed as to the true status of the treatment of lateral curvature. If we apprehend the author's meaning correctly, the true status is this: All methods, with one exception, are of no avail. The advice of the leading textbooks is, when not harmful, a mass of glittering generalities, and the practice of the leading surgeons in this field leads to little or nothing that is useful. The only method that is of avail is the one originated by the author, which he has practised for a number of years with gratifying results. The author's method consists in proper exercises and the abandonment of all forms of braces. More definite than this we cannot be. In criticising Bradford and Lovett for their indefinite attitude toward his method, the author says: "Neither of the gentlemen has ever seen a demonstration by the author of this method, and as no one can be expected to obtain results by it unless he has not only seen it, but has also been properly trained in its application, the cause is obvious."

3. **Intestinal Fermentation.**—Morris is curious to know what proportion of cases of intestinal fermentation are really medical cases and are not curable by surgical means. It seems to be the author's belief, though he nowhere says so definitely, that the number of cases that are truly medical is exceedingly small. The surgical causes that lead to intestinal fermentation, principally through peripheral irritation, is enumerated thus by the author: (1) Intestinal adhesions. Adhesions about the gall bladder produce perhaps the most disturbance. (2) The presence of the appendix vermiformis while undergoing the process of normal involution. (3) Loose kidney or general enteroptosis. (4) Hypertrophied rectal valves. (5) Eyestrain. This list is, of course, not intended to cover all the possible causes of intestinal fermentation that are capable of being cured by surgical intervention, but merely serves to indicate the possibilities of surgical intervention.

4. **The Submucous Resection of the Nasal Sæptum.**—Cohn does not advocate submucous resection of the nasal sæptum in all cases of deformity. He recommends the operation only for those cases in which experience has led us to know beforehand that the results obtainable by the simpler methods are not good. The operation takes anywhere from twenty minutes to two hours and a half for its completion. The author operates under local anæsthesia and has had uniformly excellent results in all his cases, about seventy in number. Perforation takes place in about 20 per cent. of all cases. The author does not consider that the occurrence of perforation is of any consequence.

BRITISH MEDICAL JOURNAL.

December 12, 1903.

1. Cancer and Its Origin. (The Bradshaw Lecture), By Henry Morris.
2. The Parasitic Theory of Cancer, By H. G. Plimmer.
3. The Behavior of Carcinoma Within Nerve and Trophic Areas, By G. L. Cheatle.
4. The Nature and Physiological Action of Radium Emanations and Rays, with Observations on Other Rays, By D. Turner.
5. Radium and Its Therapeutic Effects, By J. Macintyre.
6. On the Treatment of Cancer, By L. Drage.
7. "Paraffin Cancer," By R. Kirk.
8. The Possible Association of the Consumption of Alcohol with Excessive Mortality from Cancer, By A. Newsholme.

1, 2, 3, 6, 7, and 8. **Cancer.**—Morris, in the Bradshaw lecture, discusses the various theories as to the origin of cancer. (See abstract of the *Lancet* for December 12th, in this number of the

Journal). Plimmer states that we dare not at present give up the parasitic theory of cancer. The disease has increased in frequency of late years out of all proportion to any known general cause except a parasite. The great variations in the death rate from the disease in certain localities also points to a parasitic origin. Again, the disease has a predilection for low-lying damp districts, and its incidence in certain houses—" cancer houses "—has often been shown. The figures of Luckan and Buffalo are very striking as regards this latter point. The theories of those opposed to the parasitic view are all most unsatisfactory. Of these the most important is Colmheim's theory of embryonic vestiges—yet cancer often arises in parts where these rudiments have not been found. It has long been known that certain definite bodies are found in cancer, generally embedded in the cytoplasm of the cancer cells, but sometimes free or in the nucleus. They are round bodies, about 0.004 mm. in diameter, containing a small central body, surrounded by a delicate substance, which in turn is surrounded by a capsule. These bodies are found in practically all cancers in the growing active parts, and must be reckoned with. There is no evidence that they are degenerations. The best method of examination is that of the living cells themselves in their own juices on the warm stage. The cancer cells can, by this method, be kept alive for many hours. Gaylord and Benda confirm the author's statement that these bodies are found in the undegenerated portions of all cancers, and nowhere else. These bodies were successively classed with the protozoa, the coccidia, and the gregarnidæ, but on the ground of Sanfelice's work they are now generally classed by most writers with the blastomycetes. Certain intracellular forms of the mycetozoa show a striking resemblance to the cell-inclusions in cancer. The rôle played by injury can be easily explained by the fact that weak and new tissue cells are the most easily affected by any parasitic infection. It is a remarkable fact that skin cancer is confined almost entirely to the face and hands—*i. e.*, the exposed parts, and only there in connection with warts, cicatrices, or uncleanliness. Dirt, as affording a nidus for the parasite, plays an important part. The local contagiousness of cancer has long been known. Many cases of cancer in persons living together—*cancer à deux*—have been collected. Feinberg calls the body which he considers to be the cause of cancer " *Histosporidium carcinomatosum* ": from his description it is the same as the bodies already described by the author and others. If we consider the clinical course of cancer, its beginning in one spot, its extension by the lymphatics or blood vessels, its disproportionate cachexia, its spread by contagion, its occurrence in different parts of the body, and its return after years of quiescence, we are driven to the parasitic theory. And, finally, the parasitic theory furnishes the only hopeful outlook in the treatment of this disease.

Cheatle, in previous publications, has pointed out that there were grounds for considering the incidence of cancer had possibly a direct or indirect connection with the nerve area on which it fell. Cancer, and especially squamous epithelioma, more often than not begins upon the actual site of irritation. As constant irritation applied over a long period produces marked intracellular changes in the ganglia of the posterior sensory roots, it will also probably induce profound physiological changes in the areas of their distributions, as well as at the actual sites of irritation. The incidence of squamous epithelioma and rodent ulcer is closely associated with the distribution of the fifth cranial nerve. When rodent ulcer is multiple, the points of incidence are nearly always on the area or areas of one or both cranial nerves respectively. The disease often appears on those points at which nerves become cutaneous (Head's " maximum points "). In this paper Cheatle attempts to show that the incidence of cancer frequently falls on these maximum points. Rodent ulcers on the trunk are rare—yet often such taken consecutively seven began exactly on maximum points. Another point suggested is that a possible direct or indirect nervous influence is the chief agent in directing the areas occupied by cancer. The spread and limitation of cancer in the skin and muscles bear a marked relationship to the presence of nerves, and the absence of nerves where previously they existed bears a marked relation to the limitation of cancer. But it is not known whether cancer can genetically arise in a completely denervated area.

Drage, led by the satisfactory results obtained in the treatment of uterine fibroids by oil of cinnamon, has used the oil in full doses in inseparable cancer of the breast. He reports seven cases of cancer in which injections of various derivatives of cinnamic acid used at intervals of a week in varying doses, have brought about improvement in every case. In one case complete recovery apparently took place. The condition which the treatment is designed to produce is, first, a leucocytosis; and, secondly, a fibrosis in the tissue affeted by cancer. In pulmonary tuberculosis there is no difficulty in producing these conditions: in cancer it is much more difficult. Kirk states that the prevalence of epithelioma in the mineral oil district among workmen employed in refining solid paraffin has long been recognized, and the affection has received the name " paraffin cancer." The crude paraffin is melted and mixed with naphtha, and then solidified on a revolving drum, from which it is scraped by a stationary knife. The workmen wear leather leggings and aprons, but their arms are bare and exposed to the naphtha mixture. As a consequence, they suffer from eczema and boils of the skin. Eventually the skin becomes hard, ulcerates, and a certain proportion of these ulcers are epitheliomatous. Early excision always gives good results. Cases have been noted where the men would not wear the leather apron; as a consequence their trousers were soaked with the paraffin mixture, and they developed epithelioma of the scrotum. Newsholme, in 1899, called attention to the fact that the death rate from cancer was higher in occupations which conduced to excessive consumption of alcohol than in those that did not. (Coalminers 38, brewers 70). He then suggested that intemperate habits were a main factor at work rather than the particular occupation. Since then he has had access to further statistics as to the incidence of cancer among abstainers and non-abstainers from alcohol, and concludes that if the death-rate among non-abstainers is stated as 100, that of abstainers will be 72.

4 and 5. **Radium.**—Turner states that the forms of radiation made use of in medicine and surgery may be divided into five groups: (1) Radiant heat rays. (2) Ordinary light. (3) Ultraviolet light. (4) Röntgen rays. (5) Radium emanations and rays. The chief properties of ultraviolet light are that it is powerfully actinic, can excite fluorescence, can discharge an electrified body, has clinical and bactericidal effects, and can produce nuclei for cloud condensation in moist air. The nature of the Röntgen rays is still unknown. Whether their effects are due entirely to the rays, or whether the electrostatic field and ionization around the tube also play a part, is as yet unsolved. The distinguishing radioactive properties of radium are that it gives a radioactive emanation and three kinds of rays—α rays, β rays, γ rays. The emanation is of the nature of a luminous gas which imparts radioactivity to objects in its path. The α rays consist of a stream of positively charged particles of mass about twice that of the hydrogen atom and projected with a velocity of about 20,000 miles a second. They have but little penetrative power. The β rays resemble the cathode rays of a Crookes's tube. They are powerfully actinic. The γ rays are the most penetrative of all, and resemble the Röntgen rays from a hard tube. It has been suggested that consumptive patients should inhale the emanation. The radium rays appear to have but little bactericidal power, yet human tissues are very susceptible to them. Persons who are totally blind are unaffected by radium. Its chief physiological effects are: (1) Effects on the skin, producing inflammations and ulcers. (2) Effects on the nervous system, producing paralysis and death. (3) Luminous effects produced in the partially blind.

Macintyre states that the salts of radium have a therapeutic effect in lupus and rodent ulcer, for the most part as yet in limited lesions, and where the agent can be applied directly to the affected part. It will probably prove useful in the same class of affections as are at present treated with the x rays, Finsen light, or high frequency currents.

LANCET.

December 12, 1903.

1. Cancer and its Origin. (The Bradshaw Lecture), By Henry Morris.
2. Antituberculosis Serum and "Vaccine," By A. Marmorek.
3. Inoculation with Haffkine's Plague Prophylactic: A Review of 30,609 Cases, By C. E. P. Forsythe.
4. Some Observations on Over 6,000 Inoculations Against Plague, By J. W. Miller.
5. Symptomatic Parotitis following Strangulation Hernia, By F. B. Jefferiss.
6. Eosinophilia in Bilharzia Disease and Tracontiasis, By H. Balfour.
7. Fever and Convulsions Due to Ascarides, By A. J. B. Duprey.

1. **Cancer.**—Morris follows Katz's division of the alleged causes of cancer formation into the entogenous (or intrinsic) and the ectogenous (or extrinsic). By entogenous causes are understood certain spontaneous and anomalous changes within the organism. They embrace the two important theories of Thiersch and Colinheim. Thiersch's theory and its variants may be called the "last balance" theories; according to them the beginning of a tumor formation is due to a loss of balance between the epithelial cells and the connective tissue, carcinoma, for instance, depending on some cause which produces with advancing age a local impairment of resistance in the subepithelial structures whilst the epithelium maintains its activity or acquires a special vigor. Cohnheim's "tumor germ" theory is the one favored by the writer and the reasons for his belief are given later. The ectogenous group of conjectural causes are as follows: (1). The various forms of injury, chronic irritation and chronic inflammation, etc. These are of importance undoubtedly, but not one of them can rank as the essential and unconditional cause of malignant disease: that is, as the factor without which cancerous diseases cannot arise. But they are unquestionably among the agents which excite the real factor of tumor formation into activity. (2). Microorganisms. The theory of the microbic origin of cancer still occupies the forefront of cancer research, but the author thinks of it as being on the wane. Bacteria were the first organisms which were thought to be the cause of cancer: many specific organisms have been described, most of them the factitious products of faulty technics. The protozoic or psorospermic theory was first advanced in 1889, and has since been advocated by Ruffer, Gaylord, and Feinberg. But many other observers assert that these alleged cancer organisms are only the products of cell degeneration or cell inclusions of other cells. The blastomycetic theory—i. e., that cancer is due to infection by vegetable parasite belonging to the blastomycetes or yeast fungi—was first advanced by Russell in 1890, and has since been adopted by Sanfelice Roucali and Plimmer, the latter having been previously a believer in the protozoic theory. These "fuchsin bodies" of Russell are regarded as a form of cell degeneration. Not one of these microbic "cancer bodies" complies with Koch's main postulates, nor does any of them give a specific reaction with the serum of an individual suffering from cancer. Grafting and inoculation experiments have not given any support to the microbic theories. Cohnheim's "tumor germ" theory, as modified by Durante, Ribbert, Lenn and others, is more consistent than any other with the known facts concerning malignant disease, and fully explains the origin of very many non-malignant tumors. In brief, it is that all tumors originate from a matrix of embryonic cells, of either congenital or postnatal formation, which has continued for a time in a dormant state, and which has finally been aroused into activity. Cohnheim thought that the matrices were always congenital fœtal tissues which were cut off from their proper connections, and remained

undeveloped. To meet this deficiency of the theory, Senn added this corollary: "The tumor matrix may be composed of embryonic cells, the offspring of mature cells, which have failed to undergo transformation into higher tissue." The author discusses the various points of the theory, brings forward the evidence in favor of each, and shows how they fit in with the known facts as to tumor formation. The many "vestiges" and "rests" prove the existence of congenital matrices. The formation of postnatal matrices readily occurs in the healing of ulcers, sinuses, fistulæ, etc. The organs of generation furnish an example of cells which have lain dormant for years, being called into activity by the proper stimuli. The causes which arouse a matrix into activity are numerous: among them may be mentioned heredity, age, traumatism, and prolonged irritation and inflammation. The "tumor germ" theory escapes equally the objections raised against the local and constitutional theories of cancer, it enables us to understand the long intervals which occur after operation before recurrence takes place, it explains the so-called recurrences in parts away from the original site and out of the line of lymphatic infection, and finally it gives the best explanation of the local extension of the growth ascribing it to cell proliferation of the edges of the matrix.

2. **Antituberculous Serum.**—Marmorek holds that the principal part in tuberculosis is played by a toxine produced by the tubercle bacillus. This toxine has not hitherto been produced outside the organism, because the bacillus has not been grown under conditions faithfully reproducing those under which it grows in the body. According to Metchinkoff's theory of immunity tubercle bacilli form their toxine within the leucocytes; so that a leucocytic (leucotoxic) serum was used as a culture medium, it being obtained by immunizing a calf against the leucocytes of a guinea pig. On this medium the tubercle bacillus grows with difficulty, but in so doing it retains what Marmorek calls its "primitive" characteristics—i. e., its power to produce the toxine. Another culture medium giving favorable results is a glycerinated liver bouillon, the liver cells being very refractory with regard to the invasion of the bacillus. Tubercle bacilli grown upon these new media rapidly produce a virulent toxine. By immunizing animals with this toxine an antitoxine is produced capable of protecting against an ulterior bacillary infection. The vaccine requires six to seven days to produce immunity and its effects are distinctly lasting. After having repeatedly proved that the antitoxic serum could prevent tuberculous infection after intravenous injection with the bacilli, its effects were tried upon the human subject. So far the results have been most satisfactory, although the cases treated have almost all been far advanced in the disease, with cavity formation, etc. No abscesses have resulted from the injections. Technical and statistical details are reserved for a future report.

3 and 4. **Plague.**—Forsyth reports the results of 30,609 injections of Haffkine's plague prophylactic. Of those injected only 329 were attacked by plague, and of these only 50 died, a reduction of the case mortality to 15 per cent. in a disease in which it is usually 50 per cent. The following table shows well the relative behavior of uninoculated and inoculated persons towards plague:

Classes.	No. in each.	Cases of plague.	Attack rate per cent.	Deaths.	Death rate per cent.	Case mortality per cent.
Uninoculated...	31,874	1,457	4.5	659	2.06	45.2
Inoculated.....	12,886	171	1.3	29	0.22	16.9

Abscesses developed in sixteen cases at the site of inoculation, fifteen of which were traced to one particular bottle of the vaccine. Haffkine's technics was adopted throughout.

Miller made over 6,000 inoculations against the plague in the Punjab during 1902 and 1903. Haffkine's prophylactic was used in doses of from 5 to 7.5 cubic centimetres. A 20 c. c. syringe was used, and was sterilized by filling it with oil at a temperature of 160° F. The injections were given in the left arm, the skin being first cleansed with soap and water. Old people, infants, and pregnant women received smaller doses than adults. The symptoms produced were as follows: Aching begins promptly at the site of inoculation, and is distinct within an hour. A rise of temperature is perceptible a few hours after inoculation. Ten hours after injection there is usually nausea, headache, and loss of appetite: the arm is swollen, tender, and œdematous, and the axillary glands are enlarged. Erythema is usually present. Abscess formation occurred in only one person.

5. **Parotiditis.**—Jefferiss reports the case of a woman, aged sixty-eight years, upon whom he operated for strangulated umbilical hernia. She did well for three days, when pain in the right parotid gland was complained of. The parotiditis grew rapidly worse, the temperature rose, and the patient died twenty-four hours after the onset of the parotiditis. Paget has called attention to parotiditis as a rare sequela of abdominal disease or laparotomy.

6. **Eosinophilia.**—Balfour has found in the blood of three cases of bilharzia disease a decided increase of the coarse-grained eosinophiles. In six cases of guinea worm disease or dracontiasis, the eosinophiles were very markedly increased in all but one case, and in that one they were 6.4 per cent.—at least twice the normal figure. In all nine cases there was a marked increase also in the percentage of the large uninuclear leucocytes.

7. **Ascaridiasis.**—Duprey reports the case of a boy suffering from fever, foul diarrhœa, and convulsions. He was unconscious when first seen and remained so until death took place, three days later. At the autopsy ascarides or round worms were found in the intestines—two in the ileum, one in the vermiform appendix, and six dead ones in the large bowel. The mucous membrane of the intestines and the meninges of the brain were quite normal.

Proceedings of Societies.

THE SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

SIXTEENTH ANNUAL MEETING.

Held at Atlanta, Ga., December 15, 16, and 17, 1903.

The sixteenth annual meeting of the Southern Surgical and Gynæcological Association, which was held at the Piedmont Hotel, Atlanta, Ga., on December 15, 16, and 17, 1903, was undoubtedly a most successful and profitable meeting. Among the many able and valuable contributions presented, were several from men outside the geographical limitation indicated in the title of the association.

The address of the President, Dr. J. Wesley Bovée, of Washington, D. C., was worthy of both the occasion and the author. After paying a tribute to deceased members of the association—Dr. W. E. B. Davis, Dr. George J. Engelmann, and Dr. J. McFadden Gaston—Dr. Bovée considered the progress of ureteral surgery, reviewing its history and its present status. An abstract of this address appears in its proper order in the report of the proceedings.

Among the papers which attracted considerable attention were those of Dr. W. P. Carr, of Washington, D. C., on œdematous encephalitis; Dr. J. Shelton Horsley, of Richmond, Va., on fracture dislocation of the spine; Dr. Maurice H. Richardson, of Boston, on the removal of neoplasms; Dr. W. B. Coley, of New York, on sarcoma of the hip joint; Dr. Barton Cooke Hirst, of Philadelphia, on the differential diagnosis of syphilis and cancer of the vulva; and of Dr. Crile, of Cleveland, on the resuscitation of animals apparently dead. There was also a symposium on appendicitis, in which, among others, Dr. J. M. Baldy, of Philadelphia, Dr. I. S. Stone, of Washington, D. C., and Dr. George S. Brown, of Birmingham, Ala., took part.

The election of officers for the ensuing year resulted as follows: President, Dr. Floyd W. McRae, of Atlanta, Ga.; vice-presidents, Dr. George S. Brown, of Birmingham, Ala., and Dr. J. Shelton Horsley, of Richmond, Va.; treasurer, Dr. Charles M. Rosser, of Dallas, Texas; secretary, Dr. W. D. Haggard, of Nashville, Tenn.

Birmingham, Alabama, was selected as the place for holding the next annual meeting, which was fixed for December 13, 14, and 15, 1904.

Dr. John D. S. Davis, of Birmingham, was selected as the chairman of the committee of arrangements.

The council recommended that the former action of the association in appropriating two thousand dollars to a memorial, consisting of a ward bearing the name of the association in the City Hospital of Birmingham, be rescinded, and that, in lieu thereof, two thousand dollars be appropriated to the erection of a monument to the memory of Dr. W. E. B. Davis, in Birmingham. The recommendation was adopted.

THE PROCEEDINGS.

The President, J. Wesley Bovée, M. D., of Washington, D. C., in the Chair.

A Study of the Prostate and Treatment of Prostatic Hypertrophy.—Dr. G. Wiley Broome, of St. Louis, showed a number of hypertrophied prostates that he had removed. Approximately, he had made two hundred post mortem examinations, to investigate the condition of the bladder and prostate in each subject. He said that it was generally maintained by routine prostatectomists that all prostates had a capsule, but this was not true.

He drew the following conclusions: 1. The position of the urethra in the normal state was always in the floor of the bladder; but in cases of urinary obstruction it was always elevated from an inch to an inch and a half or two inches above the floor of the bladder. 2. Normally, there was no third lobe, but segmentation took place behind the prostatic fissure in consequence of a hyperplastic process, this process occurring in the direction of least resistance—into the cavity of the bladder. 3. Only a small percentage of cases of hypertrophied prostate was responsible for urinary obstruction. 4. No matter how large the prostate became, it would retain its functionating capacity. It was not the prostate which caused suffering to the patient. 5. By prostatectomy this functionating organ was mutilated or destroyed, and the bladder, which really caused the patient trouble, was left *in situ* without any operation having been performed on it. 6. In only a small percentage of cases could the prostate be enucleated. 7. It was unfortunate that the profession had reached the point of resorting to routine prostatectomy in all cases of urinary obstruction. 8. The commissure and capsule were obliterated in the fibromyomatous variety of prostate. In the adenomatous variety, if complete and permanent drainage was established, the prostate would shrink.

Œdematous Encephalitis.—Dr. W. P. Carr, of Washington, D. C., called attention to a condition of the brain that he had encountered quite frequently when operating for cerebral epilepsy and for suspected cerebral abscess following mastoid disease due to grippe. This condition he called œdematous encephalitis. It was apparently so much benefited by opening the skull and draining the excessive serum from the brain, that it deserved careful consideration. He reported four cases. In cases of severe cerebral symptoms following influenza or blows upon the head, where the symptoms persisted or became worse after weeks of medical treatment, he thought that exploration was justifiable in the hope of finding œdematous encephalitis or some other condition that would be benefited by operation. In operating for œdematous encephalitis he recommended that a large osteoplastic flap be cut with the De Vilbiss craniotome over the site of any injury that might be suspected as a cause, or over some location indicated by the symptoms. If the symptoms furnished no local indication and there was no local injury, then the flap had best be turned down in a convenient place, say, the upper parietal region. The exposed membranes and brain substance should be examined carefully, and if they presented an œdematous appearance, a grooved director should be introduced into the brain substance carefully in several places, and the serum drained off until the brain assumed a normal appearance. A small soft drainage tube should be inserted just through the dura into the arachnoid space and left in place as long as there was a copious discharge of serum. This tube might be brought out through one of the small trephine holes made for the introduction of the De Vilbiss instrument, and stitched to the skin after an osteoplastic flap had been replaced. If the head was carefully shaved and scrubbed, and all proper antiseptic precautions were taken, this operation was almost free from danger; and if only a small percentage of the serious cases could be cured in this way, the operation would be justifiable. He had been encouraged by his limited experience to believe that surgeons might hope for recovery or great improvement from this operation in many otherwise hopeless cases of epilepsy and of progressive brain disease due to trauma and influenza.

A New Device and Method for Intestinal Anastomosis.—Dr. Carr presented a method of intestinal or gastrointestinal union of his own devising by means of small silver clamps, which he thought were more easily and quickly applied than the Murphy button. These clamps were exhibited. He had used them in one case of resection of five inches of gangrenous ileum caused by strangulated hernia. The man recovered, and the clamps were recovered between the sixteenth and twenty-first days.

The Surgical Physiology of the Lymphatic System.—Dr. C. H. Mayo, of Rochester, Minnesota, said that a study of the lymphatic system readily explained many normal physiological as well as pathological processes. All tissues were provided with lymph vessels and glands in direct proportion to their exposure, activity, and necessity for repair. The tissues of the body were constantly bathed in lymph, which fluid, similar to, and derived from, the blood plasma, must all pass through the lymph vessels and glands. In the glands the lymph was exposed to the direct action of the leucocytes, which were there found in great abundance. It was in the glands that infection was checked and destroyed, or it might possibly overpower the glands and develop local growth. An enlarged gland was an evidence of a local struggle, of a defeat. The lymph system undoubtedly performed a great function in draining the ductless glands.

Considering the lymph supply of certain organs, it was found that the brain was deficient in lymphatics in its structure, the arachnoid serving this purpose upon its surface. Hæmorrhages into its structure became cysts from lack of absorption, and infections of its substance caused but little temperature or general disturbance, except from pressure. Liver and kidney showed the same condition in a less marked degree.

The lungs, rich in lymphatics, gave constant temperature from infectious diseases. Chills usually signified the direct delivery of accumulations of infection into a vein. In certain diseases resulting from a loss of equilibrium between the production and absorption of fluids, one set of lymphatics was substituted for another by operation, as in glaucoma and hydrocephalus.

When lymphatic conditions were considered in connection with surgical work, it was found that there was a real principle involved in drainage, whether it be internal or external.

Dr. Mayo then discussed the varieties of drains and drainage adjuncts.

Early Diagnosis of Cancer of the Uterus.—Dr. F. F. Simpson, of Pittsburgh, Pa., said that, early in 1900, a note was addressed to the health departments of American cities having an aggregate population of ten millions, requesting a tabulated statement of deaths from cancer and from all causes during each year of the preceding decade. Statistics showed that of every fourteen people who reached the age of thirty, cancer would claim one as its victim. Bearing more directly upon the subject of cancer of the uterus, however, was the distressing fact that of every twenty-eight women who passed the age of thirty, one would be the victim of this disease.

The paper was largely statistical, and the author closed by saying that the day was fast approaching when well informed women of the cancer age would seek protection by regular quarterly examinations. Early diagnosis would then be the rule in cancer of the uterus as it was in appendicitis to-day.

Fracture-Dislocation of the Spine.—Dr. J. Shelton Horsley, of Richmond, Va., reviewed the opinions of several authorities on the treatment of this lesion. He advocated the plan of McCosh, of operating in all cases of complete paralysis below the injury, unless there was improvement within twenty-four hours after the injury. When the trauma was especially marked, he operated sooner. He pointed out that the danger of delay lay in degenerative changes in the spinal cord which set in soon after the injury. Early operation might arrest this degeneration.

He reported six cases, in two of which the injury was received several years before he saw the patient. In one there was a forward dislocation of the axis and atlas from the third cervical vertebra. This was demonstrated by a skiagraph. The patient had paralysis of the muscles of the arm, body, and thighs. There were disturbances of sensation of various degrees over the body and limbs. He reported two other cases in which fatal results rapidly followed the injury. One was from a gunshot wound, and the other was the result of a fall on the shoulder in which there was a fracture-dislocation in the lower dorsal region. In one of the last two cases he operated on, there was an injury at the lower dorsal region, where the whole of the dorsal spinal column was dislocated forward upon the lumbar spinal column. The spinous process of the last dorsal vertebra was fractured. The cord was caught between the last dorsal and the first lumbar as between the blades of a pair of scissors. It was not completely crushed, as the dislocation was not extensive enough. It was impossible at the operation to reduce the dislocation, so the spinous processes and the laminæ of the last three dorsal vertebræ were removed. This relieved the pressure on the cord. The patient died, however, from pneumonia a week later, without any improvement in the spinal symptoms. A post mortem examination showed the wound in an excellent condition, with the cord softer than at the time of operation, and solidification of the whole lower lobe of the right lung and a part of the middle lobe. In the other case, operation was undertaken about a month after fracture of the eleventh and twelfth dorsal vertebræ in a laborer, nineteen years of age. The cord was almost completely gone, there being a few fibres remaining from its anterior portion. The laminæ had been fractured and driven into the canal. One of the articular processes had also been driven into the canal. These were removed and the wound was closed, leaving a small catgut drain. There was no decided improvement in his condition for six weeks after the operation. At this time he urinated voluntarily. Two weeks later there was noticeable improvement in both sensation and motion in the thighs. This improvement continued until the present, about three years after operation. His thighs were practically normal as to motion and sensation. Bladder and rectum acted naturally, and his general health was excellent. He could stand with support and walk by having a strong support on each side. His legs and feet were still paralyzed, both as to motion and sensation. At present the patient weighed nearly two hundred pounds, and was quite comfortable, except for occasional pains in his legs.

Neoplasms, Wherever Situated, Should, if Possible, be Removed, Whatever Their Apparent Nature.—Dr. MAURICE H. RICHARDSON, of Boston, Mass., considered chiefly neoplasms of the breast and of the female pelvis, in a paper on this subject. The reasons which justified the adoption of the title rule in these regions would apply with certain exceptions to all parts of the body. These reasons, all of which were illustrated by specific cases, in the author's own experience, were as follows:

1. The uncertainty of the diagnosis, even on the part of the most experienced and the most skilful, made palliative treatment hazardous, especially in the doubtful cases. Several instances were given in which the patient was not operated on because the tumor was supposed to be benign when, in reality, it was malignant. The error cost the patient the favorable moment for operation. The impossibility of accurate diagnosis in even the most accessible regions of the body was emphasized. Breast tumors apparently benign had proved malignant. Breast tumors benign throughout their principal areas showed minute foci of malignancy. Breast tumors clearly benign had, after many years, developed a fatal malignancy. So, in abdominal tumors, especially the pelvic tumors in women, the difficulties of diagnosis made the apparently benign cases dangerous. Many instances were given illustrating the difficulties of diagnosis and the necessity for exploration in even the most favorable cases of presumably benign growths.

2. The danger of benign tumors becoming in time malignant was emphasized, and illustrated by not a few cases in which, after years of slow and harmless growth, a tumor had suddenly developed evidences of malignancy. Tumors of the breast, of the gall bladder, the stomach, the uterus, the ovary, and other regions, had by an acquired malignancy convinced the speaker that the only safe rule of treatment was in all cases thorough extirpation of the tumor as early as possible.

3. The wisdom of exploration in certain apparently hopeless tumors was illustrated by cases in which a benign and easily remediable condition was found, and in which impending death was averted by a safe operation. In this class were infiltrating tumors of the abdominal wall supposed to be hopelessly malignant, but which proved to be tuberculosis of the muscle aponeurosis; epigastric tumors, apparently cancerous, found to be pancreatic cysts, actinomycosis, chronic pancreatitis, and the like; pelvic tumors supposed to be malignant and inoperable were proved to be old tubal inflammations, fibroids, ovarian cysts, and the like.

4. The essential malignancy of certain areas in the malignancy-inviting nature of certain regions, especially the breast and the ovaries, was especially emphasized. In these regions the tendency of tumors to become malignant made the application of this rule practically imperative. Ovarian tumors, even when apparently benign, were shown to have especially dangerous tendencies to malignant degeneration.

5. In pelvic tumors especially, the benign often masked the malignant. Cases were reported to illustrate the obscuration of a uterine sarcoma by an overlying fibroid. In two recent cases cancer of the ovary was found concealed by an enormous fibroid, and in a third there was found an annular stricture of the sigmoid flexure.

The rule of universal extirpation had numerous exceptions. It should not apply to superficial tumors, clearly benign, which could not be removed without great disfigurement; keloids that could not be removed without leaving a broad scar, unless they showed a tendency to ulceration and malignancy; all other benign tumors, which caused needless suffering, disability and disfigurement, whenever their removal was dangerous, or whenever the patient's general condition was unfavorable; and tumors of all kinds in which the dangers and sufferings of removal outweighed the dangers and sufferings of the tumors themselves.

Intestinal Cancer.—Dr. J. GARLAND SHERRILL, of Louisville, Ky., stated that cancer of the intestine, while rare, was more frequent than physicians were led to believe; that sarcoma was much less frequent than carcinoma, and selected especially the small intestine, while carcinoma most often attacked the large bowel. The appendix was the seat of both carcinoma and sarcoma, although occurring quite infrequently. The literature showed that men suffered from both forms oftener than women. Adenocarcinoma was the type most frequently seen, while the round-celled sarcoma or the lymphosarcoma occurred oftenest.

The author reported two cases of cancer of the intestine. The treatment was to be largely determined by the extent of the involvement. Resection of the intestine and extirpation of the growth offered the patient the only hope of a permanent cure, and this chance, though slight, should be given the patient whenever practicable, as early in the course of the disease as possible. Any of the classic methods might be employed.

Amputation of the Hip Joint for Sarcoma, with a Report of Seven Cases.—In a paper on this subject, Dr. William B. Coley, of New York, said that the tumor originated in the bone or peristeum of the femur in five cases, and in the soft parts in two. The age of the patients ranged between six and fifty-six years. In six cases Wyeth's pins were used, but in the seventh case the growth extended above Poupart's ligament; pins could not be used, and the external iliac artery was first tied. All of the patients made a good recovery from the operation; yet only one patient survived operation long enough to be called cured. This was a sarcoma of the thigh in which the mixed toxines of erysipelas and *Bacillus prodigiosus* were used for two months before amputation. In one recent case the patient was still alive without recurrence; in all the other cases death occurred from local or general recurrence in from four months to two years after amputation. Of four other cases of sarcoma of the femur and thigh, treated by high amputation just below the trochanter, two patients died at the end of four months; one died at the end of two years and a quarter, and a third had recurrence in the gluteal region, which disappeared under the mixed toxine treatment, and the patient was alive at present without recurrence, six years afterward.

The extraordinary malignancy of sarcoma of the femur was shown by the very small number of patients known to have survived for more than three years after amputation. Butlin was able to find but one case in sixty-eight treated by high amputation or hip joint amputation. Wyeth in 1901 collected 131 cases treated by hip joint amputation with ten alive more than three years. Dr. Coley stated that he had personally known of but six cases. In one of these cases (Dr. Bull's), operated upon sixteen years ago, a severe infection occurred in the wound, probably streptococcus, and the patient was well six years later. In another case (Dr. Gerster's), the disease was so extensive and so high up that amputation was considered impossible, and the patient was treated with the mixed toxines of erysipelas and *Bacillus prodigiosus* for several months. The tumor disappeared, and the patient was shown to the New York Surgical Society a year ago in perfect health, more than four years after treatment.

The better results following amputation in the preantiseptic days the writer attributed to the infection that frequently occurred in the earlier period. This fact, together with the results referred to, in which the erysipelas toxines were used, he believed sufficient reasons for advocating the systematic use of the toxines after primary amputation, as a prophylactic against recurrence. He would not advise such treatment prior to amputation in sarcoma of the femur, on account of the great liability to early mestastases, although in a case of sarcoma of the tibia he had been able to save the leg, and the patient was now well seven years afterwards.

The method of treatment advocated by Mikulicz, namely, resection of the femur, Coley did not think should be adopted as a substitute for amputation. While it was true a fairly useful limb might be obtained by resection, there were no cases treated by this method that had been observed for longer than a year, hence nothing could be said as to permanent cure.

The x ray, Coley believed, should never be used unless the patient absolutely refused amputation. One such case he had treated two years ago (round-celled sarcoma of femur); the tumor apparently entirely disappeared from the femur, but ten months later a large metastatic tumor appeared in the pectoral region, which was partially removed by operation. A little later another very large tumor appeared in the lumbar and iliac regions. Under long continued treatment with the mixed toxines plus the x ray, the tumors disappeared, and the patient was alive and well to-day, although by no means regarded as cured.

Diagnosis and Treatment of Gall Stones.—Dr. Mack Rogers, of Birmingham, Ala., read a paper on this subject. After referring to the differential diagnosis, he spoke of the operation for the removal of stones from the gall bladder, saying that where there were no adhesions it was comparatively easy, but when the stone was located in the common duct, or extensive adhesions existed, or both, the surgeon had a very difficult condition to deal with. The mortality in all cases from the operation averaged only about three per cent.

Surgery of Urinary Tuberculosis in Women.—Dr. Guy L. Hunner, of Baltimore, Md., reported thirty-five cases occurring in the service of Dr. Howard A. Kelly and his associate in Baltimore. These patients were all women with an average age at the onset of symptoms of twenty-eight years. The disease was unilateral in thirty-one of the cases, and it was probably primary in the kidney, as regards the urinary system, in thirty or more of the cases. In thirty-one cases there were bladder symptoms at some time in the course of the disease, although in only eighteen cases were there bladder lesions at the time of operation. In eleven of these eighteen cases there still remained some bladder symptoms, and in five there were known to be bladder lesions, although in nine of the eleven systematic bladder treatment had been employed. Tuberculosis of the bladder did not heal with the ordinary methods of treatment, and if the disease persisted a year and did not occupy more than half of the bladder, excision should be performed. Of twenty-two ureters examined microscopically, seventeen showed tuberculosis, while five were chronically inflamed. If a tuberculous ureter remained either in part or *in toto,* the wound usually remained open at least two years, while the removal of a ureter with the kidney resulted in rapid closure of the wounds. In five of these cases death took place in three after six and eleven weeks and two years respectively, from involvement of the other kidney, and in two, in fifteen and six days, because of the operation. Sixty-six per cent. of the patients were enjoying fairly good or excellent health.

Spurious Dysmenorrhœa.—Dr. HENRY T. BYFORD, of Chicago, made a plea for a more rational treatment of dysmenorrhœa. After naming twenty-five varieties that were mentioned in textbooks, the author called attention to their disappearance therefrom. Many supposed cases were spurious in character. These had been perpetuated by the physician and cured by the quack.

The absurdity of the nasal cure was emphasized and the cures referred to as spurious. Instances of menstruation in the male were quoted.

The trend of the paper was to condemn writers for bringing the symptom into the foreground when it should be kept in the background, and for wasting their own time and that of their readers in ridiculous refinements and speculation.

Memorial Address on Dr. W. E. B. Davis.—Dr. RICHARD DOUGLAS, of Nashville, Tenn., spoke impressively of the work that had been done by Dr. Davis, and pointed out in a masterly way the distinguishing characteristics of the deceased.

Diagnosis and Treatment of Congenital Misplacement of the Hip in Infancy.—Dr. ALBERT H. FREIBERG, of Cincinnati, Ohio, had been able to ascertain that, in several cases, children with congenital misplacement of the hip had been late in walking. It was a common experience in mild grades of rhachitis that children were late in walking. The usual age of sixteen months was passed by, and the rhachitic child not only failed to walk, but was usually also unwilling to stand. The author had been able to ascertain in several cases and to observe in one that children with congenital luxation stood readily at the usual age for walking, and especially if allowed to support themselves by holding on to some object. It was only when independent effort at ambulation was urged that the child showed its timidity and refused to make the attempt as a normal child would. This period was gone through by every normal child, but in some cases its long continuance might be attributed to congenital luxation. The length of this period in luxation cases varied greatly, but in every case was finally determined by the child's learning to walk with more or less limping, at which time the diagnosis was usually made, and was of no further interest in this connection. In some few instances mothers observed these things and possibly also that the apparent breadth of pelvis and perinæum was unusually great. It was therefore urged that in the presence of any of these signs which had been referred to attention be paid to the possibility of congenital luxation, and that in the event of any doubt, the x ray be resorted to as a final means of precision.

Experience had abundantly shown the feasibility of operative procedure after the age of one year, and that the results amply justified the great additional care which was necessary to prevent the dressings from becoming soiled in so young a patient.

THE PRESIDENT'S ADDRESS.

The Progress of Ureteral Surgery.—Dr. J. WESLEY BOVÉE, of Washington, D. C., President of the association, selected this title for his Presidential Address. After referring to the deaths of Dr. W. E. B. Davis, Dr. George J. Engelmann, and Dr. J. McFadden Gaston, he confined his remarks to the surgery of the ureter, giving its history and present status.

The treatment of ureteral calculi first claimed attention since the diagnosis and treatment of this condition were very much studied at the present time. The use of the x ray was the simplest procedure known for purposes of diagnosis, and were it accessible at all times, and completely reliable, no other method would be comparatively valuable. Unfortunately, such conditions as calculous anuria might render a patient in a secluded place so ill that this method of investigation was necessarily precluded. Moreover, calculi might be of sufficient size to block the ureter and give no shadow in the radiograph. For this reason especially, other plans of examination should be employed, although the necessity of constant manipulation of the ureter was a *sine qua non* to dexterity in treating other conditions of this structure. Palpation would ever have its important position. Exploration was an important method in such investigations. Tubular calculi might escape discovery by this plan. The wax tipped bougie, suggested and used by Kelly, was especially sensitive, and no doubt if it touched a calculus it would receive a tell-tale impression.

In the treatment of ureteral calculi the proper plan was extraperitioneal ureterolithotomy, as infective urine was usually associated with this condition and easily produced peritonitis if permitted to come in contact with the peritonæum. If pus was not present, the establishment of ureterocutaneous fistula would seldom be necessary, though careful drainage of the wound would be advisable. This rule applied to every part of the duct. He was firmly convinced that the ureteral wound should be made longitudinally whenever possible, and sutured after lithotomy. If much necrosis of the ureter was manifest, as had aften resulted from the impaction of a calculus, each case should be treated according to the judgment of the surgeon, and such modifications as resection or exsection, with ureteroureteral anastomosis or ureterocystostomy might rarely be required. Frequently pyonephrosis accompanied calculus ureteritis. Incision and drainage, and probably nephrolithotomy would be needed in addition. The routes employed depended upon the location of the calculus, the bladder, vagina, or loin being selected. He could only endorse the rectal route, as employed by Ceci, when examination revealed a calculus ulcerating into the rectum or threatening to do so.

For ureteral fistula nothing need be done unless obstruction of the duct below the fistulous opening existed. In such a case the calibre of the canal must be restored. Usually, the fistula would then close spontaneously, although so much cicatricial tissue might be deposited about the opening as to prevent closure. Suture or perhaps restriction might be required in that case.

Dr. Bovée referred to subcutaneous injury of the ureter, saying that no treatment was advisable unless evidence of extravasation of urine or of ureteral obstruction existed. For partial division of the ureter suturing should be applicable. Abnormal ureteral terminations of congenital origin might be corrected by ureterocystostomy, usually by the vaginal route. Fortunately, in these cases the ureter was abnormally long, and therefore the difficulty was much less than was the same operation for other indications. The ureter might be removed in whole or in part for tumors, tuberculosis, and malignant disease. In 1899, he was able to collect from literature about twenty-four cases of partial or complete ureterectomy. Now, the number had increased to nearly 100. In complete ureterectomy or nephroureterectomy in women probably the loin and vaginal incisions constituted the best plan. In his last case he separated the lower two inches through a vaginal incision, and then separated and withdrew the kidney and ureter by the loin route. This he believed to be the best of all.

For ureteritis the treatment had been largely of irrigation and topical applications. He had been disappointed in this work, and had grave doubts of its being the best. Probably the violence done to the lower part of the ureter by this instrumentation counterbalanced the benefits. He had had a few cases of trigonitis that had come to him after ureteral irrigations were said to have been made. He had in consequence been led to speculate as to whether a non-alcoholic, non-nitrogenous diet, with diuretics and rest in bed, might not be superior treatment for simple ureteritis.

(To be concluded.)

Book Notices.

Physical Diagnosis of Diseases of the Chest. By Richard C. Cabot, M. D., Physician to Out-Patients, Massachusetts General Hospital; Assistant in Clinical Medicine, Harvard Medical School. Second Revised Edition. With One Hundred and Forty-seven Illustrations. New York: William Wood & Company, 1903. Pp. xvi-319. (Price $2.50 net).

To recognize and appreciate pathological conditions and to detect the phenomena of disease by physical examination requires not only the broadest general experience and knowledge, but the greatest accuracy of perception as well. A comprehensive knowledge of disease can only be obtained by close observation and study combined with accurate induction. To gain this proficiency, the student must first be impressed with the importance of careful physical examination. Cabot's book will prepare him most adequately for such work. It is not so large as some of the works on the subject, and deals only with the essential elements. But the material is so logically arranged, the style is so clear, the statements are so precise that we consider it one of the best of the smaller works of its kind.

Diseases of the Skin. An Outline of the Principles and Practice of Dermatology. By Malcolm Morris, Consulting Surgeon to the Skin Department, St. Mary's Hospital, London, etc. With Two Colored Plates and Fifty-eight Plain Figures. New Edition. Chicago: W. T. Keener & Co., 1903. Pp. xvi-642.

The previous edition of this compendium of dermatology appeared five years ago, and the present edition makes comparatively few changes in it. The colored plates which disfigured the former editions of the work have been wisely omitted, the publishers evidently having concluded that illustrations which fall short of perfect reproductions are worse than useless. On the other hand, the number of "plain figures" has been largely increased.

The text of the book remains very much what it was five years ago. The author still regards tuberculin as of value, in some obscure way, in the treatment of lupus, and he still groups the various forms of xanthoma under one head in describing their histopathology. The Finsen light treatment receives but scant notice, and the value of the x ray in the treatment of epitheliomata and many skin diseases is practically neglected. The chapter on the "vegetable parasites," meaning those of ring-worm and favus, is one of the best in the book, and altogether an excellent presentation of the subject.

A Handbook of the Diseases of the Eye and Their Treatment. By Henry R. Swanzy, A. M., M. B., F. R. C. S. I., Surgeon to the Royal Victoria Eye and Ear Hospital, and Ophthalmic Surgeon to the Adelaide Hospital, Dublin, etc. Eighth Edition, Revised. With 168 Illustrations and Zephyr Card of Holmgren's Tests. Philadelphia: P. Blakiston's Son & Co., 1903. Pp. 580. (Price $2.50 net).

This book is too well and too favorably known as one of the best textbooks for students in the English language to need any introduction. The fact that four editions have appeared within eleven years is ample testimony to the demand for the book, while the manner in which the work is kept nearly abreast of the times is equally indicative of the energy and zeal of the author. Fresh matter has been introduced, of which the portion on some of the rarer forms of keratitis deserves special mention, and some obsolete matter omitted, and the size of the book has been only a little increased. The difficulty of keeping its size down nearly to that of the previous edition by culling from the latter that which can best be spared must be very great, and to overcome it so well must call for a selective ability even greater than that exercised by the compiler.

A Dictionary of Medical Science. Containing a Full Explanation of the Various Subjects and Terms of Anatomy, Physiology, Medical Chemistry, Pharmacy, Pharmacology, Therapeutics, Medicine, Hygiene, Dietetics, Pathology, Bacteriology, Surgery, Ophthalmology, Otology, Laryngology, Dermatology, Gynæcology, Obstetrics, Pædiatrics, Medical Jurisprudence, Dentistry, Veterinary Science, etc. By Robley Dunglison, M. D., LL. D., late Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College of Philadelphia, etc. Twenty-third Edition. Thoroughly Revised, with the Pronunciation, Accentuation, and Derivation of the Terms. By Thomas L. Stedman, A. M., M. D., Fellow of the New York Academy of Medicine. Lea Brothers & Co., Philadelphia and New York. 1903. Pp. xii-1212.

In December, 1900, we reviewed the twenty-second edition of this excellent work, of which the twenty-third edition now lies before us. This fact alone speaks volumes for the merits of the work. We can add little to the high commendation we have bestowed on preceding editions, other than to say that, unlike so many other revisions, it has not been revised out of all semblance to the original, but still retains distinctly all the characteristics thereof which have made it so eminently popular. New words have been added, of course, to keep pace with the ruthless hordes of invaders into the territories of medical onomatology, which threaten in truth to overwhelm us as Rome was overwhelmed by the Huns and Goths. Many of these, however, are necessitated by the growth of new sciences, immunity, bacteriology, the x rays, etc.; and while we could well spare many of the constantly arising words that merely duplicate already existent terms from our literature, so long as they are to be found there, we cannot spare them from our dictionaries. The present edition of this work more than sustains the reputation gained by its predecessors.

Diseases of the Ear. A Textbook for Practitioners and Students of Medicine. By Edward Bradford Dench, Ph. B., M. D., Professor of Diseases of the Ear in the University and Bellevue Hospital Medical College, etc. With Fifteen Plates and One Hundred and Fifty-eight Illustrations in the Text. Third Edition, Revised and Enlarged. New York and London: D. Appleton & Company. 1903. Pp. xxv-718.

The latest revision of Dench's excellent treatise is an epitome of the extensive advances which have been made in otology during the past decade. This has been most marked in the application of radical measures of general surgery for the relief of aural disease and especially in the operations for middle-ear suppuration and its intracranial complications. The technics of these procedures, more particularly of those indicated in sinus thrombosis and brain abscess, has been fully elaborated, giving a complete and trustworthy guide to each step as well as to the essentials of past operative treatment. It is this feature of the work which gives it great value to the practitioner, while the unusually complete chapters on aural examinations and diagnosis combine to make it a reference book of much service. The illustrations are numerous and instructive, particularly those showing the instruments arrayed for different operations, and the cuts from dissections by the author of the successive steps in the Stacke-Schwartze operation.

A number of new plates have been added to the book, including photographs of bony specimens, colored representations of the anatomy of the internal jugular vein, and the technics of exploratory craniotomy.

BOOKS, PAMPHLETS, ETC., RECEIVED.

The Physicians' Visiting List for 1904. Fifty-third Year of Its Publication. Philadelphia: P. Blakiston's Son & Co. [Price, $1.00].

Special Report on Diseases of the Horse. By Dr. Pearson, Dr. Michener, Dr. Law, Dr. Harbaugh, Dr. Trumbower, Dr. Liautard, Dr. Holcombe, Dr. Huidekoper, Dr. Stiles, and Dr. Adams. Revised Edition. Washington: Government Printing Office. 1903. Pp. 600.

The Principles of "Open-Air" Treatment of Phthisis and of Sanatorium Construction. By Arthur Ransome, M. D., M. A. (Cantab.), F. R. C. P., F. R. S., Honorary Fellow of Gonville and Caius College, Cambridge; Consulting Physician to the Manchester Hospital for Consumption and Diseases of the Chest and Throat, etc. London: Smith, Elder & Co. 1903. Pp. vii-104.

Elements of Surgical Diagnosis. By A. Pearce Gould, M. S., London; F. R. C. S., England; Surgeon to the Middlesex Hospital, Member of the Council of Royal College of Surgeons of England, etc. Third Edition, Revised and Enlarged. Chicago: W. T. Keener & Co. 1903. Pp. 607. [Price, $2.00].

Pathologie und Therapie der Rachitis von Dr. Wilhelm Stoeltzner. I. Assistenten an der Kinder-Poliklinik der Kgl. Charite und Privatdozenten an der Universität zu Berlin. Mit 3 Tafeln. Berlin: Verlag von S. Karger. 1904. Pp. 176.

Atlas of the External Diseases of the Eye, Including a Brief Treatise on the Pathology and Treatment. By Professor Dr. O. Haab, of Zurich, Authorized Translation from the German. Second Edition, Revised, Edited by G. E. de Schweinitz, A. M., M. D., Professor of Ophthalmology in the University of Pennsylvania; Consulting Ophthalmic Surgeon to the Philadelphia Polyclinic, etc. With 98 Colored Lithographic Illustrations on 48 Plates. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Pp. 232. [Price, $3.00].

Ueber die Prognose der Syphilis. Vier Vorlesungen gehalten in den Aerztlichen Fortbildungskursen zu Aachen. 1902-1903. von Dr. G. Mayer, Geh. Sanitätsrat. Berlin: Verlag von S. Karger. Pp. 87.

Operationen am Ohr. Die Operationen bei Mittelohreiterungen und ihren intrakraniellen Complicationen. Fur Aerzte und Studierende von Dr. B. Heine. I. Assistenten der Kgl. Universitäts-Ohrenklinik und Privat-Docenten an der Universität, Berlin. Mit 29 Abbildungen im Text und 7 Tafeln. Berlin: Verlag von S. Karger. 1904. Pp. 178.

Die Funktionsprüfung des Auges und ihre Verwertung. Für die allgemeine Diagnostik. Für Aerzte und Studierende von Professor Dr. O. Schwarz, in Leipzig. Mit 81 Figuren im Text und einer Tafel. Berlin: Verlag von S. Karger. 1904. Pp. 322.

A Non-Surgical Treatise on Diseases of the Prostate Gland and Annexa. By George Whitfield Overall, A. B., M. D., Formerly Professor of Physiology in the Memphis Hospital Medical College. Chicago: Marsh & Grant Company, Printers. Pp. 207.

Compend of Diseases of the Ear, Nose, and Throat. By John Johnson Kyle, B. S., M. D., Lecturer of Otology, Rhinology, and Laryngology and Assistant to the Chair of Surgical Pathology in the Medical College of Indiana, etc. 85 Illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1903. Pp. xx-271. [Price $0.80 net].

Miscellany.

Hirudin.—According to the *American Druggist* for September 28, 1903, hirudin, a styptic and antihæmorrhagic for gynæcological practice, is prepared by removing the heads and upper segments of leeches, extracting them with distilled water, and subsequent treatment by centrifugation and precipitation with acetic acid. It occurs as a peptone, like albumose, in brownish scales or masses, very soluble in water, but insoluble in ether or alcohol.

Two Remarkable Palindromes.—We are indebted to a well-known civil engineer of New York for the two following verses, with which the author puzzled his teacher in his schoolboy days, by asserting that they were drawn from a classical author. Each contains an epigram of some merit, and has not hitherto, we believe, been published:

Aspice nam raro mittit timor arma nec ipsa.
Si se mente reget non tegeret Nemesis.

Misoneismus.—Under this title Dr. Achilles Rose (*Post-Graduate*, December, 1903) refers to "the deeply rooted inclination of mankind to combat new ideas." Dr. Rose says: "We find in the history of the world, and especially in the history of medicine, innumerable instances in which new ideas have been persistently rejected, which Time has nevertheless proved to be of the greatest service to mankind; often, alas! after their originators, the men who have conferred on mankind these great and lasting services, have suffered persecution, physical or moral, or both, and even in some instances, torture. In later days, it is true, we refrain from physical violence, but even so late as in the last century we have seen a great medical benefactor persecuted and his discovery rejected, until, mentally unbalanced by the calumny and ignominy with which he was treated, he was confined in a lunatic asylum and allowed to die there. Then, a few years later, we have welcomed his beneficent discoveries and raised a monument in honor of his name and achievements." Dr. Rose then relates the case of Ignaz Phillipp Semmelweiss, the discoverer of the ætiology of puerperal fever. Semmelweis was appalled at the terrible loss of life that regularly occurred from this dread scourge in the early part of the nineteenth century, and published, in 1861, the result of his researches on the ætiology, nature and prophylaxis of puerperal fever, in which he attributed that disease to contagion arising from lack of proper surgical cleanliness, or, as we should now say, to lack of asepsis. He strongly advocated a procedure, including thorough disinfection of the hands, such as is now almost universally practised by practitioners of any standing in almost every community, and laid the responsibility of the appalling death rate from this disease at the doors of the medical profession. What a scourge puerperal fever was in the middle of the last century may be gathered from the statistics of 2,674 deaths from puerperal fever in the two lying-in institutions of Vienna during the years between 1847 and 1858. Dr. Rose adds: "I was a medical student at the University of Jena during the years from 1860 to 1863. B. Schultze was then, and still is, professor of obstetrics and gynæcology there. At one lecture—it was at the end of a semester—we were shown a large number of pelves, freshly prepared, all those of women who had died of puerperal fever during the preceding six months. So far as I can remember, no woman who was admitted for confinement during that period, left the institution alive. All died from puerperal fever. Disinfection of the hands, insisted on by Semmelweis, had not received any consideration even by such an eminent man as Professor Schultze. Subsequently the whole building was torn down and a new one erected." Yet the views and exhortations of Semmelweis were ignored or ridiculed, and he himself was treated with contumely and contempt by the principal obstetricians of his day, including such names as those of Spaeth, Braun, von Siebold, and even by men like Scanzoni and Virchow. Professor Oliver Wendell Holmes had also promulgated views identical with those of Semmelweis, in a paper read before a medical society, in April, 1843. He, too, was violently opposed by his contemporaries, or by many of them. To-day almost every country practitioner practises an adequate asepsis in his obstetrical cases, and a monument has been erected at Buda-Pesth in honor of Semmelweis from contributions by the medical profession throughout the civilized world.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending December 26, 1903:

Smallpox.—United States.

Place.		Cases.	Deaths.
California—San Francisco	Dec. 6-13	2	
Illinois—Belleville	Dec. 12-19	2	
Illinois—Danville	Dec. 12-19	1	
Indiana—Evansville	Dec. 12-19	3	
Louisiana—New Orleans	Dec. 12-19	3 Imported	
Maine—Biddeford	Dec. 12-19	1	
Massachusetts—Haverhill	Dec. 12-19	1	
Michigan—Detroit	Dec. 12-19	2	
Michigan—Flint	Dec. 6-19	2	
Michigan—Port Huron	Dec. 12-19	2	
Mississippi—Natchez	Dec. 6-13	26	
New Hampshire—Manchester	Dec. 12-19	1	
New Jersey—Camden	Dec. 12-19	2	
Ohio—Cincinnati	Dec. 11-18	5	1
Pennsylvania—Erie	Dec. 12-19	5	1
Pennsylvania—Johnstown	Dec. 14-21	1	1
Pennsylvania—McKeesport	Dec. 12-19	1	
Pennsylvania—Philadelphia	Dec. 12-19	90	22
Pennsylvania—Pittsburgh	Dec. 12-19	27	8
		2 Imported.	
Tennessee—Memphis	Dec. 12-19	17	
Wisconsin—Milwaukee	Dec. 12-19	2	

Smallpox.—Foreign.

Place.		Cases.	Deaths.
Austria-Hungary—Prague	Nov. 21-28	7	
Austria-Hungary—Trieste	Nov. 21-28	2	
Belgium—Antwerp	Nov. 21-28	2	2
Brazil—Rio de Janeiro	Nov. 15-29	99	59
France—Paris	Nov. 28-Dec. 5	12	
Great Britain—Birmingham	Nov. 21-Dec. 5	9	
Great Britain—Glasgow	Dec. 4-11	26	2
Great Britain—London	Nov. 28-Dec. 5	3	
Great Britain—Manchester	Nov. 28-Dec. 5		1
Great Britain—Nottingham	Nov. 28-Dec. 5	3	
Great Britain—Southampton	Nov. 28-Dec. 5	1	
India—Bombay	Nov. 17-24		1
Italy—Catania	Nov. 26-Dec. 10		6
Italy—Palermo	Nov. 14-21	1	
Java—Batavia	Oct. 21-Nov. 7	16	5
Mexico—City of Mexico	Nov. 22-29	1	1
Russia—Warsaw	Nov. 14-21		6
Spain—Corunna	Nov. 21-28		1
Turkey—Constantinople	Nov. 22-29		7
Turkey—Smyrna	Nov. 15-22		14

Yellow Fever.—United States.			
Texas—Cannel	Dec. 13	1	
Texas—Laredo	Dec. 15-18	6	
Yellow Fever.—Foreign.			
Brazil—Rio de Janeiro	Nov. 22-29	1	1
Mexico—Vera Cruz	Nov. 28-Dec. 19	22	7
Cholera.—Foreign.			
India—Calcutta	Oct. 31-Nov. 7		14
India—Calcutta	Nov. 14-21		35
Straits Settlements—Singapore	Oct. 31-Nov. 7		24
Turkey in Asia	Nov. 16	116	114
Plague.—Foreign.			
Brazil—Rio de Janeiro	Nov. 15-29	85	43
India—Bombay	Nov. 17-24		55
India—Karachi	Nov. 8-22	15	14

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending December 26, 1903:

Angeny, G. L., Passed Assistant Surgeon. Detached from the naval hospital, Philadelphia, Pa., and ordered to the *Dixie* for duty with the Panama marine brigade.

Carpenter, D. N., Surgeon. Detached from the naval hospital, Washington, D. C., and ordered to the *Dixie* for duty with the Panama marine brigade.

Johnson, M. K., Surgeon. Detached from the naval hospital, New York, N. Y., and ordered to the *Tacoma*.

McClurg, W. A., Medical Inspector. Ordered to the Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

Schwerin, L. H., Acting Assistant Surgeon. Detached from the *Southery* and ordered to the *Abarenda*.

Spratling, L. W., Surgeon. Detached from the naval laboratory, Brooklyn, N. Y., and ordered to the *Dixie* for duty with the Panama marine brigade.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending December 26, 1903:

Allen, J. H., First Lieutenant and Assistant Surgeon. Relieved from further duty in the Division of the Philippines and ordered to the U. S. General Hospital, Presidio of San Francisco, Cal., for duty.

Carroll, James, First Lieutenant and Assistant Surgeon. Detailed to represent the Medical Department at the meeting of the Society of American Bacteriologists to be held in Philadelphia, Pa., December 29th and 30th.

Chidester, W. C., First Lieutenant and Assistant Surgeon. Relieved from duty at the U. S. General Hospital, Presidio of San Francisco, Cal., and ordered to Fort Lawton, Wash., for duty.

Church, J. R., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Trumbull, Conn., and ordered to Fort Brown, Texas, for duty.

Ebert, R. G., Major and Surgeon. Granted leave of absence for one month from December 13, 1903.

Ekwurzel, G. M., First Lieutenant and Assistant Surgeon. Relieved from temporary duty at New Haven, Conn., and ordered to Fort Trumbull, Conn., for duty.

Farr, C. W., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Reno, O. T., and ordered to proceed to Fort Mason, Cal., for duty.

Fisher, H. C., Major and Surgeon. Granted three months' leave of absence from December 21, 1903.

Ford, J. H., First Lieutenant and Assistant Surgeon. Relieved from duty at the U. S. General Hospital, Washington Barracks, D. C., and ordered to Fort Reno, O. T.

Hartnett, E. H., First Lieutenant and Assistant Surgeon. Granted fourteen days' leave of absence from January 1, 1904.

Hartsock, F. M., First Lieutenant and Assistant Surgeon. Granted ten days' leave of absence from December 23, 1903.

Jean, George W., First Lieutenant and Assistant Surgeon. Ordered to proceed to Fort Greble, R. I., for temporary duty during the absence of Lieutenant Williams.

Johnson, R. W., Major and Surgeon. Ordered to proceed to St. Louis, Mo., for duty pertaining to the exhibit of the Medical Department at the Louisiana Purchase Exposition.

Matthews, A. W., First Lieutenant and Assistant Surgeon. Granted leave of absence for seven days from December 24, 1903, with permission to apply for an extension of twenty-three days.

Shepherd, J. L., First Lieutenant and Assistant Surgeon. Left San Francisco *en route* to Fort Myer, Va., on duty with detachment of Fifteenth Cavalry.

Usher, F. C. M., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month.

Williams, A. W., First Lieutenant and Assistant Surgeon. Granted leave of absence for seven days from December 24, 1903, with permission to apply for an extension of twenty-three days.

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Births, Marriages, and Deaths.

Married.

Barton—Goodbar.—In St. Louis, Missouri, on Wednesday, December 16th, Dr. Harry Barton and Miss Lucie Mae Goodbar.

Gray—Fitts.—In Gallatin, Tennessee, on Saturday, December 19th, Dr. Joseph Gray and Miss Sadie Fitts.

Leach—Horton.—In Passaic, New Jersey, on Tuesday, December 22nd, Dr. Albert Edward Leach and Miss Gertrude Arthur Horton.

Randall—Altenbrand.—In Brooklyn, N. Y., on Wednesday, December 23rd, Dr. Edwin T. Randall and Miss Lillian Altenbrand.

Scott—Reeves.—In Washington, D. C., on Wednesday, December 23rd, Dr. Sidney Lochart Scott, U. S. N., and Miss Marion Legare Reeves.

Sicard—Ireland.—In New York, N. Y., on Tuesday, December 22nd, Dr. Montgomery Sicard and Miss Adelia Avena Ireland.

West—Bottoms.—In Kansas City, Missouri, on Wednesday, December 16th, Dr. William C. West and Miss Estelle Bottoms.

Died.

Bushong.—In New York, N. Y., on Sunday, December 20th, Dr. Charles H. Bushong, in the forty-eighth year of his age.

Edson.—In Brooklyn, N. Y., on Tuesday, December 22nd, Mary R., wife of Dr. Benjamin Edson, in the seventy-first year of her age.

Hamilton.—In San Francisco, California, on Monday, December 14th, Dr. J. W. Hamilton, in the sixty-seventh year of his age.

Henry.—In Falls Church, Virginia, on Saturday, December 12th, Dr. William Scarborough Braxton Henry, in the seventy-seventh year of his age.

Kissam.—In Huntington, N. Y., on Wednesday, December 23rd, Dr. Daniel Embury Kissam, in the eighty-seventh year of his age.

Millring.—In Stockton, N. Y., on Saturday, December 19th, Dr. Edwin A. Millring, in the thirty-fifth year of his age.

Moran.—In Atlanta, Georgia, on Sunday, December 20th, Dr. Charles Moran, in the forty-sixth year of his age.

Pickett.—In Tyty, Georgia, on Tuesday, December 15th, Dr. J. H. Pickett.

Schroeder.—In New York, N. Y., on Friday, December 25th, Aimee Raymond Schroeder, wife of Dr. Henry Harmon Schroeder.

Taylor.—In Brocton, N. Y., on Monday, December 21st, Dr. Horace Clifton Taylor, in the ninety-first year of his age.

Waid.—In Buffalo, N. Y., on Monday, December 21st, Dr. Adin P. Waid, in the seventy-first year of his age.

New York Medical Journal
AND
Philadelphia Medical Journal.
CONSOLIDATED.

A Weekly Review of Medicine

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RADIUM: INDUCED RADIOACTIVITY AND ITS THERAPEUTICAL POSSIBILITIES.

By SAMUEL G. TRACY, B. Sc., M. D.,

NEW YORK.

Ever since Professor Pierre Curie and Madame Curie discovered radium, in 1899, great interest has been manifested by scientists at large in this mysterious and wonderful substance. Naturally, medical men have taken up the investigations of it, foreseeing the great possibilities it presents from a therapeutic point of view.

In a former paper[1] I have had something to say on the physical and physiological properties and on some of the therapeutical properties of radium. I now wish to record some observations on a comparatively new physical property of radium, the phenomenon of induced radioactivity. This property has been demonstrated by Curie, Rutherford, Soddy, and Hammer, and has been personally verified by the writer. Induced radioactivity may be described as that property of radium whereby it imparts radioactivity to other bodies in its immediate environment.

Professor Curie found that it was often impossible for him to go near his delicate measuring instruments for hours, because, after handling or being much in the proximity of radium, his clothing became so affected with induced radioactivity as to influence his instruments and to interfere with the accuracy of their records.

Hammer adduces as an evidence of induced radioactivity the fact that he had a pasteboard box in which rested some specimens of radium for several months. After a time he tore up the box, but fortunately kept the pieces. Six days after the radium had been removed from the box, he looked at the pieces in the dark and found them luminous, the result of induced activity. No doubt the cause of this form of induced radioactivity resembles that of the well known laboratory experiment, of coating an object with calcium sulphide and exposing it to the sunlight for a short time. When brought into a dark room, it will continue to phosphoresce for several hours; and even when it has ceased to glow, it can be stimulated by the heat of the hand into giving light again. If a tube of radium is wrapped in cotton in a dark room, the entire mass becomes luminous. This is due, not only to the light passing from the radium through the cotton, but to the fact that the cotton itself has become radioactive by induction.

There are two easy methods of testing radioactivity and induced radioactivity; one is by means of the delicate electroscope, such as is used for demonstrating electrical induction; the other by the sensitized photographic plate.

With the first method, when a radioactive substance or one possessing induced radioactivity is brought near the wire attached to the two gold leaves in the electroscope, the leaves fall together, showing that radioactivity is present. The greater the rate of the discharging power of the gold leaves, the greater the radioactivity.

The second test—that with the photographic plate—takes a much longer time to accomplish, viz., in the case of induced radioactivity, from twelve to twenty-four hours.

While experimenting with various substances and fluids as to their receptivity for imparted radioactivity, the writer found that normal salt solution was one of the best media for the manifestation of this phenomenon. This fact may prove to be of considerable importance in medicine. The method I have employed for inducing radioactivity in normal salt solution is as follows: Into a bottle containing the solution I inserted two hermetically sealed tubes of radium bromide. One tube contained a small quantity of pure radium having the highest radioactivity known, viz., 1,800,000.[2] The other tube contained 10 milligrammes of 950,000 radioactivity. These tubes of radium remained in the normal saline solution for twenty-four hours, at the end of which time I removed them, and let the salt solution stand in a rack for twenty-four hours more. Then I examined it and found that the salt solution was impregnated with the properties of the radium, which had imparted to the solution considerable induced radioactivity. That this induced activity was present, is evidenced by the accompanying skiagrams. These photographs were obtained as follows: In a dark room, there rested upon a photographic plate, a piece of perforated brass and other metallic substances. Suspended above this was a test tube containing half an ounce of radioactive salt solution ("radium fluid"). The length of exposure given was twenty-four hours. This experiment was repeated a week later with the same solution and with the same result, thus showing that the radioactivity was not lost. But even though the emanations be lost, the "active matter" remains, and will continue to produce radiations for several hours afterward. The radioactivity of the normal salt solution may be stimulated by burning magnesium near it, or by exposing it to the spark from a Leyden jar or a static machine. Exposure to the ultraviolet rays will also stimulate it.

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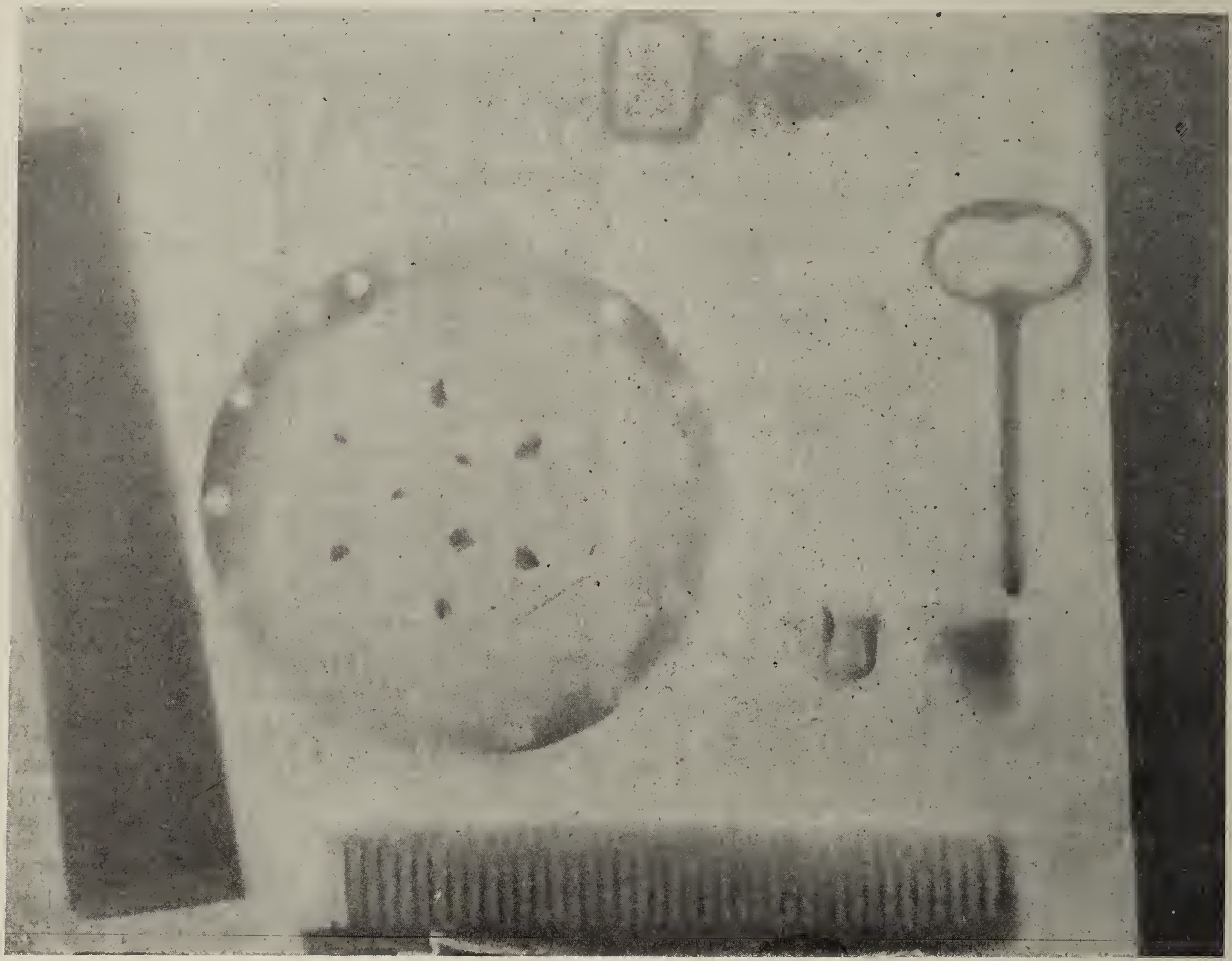
[1] *New York Medical Journal and Philadelphia Medical Journal,* October 24, 1903.

[2] I am reasonably sure of this, as Professor William Hallock, of Columbia University, tested for me a ½ per cent. specimen and found it to have a radioactivity of 9,000. This is equal to 1,800,000 for 100 per cent. pure.



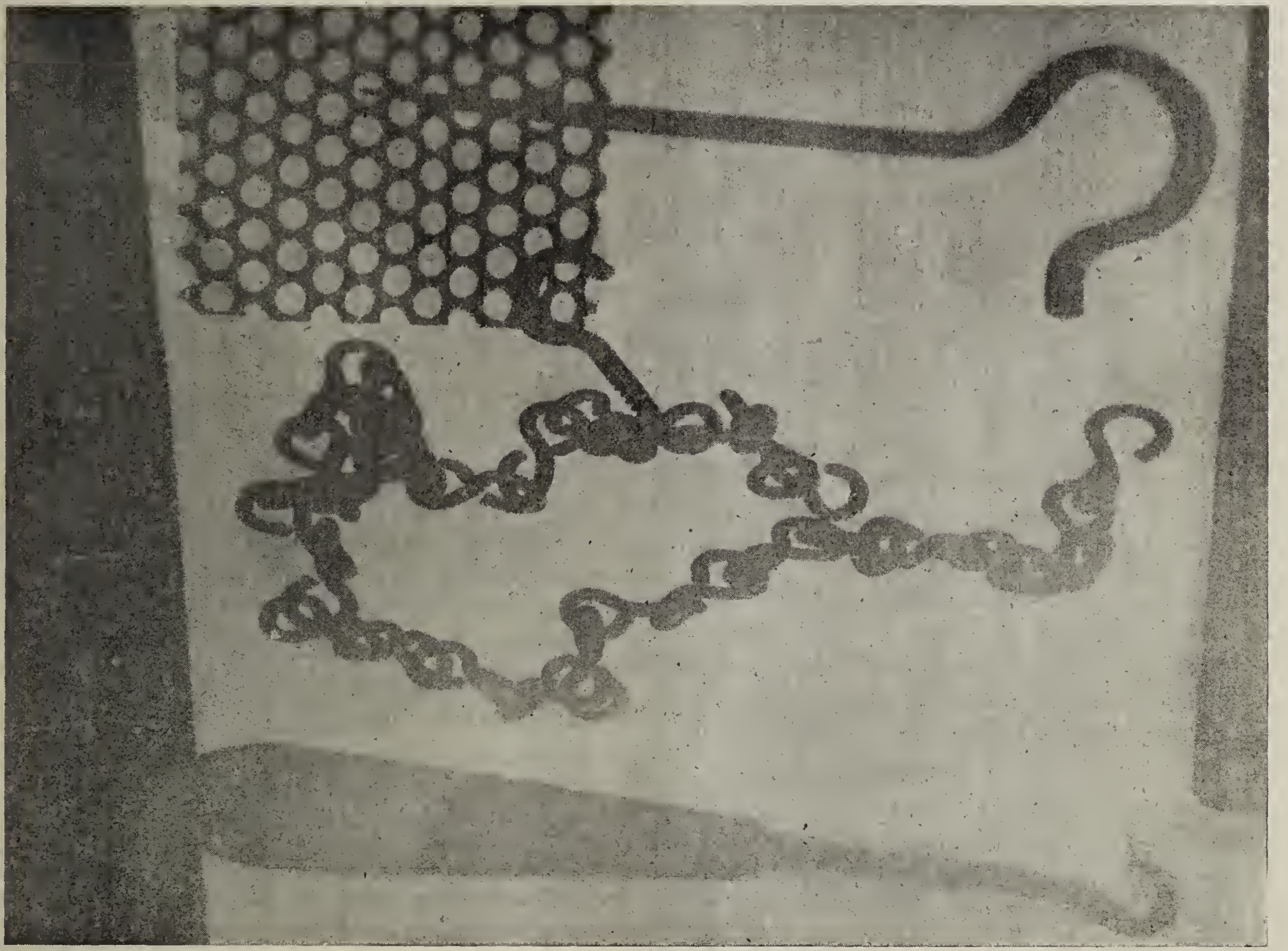
Photograph taken by induced radioactivity.

It has been proved by scientists who have experimented with radium, that its radiations possess marked germicidal and antifermentative actions. The same is true of radioactivity induced in normal salt solutions ("radium fluid"), although in a less degree. Hugo Lieber, in his experiments, has shown that grape juice, when exposed to radioactive matter, will not ferment for a month, even though it is kept in a hot room with the bottle uncorked. In another experiment, two bottles were filled with agar agar and mould (such as may be taken from fermented fruit). In one of these bottles Lieber placed a tube of radium, but not in the other. In the bottle containing the radium tube the growth of the mould was inhibited; but in the other bottle, the mould grew quickly, soon filling the bottle.

The marvellous properties of radium have made it a matter of wide interest to almost everyone, but to the medical man its possible value as a therapeutic agent renders it a subject of special importance. Already many investigators are turning their attention to the treatment of various forms of disease by means of radium, and many fields have been proposed as promising ones for investigation of its action. For instance, among the various diseases in which it has been tried may be mentioned certain malignant growths, such as epithelioma and other superficial cancers, lupus, certain skin diseases, blindness from atrophy of the optic nerve, etc. Its effect upon microorganisms and fermentation, as well as its likely action upon the tissues and fluids of the body, suggests that if it could be harmlessly introduced into the system a vast field of positive usefulness lies before it. To take its effect upon microorganisms first: As we have stated, it is admitted to have a very considerable inhibitory effect upon the functional activity of various bacteria, moulds, etc., and it is at any rate possible that it may possess a like effect upon protozoa. This at once suggests a value for its systemic employment, should such be practicable.

Now, the property possessed by radium of imparting its activity to various fluids, *e. g.*, normal saline solution, as shown in these experiments, seems to offer reasonable ground for hope that, in this way, it may be therapeutically administered internally, and the fight against bacterial disease be waged directly in the tissues affected, through the agency of the blood and lymph circulations and the various internal secretions. It is true that such retention of properties in the radium fluid is only temporary, but the process of manufacture is so simple that when radium is available in greater quantity than at present, there will be no difficulty in any suitable case in keeping up the supply of freshly prepared and active solution.

Professor E. Rutherford, of McGill University, in a letter to me, dated December 11, 1903, says: " The emanation will escape rapidly when the patient drinks the water [' radium fluid '] but the ' active matter,' which it has produced from itself will remain with the water, and will produce radiations for a couple of hours, after which the intensity becomes very small." We have thus before us the hope that the internal administration of " radium fluid " will strike at the root of the disease, in tuberculosis, diphtheria, typhoid, and other infectious diseases; in the protozoal diseases, such as malaria, and perhaps scarlet fever. In this connection it is well to note that fluorescence takes place when a solution of quinine is exposed to the radium rays. Morton has suggested the internal administration of quinine for patients who are undergoing x ray treatment, on the supposition that the blood will become more or less fluorescent, and this fluorescence will be more inimical to germ life. If this is the case it is likely that better results will also be obtained from the internal use of quinine when the patients are subjected to the rays from radium, or from the internal use of a radioactive fluid.



Photograph taken by induced radioactivity.

Another diseased condition in which the induced radioactive salt solution is likely to prove of service is fermentative, gastrointestinal indigestion, with its long train of symptoms due to autointoxication. It is also hoped that the "radium fluid" will have a favorable effect on malignant disease of the stomach and intestine.

As to local employment, that is already under investigation, for radium has met with more or less success in many superficial diseased conditions. Its local use, however, will be found far more convenient if we can get the desired results by the employment of the induced radioactive salt solution. By this method we can use it as a local application on compresses, in sprays, gargles, inhalations, collyria, etc.

In its use in surgical dressings, compresses can be saturated with this solution and applied over large areas which could not be reached by the radium rays.

As a spray it will be found useful in catarrhal affections of nose, throat, and lungs, by coating the membranes with a fine film of radioactive matter. This active matter is antiseptic and will remain in the tissues for several hours. The radioactivity of this active matter may be intensified by exposing the patient to the ultraviolet rays, and by the internal use of quinine.

While *all* these possibilities of the use of radium fluid may not be borne out by actual clinical experience, nevertheless, owing to the already known properties of radium and induced radioactive substances, it is certainly worth while to try them—especially in pathological conditions which are not amenable to other forms of treatment. Through the courtesy of Professor Fox and Professor Bulkley, I am permitted to carry on a series of observations in the radium treatment of a variety of diseases at the Vanderbilt Clinic and at the New York Skin and Cancer Hospital. As I have been using radium less than three months, I am not prepared to make a report on cases which I have under treatment, both in private practice and in the institutions named above. Nevertheless, some of these cases have already shown marked improvement, and I trust that within the next three months I may be able to report favorably on a number of the diseases mentioned in this paper.

240 WEST ONE HUNDRED AND SECOND STREET.

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The Editor of the Massachusetts Medical Journal, Dr. Robert A. Reid, of Newton, completed on December 19th his twenty-second year of editorial service. His associates on the *Journal* signalized the occasion by presenting him with a handsome diamond.

SOME OBSERVATIONS ON AN UNUSUAL CASE OF SCURVY.

By JOSEPH DAVIDSON, M. D.,

NEW YORK.

Scurvy seems to have been known even at the time of Hippocrates (1). Although it usually occurs in epidemics and sometimes endemically, sporadic cases are occasionally met with. Geographically it is not limited, but has been experienced in all parts of the earth, both on land and on water. The first epidemic on ship-board befell the crew of Vasco de Gama, in 1498, on his sail around the Cape of Good Hope. Epidemics of scurvy became more numerous when long sea voyages began to be undertaken and also in the armies of the middle ages. Since then they have occurred frequently enough among marines, in besieged towns, in barracks and prisons, among the crews of Arctic explorers, etc. The observations and studies on this subject, which have accumulated through the centuries, furnish an exceedingly comprehensive literature. Scientific investigation and experimentation have been added in more recent years, but have not as yet succeeded in definitely solving the question of ætiology.

The lack of fresh fruits and succulent vegetables with their vegetable acids, the exclusive diet of salt meat and fish, the deficiency of food containing the potassium salts (Garrod), insufficient variety of food, intestinal autointoxication (Michelazzi (2)), ptomaine poisoning by tainted food (Jackson and Harley), acid intoxication (Wright), infection by *Ankylostoma duodenale* (Liston), and the influence of unfavorable climatic and unhygienic conditions have all, separately or combined, been considered ætiological factors of the greatest importance; and doubtless those errors in diet just mentioned are, if not the real cause, the predisposing element. For how else could be explained the wonderful effect which invariably follows the treatment by vegetable acids, fresh fruits and vegetables, beef-juice and abundance and variety of fresh food?

Of late years the theory of septic infection is gaining ground. The experiments of Murri, Contu, Mari, and Petroni are not convincing, but Babes (3) in 1893, first found and isolated from the gums a bacillus which he describes as being 0,3 μ broad and 0,3 μ to 0,6 μ long, curved and pointed at the ends, the animal experiments with which seem to indicate its ætiological relation. Müller (4) found in the urine in two out of three cases an organism closely resembling that of Babes. Rosenell (5) isolated a similar bacillus, of which he made cultures, but failed to produce the disease by inoculating rabbits. Bornträger (6) isolated a coccus, but does not consider it as the cause of scurvy.

Although all signs point to the probability that scurvy is an infectious disease, more proof and confirmatory evidence will be required. It does not seem to be contagious, and if infectious it appears that the microorganism causing it only develops in a body favorably prepared for it by the dietetic and hygienic errors previously enumerated.

The following case has come under my observation:

J. S., seventeen years old, has been sick for two years. When a child he had measles, nothing else. In July, 1901, he was admitted to one of the large hospitals in this city, where he was treated for mitral stenosis and nephritis (according to the hospital record). Additional symptoms were: Loss of weight, cough, slight dulness over left apex and right base, and slight difference in breathing; no tubercle bacilli. When he was discharged from the hospital after three weeks and a half he had gained in weight and was generally improved.

He felt better during the next three months, but then began to cough again and had hæmoptysis. The following eight months he was treated at home, and his condition was sometimes better and sometimes worse.

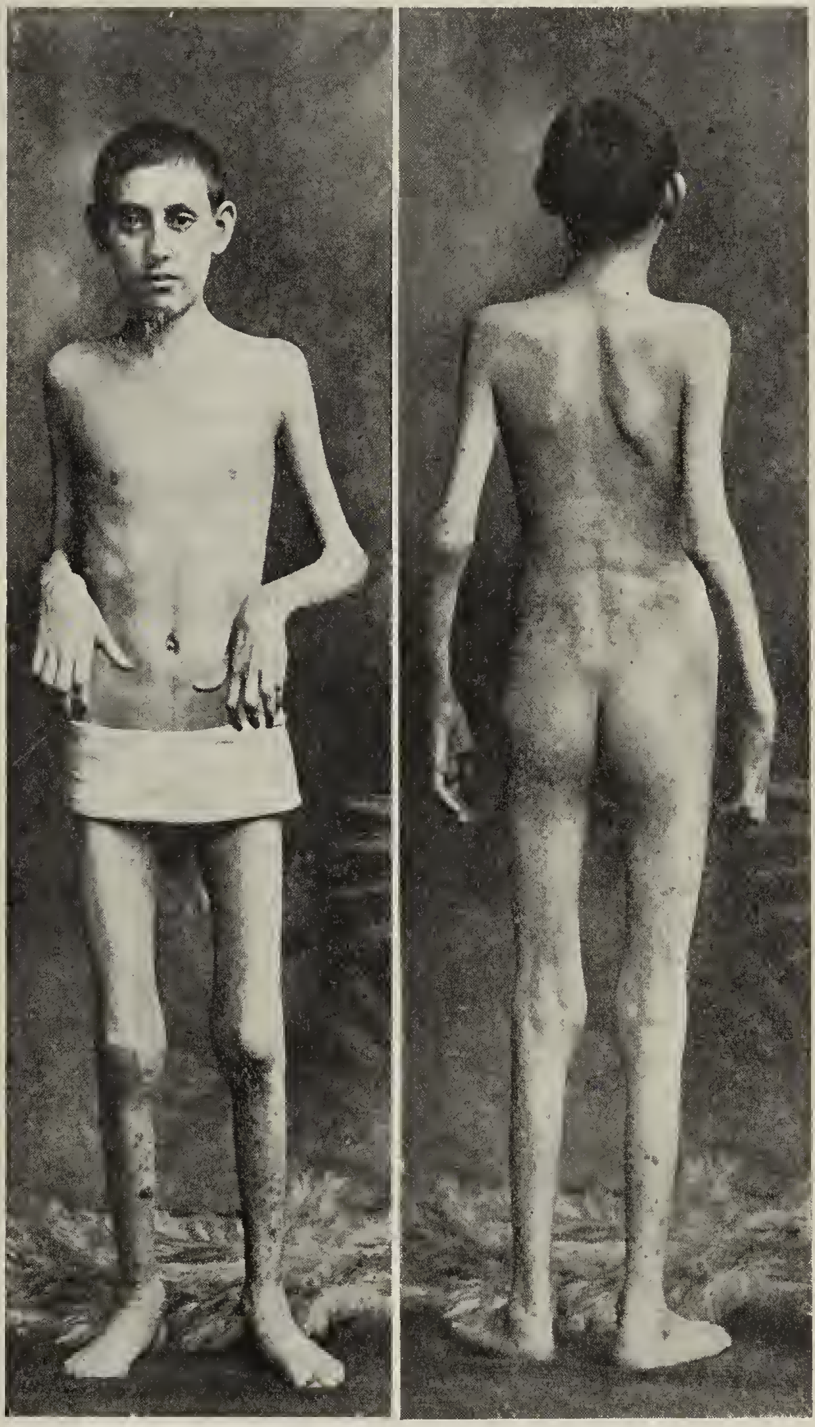
In April, 1902, he was readmitted to the hospital, but only remained there for two weeks. This time he was entered as a doubtful case of pulmonary tuberculosis. Tubercle bacilli were never found. His symptoms were: Tachycardia, dyspnœa, fever, night sweats, cough, enlarged glands in axilla, neck, and groin, sibilant breathing on both sides, some dulness over right apex and right base, heart not enlarged, *no murmur*, action regular, pulmonary second sound accentuated. Liver palpable one finger's breadth below free border of ribs, spleen negative. Was discharged improved.

I saw him for the first time in May, 1902. He had then been sick for about one year. He was in bed, unable to move a limb, and presented a pitiable sight. His emaciation and prostration were extreme, the face and lips were very pale, his body, his upper and particularly his lower extremities were covered with a fresh purpura eruption. The blotches of cutaneous hæmorrhage were of varying size, hæmorrhages had also taken place into the subcutaneous cellular tissue, which could be plainly felt as hard nodules. He had had nose bleeds, his gums were bluish, spongy, and superficially ulcerated, they bled readily. His joints were greatly enlarged, particularly both knees, elbows, wrists, and almost all phalangeal articulations; they were very painful and sensitive.

His heart was enlarged to the right side, its action weak, rapid, and irregular. An indistinct and inconstant murmur could be made out near the apex, second pulmonary sound accentuated, pulse 130, small, irregular. Temperature (by mouth) 102.5° F. Over both apices of his lungs there were some fine moist râles, but there was little or no cough. He complained of sleeplessness and anorexia and of especially severe pains in his arms and hands, which he could not move. His urine had a specific gravity of 1019, and contained albumin, hyaline and epithelial casts, and blood, no sugar. His abdominal organs showed nothing abnormal.

He presented then a typical picture of scurvy: Hæmorrhages into the skin and deeper tissues, ulcerated gums, nose-bleeds, bleeding from the lungs, swelling of the joints, emaciation, pallor, fever, pain, and prostration.

I put him on antiscorbutic treatment at once. He was given at first several oranges daily and was ordered to drink freely lemonade prepared from fresh lemons, and pure fresh milk. Soon, fresh beef-juice was added, and as his appetite and digestion improved fresh vegetables and fresh fruit. Treatment otherwise was tonic and symptomatic, embracing all the usual hygienic measures.



Dr. Davidson's case of scurvy. Taken two months after the beginning of treatment, showing the remnants of eruption, the swelling of the joints, and the emaciation.

From the day that this treatment was instituted the patient began to improve. While his condition had been constantly getting worse until then, so that his relatives had lost all hopes for his recovery, his improvement now was astonishingly rapid. First the subjective symptoms abated, principally the pain and tenderness in his joints and muscles, then the temperature went down, his heart's action became stronger, appetite and sleep returned. No more bleeding took place from any part of his body. The skin ecchymoses began to resolve, some going through the various stages of discoloration and absorption, others forming superficial ulcers which healed rapidly. After three weeks he was able to sit up out of bed; after three weeks more he could leave the house. The accompanying photographs, which were taken about two months after the beginning of antiscorbutic treatment, show the remnants of his eruption, of the swelling of the joints, and of his emaciation. He could walk then with little difficulty, appetite and sleep were splendid, he had put on flesh considerably and weighed in his clothes 85 pounds, he was free from pain. His pulse was still small and accelerated and slightly irregular, but the temperature was normal. His heart was slightly enlarged, a systolic murmur was to be heard, the eruption had disappeared for the greater part, the ulcerations were cicatrized, the joints were much smaller, the gums were healed. Some moist râles could be heard over both apices, but he had no cough, no sweats, and felt generally stronger and improved. His urine contained albumin and casts. He had a paralysis of ulnar and median nerves on both sides, right side worse than left; the thenar and hypothenar muscles, interossei, lumbricales and the flexors on the front of the forearm were paralyzed and atrophic, there were disturbances of sensation and partial reaction of degeneration.

Since that time his condition has not changed very much.

Status praesens, June, 1903: Patient is poorly nourished, weighs in his clothes 95 pounds (his height is 5 feet 4 inches), is very pale, has no fever. The examination of his lungs reveals rough breathing over both sides, but he has a chronic catarrhal condition of his nasopharynx, which somewhat impedes free respiration.

The heart dulness is slightly enlarged to the right and to the left side, a systolic murmur is heard at the fourth left costal cartilage, it is circumscribed, disappears when patient lies down, and is rendered more distinct by physical exertion. The apex beat is in the fifth intercostal space and nipple line, is a double beat; heart sounds are clear. The second sound is markedly accentuated in third intercostal space, and is palpable as a short diastolic beat. Heart's action regular, pulse small, of normal frequency.

The liver dulness is somewhat enlarged. Spleen apparently normal. The blood shows 75 per cent. of hæmoglobin. His urine contains a considerable amount of albumin, epithelial, granular, and blood casts, uric acid in large quantities, no sugar, specific gravity, 1019.

On various parts of his body, particularly about the left gluteal region he shows scars resulting from the ulcerations of the skin ecchymoses.

His left hand has recovered completely, his right hand is a typical *"main en griffe,"* caused by the ulnar nerve palsy, while the median nerve on this side has also recovered. The intrinsic muscles of the right hand supplied by the ulnar nerve are paralyzed, and very much atrophied, there is complete reaction of degeneration, the sense of touch is slightly diminished, pain sensation a little heightened, temperature sense normal.

This ulnar nerve palsy and the paralysis of the nerves which have been restored are due to a multiple neuritis. In addition to the complete ulnar nerve paralysis the patient presents the following phenomena: The right knee jerk is very lively, the left knee jerk absent, the right tendo Achillis reflex absent, the left tendo Achillis reflex present, tapping of right knee causes adduction of left thigh, tendon reflexes in upper extremities lively, there is a limited area of disturbance of sensation on outer side of left knee; diminished tactile and increased pain sensation.

These symptoms can all be explained as due to a multiple neuritis that has recovered sufficiently not to leave any marked loss of muscular power, but nevertheless to leave evidences of some wasting and of reaction of degeneration in certain muscles, and areas of slight disturbance of sensation. The absence of knee jerk on the left side and of tendo Achillis reflex on the right side can be explained as the result of lesion in anterior crural nerve and peroneal nerve respectively, affecting some sensory fibres and thereby causing an interruption of the reflex arc in the peripheral sensory tract, the increase of right knee jerk and other tendon reflexes by a generally heightened myotatic irritability. Although scurvy has not been proved to be an infectious disease, it may yet cause a polyneuritis analogous to diseases of metabolism such as diabetes, and, according to Oppenheim (7) "severe types of anæmia and cachexia may produce degenerative processes in the peripheral nervous system resembling multiple neuritis."

While it is true that hæmorrhage into the spinal cord may occur and has occurred in scurvy, all evidences in this case point toward a peripheral lesion: 1. The onset and development which were rather gradual; 2. the exact symmetry; 3. the exact and accurate limitation of palsy, atrophy, and particularly of sensory disturbance to distribution of ulnar nerve (all the other nerves involved having recovered, some entirely, some almost so); 4. the selection of the most terminal nerve branches to the exclusion of nerves nearer the centre; 5. the recovery of median nerve and continuing palsy of ulnar nerve on the same side; 6. the absence of pupillary disturbance (and of bladder, rectum and other spinal cord symptoms); 7. the absence of areas of sensory disturbance in strips along regions corresponding to spinal cord sections. Whether the multiple neuritis was caused by hæmorrhages into the nerve sheaths or was of toxic origin cannot be positively stated. The former condition has been observed (Wales), while the latter does not seem to be known, yet this case has all appearances of a toxic polyneuritis.

This case, then, is noteworthy on account of its severity and manifold complications. It is my opinion that this patient was suffering from a severe attack of scurvy from the very beginning, and that his hæmoptysis, which created the suspicion of pulmonary tuberculosis, his nephritis, endocarditis, and nerve lesion were all of scorbutic nature, and that the absence of the pathognomonic symptoms in the beginning prevented the recognition of the disease. Unusual is the severe form of chronic parenchymatous nephritis, and the endocarditis, and I have not been able to find in literature multiple neuritis reported as complicating scurvy.

As to the ætiology in this case I believe that lack of variety of food, especially lack of fresh vegetables and fruit, plays an important part. On the daily bill of fare of this boy's family salt herring was predominant; in addition their diet consisted of bread, some potatoes, cereals, sometimes meat, but very little fruit, and fresh vegetables were wholly unknown to them. Probably a family predisposition existed, for at the time an elder brother and an elder sister looked very pale, complained of pains in their limbs, of languor, were easily fatigued and perspired much when working. Perhaps they represented rudimentary, undeveloped forms of the same disease (*formes frustes*).

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7. H. Oppenheim. *Diseases of the Nervous System,* p. 309.

173 East Eighty-second Street.

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The Medical Society of the County of Clinton.—The annual meeting of this society will be held in Plattsburgh, on Tuesday, January 12, 1904, at 1.30 p. m. By courtesy of the Plattsburgh Club, the session will be held in the club rooms at 27 Clinton Street. The following programme has been arranged: The President's Address, by R. B. Lamb; An Endemic of Typhoid Fever in Plattsburgh, by Dr. W. C. Thompson; Report of a Case of Head Injury with Remarks, by Dr. J. B. Ransom; The Recent Scarlet Fever in Peru, by Dr. M. B. Holcomb and Dr. W. N. Thayer. As matters concerning the public health will be discussed, members of the different boards of health, in the county are invited to be present. To those desiring it, lunch will be served at the Arcade at half-past twelve. R. B. Lamb, M. D., President. D. S. Kellogg, M. D., Secretary.

THE TREATMENT OF A CERTAIN CLASS OF THE UNDERFED.*

By WILLIAM S. ELY, M. D.,

ROCHESTER, N. Y.

Though, in a spiritual sense, man cannot live by bread alone, in a physical sense he does, and the varied activities of the bread winner represent the struggle for existence. With this struggle we are all more or less concerned.

In the primitive stage of mankind, the survival of the fittest designates those most successful in the strife for life. In the civilized state those who formerly would have succumbed have become burdens on society, many of them creating divisions of nosology and maintaining specialties in medicine. Among the less important of the classes referred to there are two that are opposed —the overfed and the underfed—those who overeat, the obese, and those who undereat, whom we may term the *subese.* The variety of treatment recommended for both the obese and the subese indicates that much is still to be learned of their successful management.

In this paper we are specially concerned with the underfed, or the subese, some of whom, like the poor, we have always with us. Reference is now had to individuals who may never have been ill, and yet never have been well. They are mostly women, from eighteen to thirty-five years of age, who have simply dragged on to adult life in an uneventful way, indefinitely weak, unequal to active exertion; thin; always under weight; comfortable when in repose, but quickly exhausted on slight effort. They do not know when they began to run down, and can only give an indefinite history of chronic invalidism. They have not dissipated; have had no great emotional, or eye strain; are not hysterical; and are not worn out by child bearing and child caring. Further, they are differentiated from the ordinary neurasthenic patient in not emphasizing spinal irritation, " nerve tire," and " womb ills." Many of them have been brought up in the village or country, where their existence has been uneventful, their condition debarring them from life's activities and pleasures. By the average physician the cases in question are set down as cases of defective nervous force, and, in the absence of organic disease, they are given tonics in ever changing combinations. For them prescriptions of strychnine, like Tennyson's brook, go on forever. Quinine and iron, with digestive aids, are taken in unlimited amounts. Pepsin and pancreatin compounds are always by their plates at table, and yet the end of the year finds them as at its beginning, incapable of effort, thin, exhausted, a drag on family and friends. If, occasionally, they rouse themselves from their lethargy to ask why they are not well, they may call in a new physician, or in desperation may break from their loyalty to regular medicine and secretly resort to some of the advertised remedies for their class, giving them successive trials until recurring disappointments finally produce a state of hopelessness, and they conclude with Solomon that, for them, there is nothing new under the sun, that what has been must continue to be; and so they sink into the old state of chronic inertia, resigned to live on in a passive way, either as a family burden, or as the recipient of family devotion and care, "thankful," as Rousseau says in his *Emile*, "to the doctor who gives to them each day the only pleasure of which they are susceptible—that of not being dead." The type of case we have pictured will be recognized by all present without further elaboration.

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* Read at the Semi-Annual Meeting of the Medical Society of the State of New York, New York, October 13, 1903.

Let the patient come into your office. Your first impression will be an indifferent one. If her overworked and worn out mother comes with her, you would probably deem the latter to be the subject for your care, but she corrects this impression, and you are introduced to a woman, eighteen to thirty-five years of age, who has never been strong, never well, and says that she gives out quickly on exertion and is good for nothing. She has never been actually sick, has an appetite—good, bad or indifferent—and some dyspepsia or distress after eating. Her menstruation is regular, with or without dysmenorrhœa, and constipation has always been present. Her pulse, temperature, and respiration are normal, the urine negative, and the most careful examination discloses no visceral disease. Her chest is small, ribs prominent, breasts undeveloped, waist contracted, and arm and leg muscles ridiculously small. If the patient's weight and height are taken there will be indications of from fifteen to forty pounds of under weight, but the statement will be made that the patient never weighed more than at present. Now let us return to the digestive organs for more specific explanation of the condition of lower nutrition that exists. If, with pen in hand, we note exactly what the patient has eaten in the past twenty-four hours (for the memory cannot go back of the immediate day) we may be surprised by the report. "What did you eat for dinner to-day?" "A little soup, a small piece of meat, a potato, and a piece of pie." "And for breakfast?" "A cup of coffee, piece of bread and butter, and a cookie." "And for supper last night?" "A cup of tea, bread and butter, a little cold meat (which by the way I did not eat) and some sauce." How often I have heard these and similar answers, the variations only emphasizing their inadequacy! If you hold these answers up to the patient, with the assertion that they represent for her starvation diet, and are not equivalent in nutritive value to the two quarts of milk often taken by an infant in twenty-four hours, she tells you, "But, doctor, I have never eaten more, and do not want more, and could not digest it, and have hard work taking what I have detailed. It almost makes me ill. My stomach won't hold it. A doctor once told me I must eat more, but I tried and could not do it." I reply, "notwithstanding what you say, for me you are a starved woman, starved in the midst of plenty. You admit that you have never been well, and you probably have always been below your normal standard, and you never can be better until your present standard is raised. This can only be done by increasing your body weight. We must disregard your ideas of what you need and crave, and must give you food as medicine—a definite amount at stated intervals, finding the limit of your tolerance and the amount necessary to increase your weight. The measures which do this will enrich your blood, improve your nervous nutrition, build up your muscle, and thus increase your strength and lift you nearer your normal standard and teach you how to maintain the improvement." While there may be many ways to effect this result, I have found that it is most quickly and surely reached by absolute rest and a diet of milk, chocolate, and raw eggs. As a rule, the attempt to carry out the treatment at home and without a trained nurse has not been successful. The most satisfactory results have been obtained in a hospital, where every detail can receive attention. With a reasonable promise of success the patient will usually yield to your insistence and go to the hospital. With the aid of a selected nurse, the treatment which Weir Mitchell has outlined in neurasthenic cases is at once instituted. It consists in having the patient remain in bed, absolute repose giving the greatest amount of nervous force for the digestion, which is to be subjected to its greatest test. Usually you can begin with four to eight ounces of milk, or chocolate made with milk, or two raw eggs every two hours. I prefer alternating these foods in the order named. During the night—the period from 9 p. m. to 6 a. m.—the interval may be every three hours, the patient being wakened at twelve and three. In many cases it has been impossible to give sufficient food to obtain satisfactory improvement without having its administration go on through the night. Patients soon become accustomed to being wakened every three hours at night, and do not object to it. As for repose they are resting all the time, and there is no evidence that they suffer from want of sleep. In the first twenty-four hours the endeavor is made to give one quart of milk, one quart of chocolate made with milk, and six raw eggs. Compare the nutritive value of this food with the diet on which the patient has always subsisted.

I am aware that every physician meets with patients who cannot take milk in any form. This suggests that for every such case, I can furnish four or five others who likewise are ruled by their stomachs. But I never saw a patient of the class to which I refer—a subese patient—to whom milk could not be given, plain or with some modification. I expect patients to rebel, and they are put in a hospital, and under firm direction to have the rebellion quelled. The number of doctors who have been stampeded by their patients' stomachs in their conflict with essential foods and medicines, is legion. There is no organ of the body that rules or ruins us to a like degree. The mind can do with the stomach what it will. A thought can make some ill. An odor can be as potent as a a policeman's club in felling others. Many persons are seasick—so seasick as to throw up their staterooms—before sailing.

No adequate treatise has yet been written on the moral training of the stomach, and there can be no success in the management of the subese, unless the doctor both trains and disciplines the stomach into good and proper behavior. It will resist doing more work than it has been accustomed to doing—will strike for shorter hours of work, and longer periods of rest—and he must be a firm disciplinarian if he would not permit the stomach to get the upper hand of him. Eminently true is all this in the cases we are considering, and failure is certain unless these facts are borne in mind. Patients will complain of fulness and discomfort. I expect them to have these symptoms. The digestive organs share the general enfeeblement, and we cannot look for strong digestion in weak underfed bodies. The sensations will be less troublesome if the food is taken slowly—fifteen or twenty minutes for a glass of milk—to " masticate it," as some of my patients tell me. The milk may be hot or cold, plain or aerated, or in other forms. I am a strong advocate of chocolate made with milk, chocolate not cocoa. The former is richer in fat and is well borne. It is also a sedative, and, with milk and eggs, furnishes the essential reconstructive elements. To obviate the bilious tendencies of the diet mentioned and to overcome the constipation almost inevitably present, rhubarb and soda tablets may be given after each, or every other, portion of food, from six to twenty a day. These and a morning enema keep the bowels free, and seem to aid the digestion of the milk. The urine is greatly increased with the ingestion of an increased amount of liquids. A moderately coated tongue is expected, and does not contraindicate the treatment.

The patient is weighed semiweekly. It is not expected that there should be any gain the first week. If the second week of the treatment no gain is noted, the food is gradually increased. This increase can often be carried with advantage to, or above, two quarts of milk, two quarts of chocolate made with milk, and twelve to fourteen raw eggs a day. Over and over again I have been surprised to observe how well this large amount of nourishment is borne, and the paradox is that the patients of the class we are discussing sometimes seem to need from four to six quarts of milk and chocolate and a dozen raw eggs to effect any improvement. This large amount is only gradually attained by small daily increments, and gradual training of the stomach.

It is interesting to note that when their improvement is effected and the limit of their gain is reached, the amount of food that has been well tolerated is rejected—absolutely disagrees—as thoroughly as it would with any well person. An increase of from one to three pounds a week for from ten to twelve weeks usually occurs. As a rule it is coincident with an improvement in the patient's appearance, blood, color, and especially in the digestive force. While mere increase in fat may not be advantageous, it is the best index of general improvement. We cannot act on nutrition electively, and often in effecting desired changes in the blood and digestive conditions, I have carried the fat gain above the normal limit, finding that the excess of fat can readily be dropped off while the general gain abides.

Dependence is not placed on food and rest alone. The usual aids in the care of neurasthenic patients are employed. They are fully detailed in Weir Mitchell's *Fat and Blood, and How to Make Them*. Daily baths, massage, passive and active movements of the joints, and the slowly interrupted faradaic current, combine to consume the intervals between feedings, to shorten the days, and to impress the patient's mind with the treatment as a whole.

So soon as the improvement is considerable, the patient, in summer, sits out of doors, masticates rare beef, and has some cereal added to her diet. But the pleasure she anticipated from solid food is seldom realized, and the milk and chocolate regimen is often better borne for the little excursion into the realm of solid food. She learns by the treatment that she can take an amount of food formerly thought impossible, and the educational value of her experience upon her future life is invaluable. Those who have followed my service in the Rochester City Hospital since 1894, when I read before this society a paper on *The Fable of the Egg*, have often seen the successful results of the treatment above outlined.

All who have both felt and seen the restorative power of food upon exhausted vital force must conclude that no medicinal tonic should ever be given to any patient until after his food supply has been accurately measured, and its further increase has been deemed inadvisable.

If the physician does not believe in this plan of treatment, he will not be successful with these cases. If, by education or theory, he decides in advance that four to six quarts of milk and twelve eggs in twenty-four hours should never be given to a depressed underfed patient from fifteen to forty pounds under weight; if he thinks that the stomach cannot, or should not, be trained to digest through the twenty-four hours, when every other function is in repose, but should have long intervals of rest; if he concludes that, because the patient's tongue is coated or the complaint of over fulness is urgent, the treatment is wrong, then he should not begin it because he will surely fail.

From the tolerance of the digestive organs for long continued excesses in eating and drinking, and from the marked permanent improvement in appetite, digestion, and nutrition often noted after typhoid fever, and from the general law of latent capacity inherent in every part of the organism, we believe that, in many of the class we have chosen to call the subese, digestive capacity can be advantageously increased.

It would seem as if man, in rising in the animal scale, had sometimes lost the equivalent of instinct in the animals below him, in judging of his food requirements.

I am aware that there are those who, with the appearance of being underfed, with the fact of under weight, and with chronic leanness, still lead long, useful, uncomplaining lives, with also a minimum of sleep. The law of variation must explain these cases.

Our concern is with a class of persons that exist, but do not live, that unaided are as imprisoned by their physical condition as are others by stone walls.

It may be that in selected subjects of this class the management and treatment which has been recommended will be found helpful.

CONCERNING THE ACCURACY OF PERCENTAGE MODIFICATION OF MILK FOR INFANTS.*

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The most distinctively American principle of pædiatric practice is the accurate modification of milk for infants by percentage formulæ. The scientific propriety of this method needs no demonstration, and it is used in this country by almost all careful practitioners who have any skill in the feeding of infants.

In spite of the general use of percentage feeding, however, there is no record of any comprehensive study of the actual composition of the milk mixtures made by this method; and, except for Wentworth's analyses, which relate solely to laboratory modifications, there has been no extensive attempt to determine whether the mixtures actually correspond closely with the prescribed formulæ. That is, it has been customary to order a certain formula, and to proceed as if the infant were getting that formula, the accuracy and conscientiousness of the person making the modification being usually taken for granted; while the fat and proteid content of the milk and cream are considered to correspond to certain accepted average figures. In other words, the method is known to be theoretically reasonably accurate, the practical results have usually been taken on faith. A conspicuous exception to this laxity of method is found, in Philadelphia, in those that use "certified" milks; for the chemical constitution, as well as the bacterial content of these milks, is kept constantly under control by a commission of disinterested physicians. A further important method of avoiding inaccuracies is in the use of laboratory modifications. Certified milks are, however, not available in many cities, and are never available in the smaller towns or in the country, except when a city that has a supply of such milks is not far distant and the family can afford the very considerable expense of having certified milk shipped to them—a course that is impracticable in most instances. Laboratory modifications, also, are used only by a somewhat limited number of physicians. Hence, in the majority of instances the statement that the composition of the milks and creams used is unknown, is correct; for few practitioners determine for themselves even the percentage of fats.

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We have undertaken a series of chemical examinations of milk mixtures, with the purpose of learning whether there are any important errors in the percentage method of feeding, as it is usually carried out; and if errors exist, to determine their sources and, if possible, the manner in which they may be corrected. Our purpose was to get some information concerning the results of several of the most important methods of percentage modification, and to determine which are the best and which are the least reliable. In carrying out this purpose we have analyzed 88 different milk mixtures.

Wentworth's figures relate solely to laboratory modifications, and throw no light upon the accuracy of home modifications. He gives a few analyses of modifications made by himself; but, since they were made up from milks and creams that he analyzed himself, the correctness of these modifications depended solely upon the care that he used in measuring and mixing, and they do not indicate the conditions that one would find in practice with milks and creams of more or less doubtful composition and with modifiers that may vary from extreme intelligence and devotion to utter stupidity and lack of conscience.

The two important sources of error that at once occur to one have already been indicated. First and foremost is, of course, variation in the composition of different milks and creams; particularly in the fat content of the creams. We have, for instance, found ordinary market creams, sold as "20 per cent. cream," to be as low in fat as 13 per cent. and as high as 26.5 per cent.—a variation of over 100 per cent. from the lowest point to the highest; and this, of course, entails a similar variation in modifications made from these creams. We have also known the fat content of milk to range from 2.5 per cent. to 8.8 per cent. in ordinary market milk—a matter of equally serious importance when whole milk or top milk is used in modifications. The proteid is subject to far less marked variations in unadulterated milk, but variations do occur. We have seen a range, within a brief period, from 2.85 per cent. to over 4 per cent. in mixed milk from one dairy of extremely good general quality; and the effect of such a variation, or of even a somewhat less pronounced one, upon a modification is at once evident. The proteid of cream is sometimes said to be less variable; but this is not an accurate statement, for marked variations occur, and especially with decided variations in fat percentage, there are usually coincident contrary variations in the proteid.

The other chief source of error in modifying milks is undoubtedly to be found in the person who does the measuring and mixing. That carelessness may often be discovered if looked for, every one will admit. That confusion and lack of understanding, even in persons of the more intelligent classes, is an equal source of error, will, we believe, be shown by our figures.

In order to meet these chief opportunities for error and to determine their effect, we have analyzed milk-mixtures made by supposedly capable persons and by others of unknown reliability; and also mixtures made, on the one hand, from milks and creams known to be of reliable chemical composition and, on the other, of ordinary market milks and creams. We are indebted to Dr. Griffith, Dr. Hamill, Dr. Westcott, Dr. Hand, Dr. Ostheimer, and Dr. Davisson for furnishing us with a number of the samples of mixtures from hospital and private patients.

In a general way, our analyses fall into the following four series:

1. A series of home modifications made from milks and creams of known composition.
2. A series of home modifications made from ordinary market milks of unknown composition.
3. A small series of modifications made from Dr. Ladd's card, chiefly using top milk and the lower fat free milk.
4. A series of laboratory modifications.

In the first and second series, the modifications were made by persons of varying capability. In one or two instances, the infants' fathers, who are physicians, modified the milk themselves. Usually it was done by a trained nurse or by the mother, the intelligence of the latter varying, in the different instances, from a high degree down to that of a stupid dispensary patient. The third series we modified ourselves, chiefly to test the accuracy of modifications made from top milk and the underlying, supposedly fat free, milk.

In all cases we determined only the fat and the proteid. The sugar is of less consequence in digestive disturbances, and, furthermore, the amount is more directly under our control, since we do not use a natural product containing a varying percentage of sugar, as we do with the fat and the proteid, but chiefly dry milk sugar. The fats and the proteid are the important constituents, and these we estimated accurately.

The method used for the proteids was determination of the nitrogen by the Kjeldahl-Argutinsky method, the value obtained being multiplied by the factor 6.38. This gave the proteid figures. We always used the mean of two control estimations. The reading of the titration in the control estimations rarely varied 0.1 cc. ($^4/_{10}$ normal solution).

The fats were estimated chiefly by the Leffmann-Beam method, frequently controlled by ether extraction. In a few instances, the latter method was used alone. It is important to note that in using the Leffmann-Beam method we, in the first place, always warmed the mixture to be analyzed to 15° C., and used a carefully calibrated pipette in measuring. We always used exactly 9 cc. of concentrated sulphuric acid of constant strength; and the dilute sulphuric acid used was always of constant strength. Two control estimations were frequently made, and always corresponded within 0.05 per cent.; and the result can practically not be read more accurately than this. If a new stock of concentrated or dilute sulphuric acid or of the hydrochloric acid amyl-alcohol mixture became necessary, the accuracy of this new stock was always tested by making control ether extractions. The ether extractions were always made in the Soxhlet apparatus after drying on asbestos (Babcock method).

In the following tables, we have introduced on the left the percentages of fat and proteid supposedly contained in the milk mixtures; on the right are those actually determined to be present. The letters L-B indicate the Leffmann-Beam process; eth. ext. indicates ether extraction.

Series I. contains mixtures made from certified milks:

SERIES I.—CERTIFIED MILKS.

	Calculated.		Determined.		
			Fat.		
No.	Fat.	Proteid.	L & B.	Eth. Ext.	Proteid.
1	3	1.50	3.2		Sample too small for estimation.
2	3.8	2.16	3.0	2.965	2.2151
3	4.16	1.50	4.4		1.3396
4	6.6	1.59	5.3		1.57
5	6 6	1.59	5.0		1.542
6	3.0	1.50	2.82		1.6335
7	3.0	1 50	2.80		1 555
8	3.1	1.60	2.85		1.429
9	3.1	1.60	2.80		1.597

Series II. were modifications of ordinary market milks and creams. The first ten were modified at the patients' houses, in all cases by the mothers. The remainder, the larger number, were modified in children's wards in hospitals by nurses especially trained in the care of children.

Series III.—Chiefly modifications made by ourselves from Dr. Ladd's card. Nos. 52 to 55 inclusive were made by using Baner's formula.

SERIES II.—MARKET MILKS MODIFIED AT PATIENT'S HOUSES.

	Calculated.		Determined.	
No.	Fat.	Proteid.	Fat L. & B.	Proteid.
10	3.0	1.0	3.4	0.7146
11	4 0	2.0	5 6	1.375
12	4.0	1.0	4 3	0.857
13	2.7	1.8	2 9	1.75
14	2.5	1 0	2.3	1.071
15	4.0	2.0	4 5	1.804
16	4.0	2 5	5.4	2.006
17	3 5	2.5	3 95	2.009
18	3 0	1.0	2 8	1.036
19	2.0	0.75	2.35	0.7146

MARKET MILKS MODIFIED IN HOSPITALS BY TRAINED NURSES.

	Calculated.			Estimated.		
				Fat.		
No.	Date.	Fat.	Proteid.	L & B.	Eth. Ext.	Proteid.
20	1.16	4	2	3.6		1.822
21	1.16	3.56	1 25	2.4		1.750
22	1.17	3	1	2.4		.7503
23	1.17	4	2.25	2.9		1.786
24	1.20	4	2	2.4	2.28	1.6792
25	1.20	3	1.25	2.4		1.2147
26	1.20	4	1 25	2.7		1.6335
27	1 20	3	1		2.802	.9646
28	1 20	3	1 25		1.806	1.036
29	2.2	4	2.5		2.72	2.1794
30	2.16	4	2	3.2	3.18	1.8935
31	2.16	3	1	2.2	2.24	1.036
32	2.19	4	2	3.2	3.4	
33	2.19	2	0.5	1.30	1.28	
		3.5	1.25	1.9		1.435
34	3.12	3	1	4.3		.786
35	3.12	3 5	1.5	4.5	4.42	1.2862
36	3 12	2 5	1.5	3.1		1.1432
37	3.17	2.5	1.5	3.2		1.2861
38	3.19	3.5	1 5	4.2		1.1432
39	3.19	3	1.5	3.8		1.1432
40	3 19	4	1	3.8	3.75	.8574
41	3.20	2	3	6		2.286

Series IV.—Laboratory mixtures ordered for this purpose to be sent to a city address. A number of specimens of each modification were examined, since this would lead to more proper conclusions, whether favorable or unfavorable, than would the examination of single specimens. The percentages were run up rapidly, for the purpose of testing the results.

In interpreting these results, one must first realize clearly that *absolute* accuracy can never be demanded or expected in the modification of milk. Consequently, if figures obtained by the chemical examination of modified milks occasionally vary a few tenths of one per cent. from the calculated figures, and only a few tenths, one is not justified in condemning the mixture in any way; on the contrary, if these variations are only occasional, the mixtures should be considered to be excellently made. This statement is based upon the well-known fact that the composition of milk and cream varies more or less widely, even when the product of one excellent dairy is used. Therefore, modifications made from milk and cream will vary somewhat, no matter how great the care used in preparing them. It is common knowledge that the fat of whole milk, even when from a constant source, may vary widely within a short time, and even from day to day. To quote our own results, we have, among others, several series of figures from estimations of the milk from one excellent dairy, made for days or weeks at a time, which show variations as marked as from 3 per cent. to 5.5 per cent. of fat within a very few days; and these figures are not at all remarkable. The Milk Commission of the Philadelphia Pædiatric Society allows the fat of the milks that it passes as "certified" to vary between 3.5 per cent. and 4.5 per cent.; and yet, although these milks are produced under conditions that are as nearly ideal as it is practicable to make them, the fats not infrequently pass these limits slightly, and require reexamination. An error of consequence would result from this in mixtures made from whole milk; and when fat free milk is used and the fat is obtained entirely from cream, an error of as much as 0.4 per cent. is possible in modifications with fairly high fat percentages. The fats of the Philadelphia certified creams are allowed to vary between 14 per cent. and 18 per cent. and do occasionally vary to this extent, even though they also are produced under most excellent regulations.

SERIES III.—MODIFIED BY THE AUTHORS.

No.		Calculated.		Determined.	
		Fat.	Proteid	Fat	Proteid.
42	Certified milk, "B" 4/12, 1903, presumably 10 per cent. cream, twelve hours standing. Determined fat percentage of cream, 7.6	2	1	1.2	.912
43	Same milk, 4/13..............	2	1	1.6	.928
44	Same milk, 4/14, 1903, presumably 10 per cent. cream. Milk stood ten hours. Fat percentage 11.1..........	3	2	3.25	1.929
45	Certified milk "A," presumably 10 per cent. cream. Milk stood twelve hours. 4/12, 1903................	2	1	1.8	.9746
46	Same, 4/14, 1903............	3	2	3	1.8578
47	" 4/15, 1903......... ...	4	2	3.9	
48	" 4/16, 1903............	3	2	3	1.786
49	" 4/17, 1903	2	1	1.85	1.0003
50	" 4/18, 1903............	3	2	3.15	1.9649
51	Milk of unknown fat percentage stood eleven hours, giving supposedly 10 per cent. cream...............	3	2	2.65	1.826
52	Certified (fat-free) milk and 16	2	1	1.8+	1.0003
53	per cent. certified cream.	3	2	3.1	2.036
54	Baner's formula....	4	2	3.8+	1.929
55	Unknown market milk and supposed 16 per ct. cream. Baner formula............	3.5	1.25	1.9	1.435

SERIES IV.—LABORATORY MODIFICATIONS

No.	Calculated.		Determined.		
	Fat.	Proteid	Fat.		Proteid.
			L. & B.	Eth. Ext	
56	1.5	.75	1.3		.822
57	1.5	.75	1.3		.8217
58	1.5	.75	1.4		.8217
59	1.5	.75	1.2	1.3	7503
60	1.5	.75	1.3	1.3	.7146
61	1.5	.75	1.1		.8574
62	1.5	.75	1.45		.8217
63	1.5	.75	1.30		
64	1.5	.75	1.50		.8574
65	1.5	.75	1.50		.9288
66	2.	1.25	2 2		1.2147
67	2.	1.25	1.9		1.2504
68	2.	1.25	1.9		1.2147
69	2.	1.25	2.4		1.2861
70	2.	1.25	1.6		1.036
71	2.	1.25	1.7		1.2147
72	2	1.25	1.9		1.0717
73	2.5	1.50	2.4		1.2504
74	2.5	1.50	2.6		1.3891
75	2.5	1 5	2 6		1.2861
76	2.5	1.5	2.6		1.4098
77	2.5	1.50	2.2		1.143
78	2.5	1.50	2.6		1.3
79	3.5	1 75	3.55		1 6335
80	3.5	1.75	3.3		1.6335
81	3.5	1.75	3.3		1.544
82	3.5	1.75	3.25		2.2151
83	4.5	1.75	3.9		2.1794
84	4.5	1.75	4.2		1.544
85	4 5	1.75	3.5		1.536
86	4.5	1.75	3.8		1.7049
87	4.5	1.75	3.9		1.557
88	4 5	1.75	3.7		1.562

As to the proteid, it is often said that this varies but little—and this is true, as compared with the fat; but it varies enough to make an error of several tenths of one per cent. possible in modifications of moderate strength. The Philadelphia milk commission allows a variation of one per cent. in proteid, as well as in fat; and no narrower limit could be maintained. As to excellent market milks, we have figures for several hundred estimations, made by us, that show even wider variations. Among these figures are many that were made day after day in metabolism experiments; and these show variations even as great as 1.1 per cent., on two successive days, with thoroughly mixed milk from the same dairy.

It is evident, then, that in the modifications themselves, if they are of moderate strength, an extreme variation of as much as 0.3 per cent. in the proteid, and certainly quite as large a variation in the fat, may be due purely to uncontrollable variations in the milk and cream; and such variations are not subject to criticism. Again, it may be properly said that a reasonably conscientious and careful modifier may often make an error of as much as one drachm in measuring, and this would often in twenty-ounce mixtures increase the fat error as much as 0.1 per cent. If a similar error were made in both milk and cream, it would add at least 0.05 per cent. to the total proteid error; and this would make the possible excusable error with the proteid as much as 0.35 per cent.

We wish it to be clearly understood that the statement that has just been made is not intended to indicate that wide variations of fat and proteid are constantly occurring, even in carefully prepared modifications. Such a wide range is permissible only in mixtures ranging from a moderate strength up to a high formula, and not in very low formulæ; and it is never permissible for them to occur very frequently. The latter would mean that poor dairy products were being used or that the modifier had been careless. We do mean, however, that in formulæ with fats or proteids running as low as 1.25 per cent. there may be an occasional entirely excusable error of fully 0.3 per cent. in either fat or proteid. In lower modifications, which are the most important from this standpoint, the excusable error would decrease in accordance with the greater dilution; in higher modifications, a somewhat larger error may be excusable. Errors as marked as this should occur only occasionally, because extreme variations in good milk are only occasional. The fats, however, show a wide range more frequently than do the proteids; consequently, moderate errors in the fats may be expected with some frequency with mixtures containing high or moderately high fats. The fats of milk or cream may go either up or down; consequently the error in the modification may do the same. The proteids not only do not vary so frequently, but when they do vary they will usually be below what they are calculated to be, because the figure generally used in computing the formula for proteid is 4 per cent., and the actual proteid is usually somewhat below that point and is much more likely to go still lower than to go above 4 per cent.

Considered from this standpoint, our figures show the following facts:

The first series of home-modifications, made under favorable circumstances—*i. e.*, from certified milks and creams and by persons of intelligence—show satisfactory accuracy, as far as the proteid is concerned, the widest variations above or below the prescribed formula being slightly within 0.2 per cent. The fats vary widely, there being errors of 0.8 per cent., 1.3 per cent., and 1.6 per cent. in this small series. These errors were almost entirely due to the modifiers, who were in these cases usually intelligent mothers. We analyzed the creams used in the last two instances and found them to be almost exactly of the percentage that they were supposed to be.

(To be concluded.)

A BACTERIAL TREATMENT OF TUBERCULOSIS; WITH REPORTS OF CASES.*

By STEPHEN J. MAHER, M. D.,
NEW HAVEN, CONN.

(Continued from page 19.)

CASE VII.—The next patient to be injected was an unmarried young woman, whose father and a sister had recently died of tuberculosis and who had been sick with consumption for two years, part of which time she had spent in the Adirondacks, and part in the hills in the northern section of this State. She had cavities at both apices, a patch of pleurisy at the right base anteriorly, and areas of consolidation in the lower lobe of the left lung. She had been taking her own temperature for months and was as discouraged as she well could be at what she saw was the steady progress of the disease. The thermometer registered 97° and 96° F. in the morning, and from 101° to 103° in the evening. She had had hæmorrhages, night sweats, and diarrhœa, until she was worn to half her former self. Her reaction after the first injection was sharp, and the lump in her groin made her lame for three days, but before the week was over she began to improve. She was able to walk out of doors. Her appetite increased. The cough lessened and she breathed with less trouble. Her daily temperature had a shorter range. She was able to call at my office every few days for examination. I found that the tubercle bacilli persisted in her expectoration.

At the end of three weeks, her symptoms began to grow worse again, and on March 2nd, I gave her another injection, this time at my office and from a blood culture unmixed. She began to have a severe chill before reaching home, and had a very uncomfortable night. The reaction lasted well into the next day. She did not improve after this injection. She said she felt better, but her cough slowly went back to its former condition. She began to lose in weight; by March 16th she had dropped three pounds. I gave her during the next two months several other injections, but they failed utterly to arrest the progress of the disease. She died in the early summer.

An interesting unsuccessful case was the following:

CASE VIII.—The patient was first taken sick in 1899. She was then nineteen years old, a popular singer. Two members of her family had recently died of "lung trouble." She suffered for several months from laryngitis, and tuberculous left sided pleurisy. There were tubercle bacilli in her expectoration; she had cough, sweats, fever, wasting. Moreover she had a tremendous tuberculous enlargement of the glands on the left side of the neck. I had her spray my pseudo X into her throat for several weeks. She appeared to improve; I told her to go to visit some friends in New York. In a few months, she came home apparently cured: no laryngitis; no cough; no fever; no tubercle bacilli; no glandular enlargement; no signs of pleurisy. She had taken no medicine; and had paid no special attention to hygiene. Her New York friends had induced her to take whisky in water or milk twice a day. Up to that time she had never used alcohol in any form. She soon returned to work and for a couple of years seemed to be one of the healthiest, as she was one of the prettiest and happiest, girls in the town. She married and became pregnant. I delivered her in November, 1902. She had a normal labor, and her baby was well developed and well nourished. Soon after Christmas, she grew irritable and despondent and had afternoon fevers. Then a slight cough developed. She could not be induced to see a physician. Finally in February, after she had frightened her friends several times with fainting spells that came on usually about nightfall, she was brought one evening to my office. I was shocked to see the change that had come over her. She had a temperature of 104° F., a pulse of 150, a racking cough, and fine and medium moist râles all over both lungs. I ordered her to be carried home immediately. She fainted before the carriage arrived. I was greatly relieved to learn of her safe arrival at her home.

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* Read before the New Haven Medical Association, December 16, 1903.

The next day I found tubercle bacilli in her sputa. I forbade her to nurse the baby, which was still healthy. I gave her an injection of X February 13th. She showed signs of improvement immediately. Her fever and sweats stopped and her cough grew very much better for a couple of weeks. Of course, this may have been due to the stopping of the nursing and a few days' confinement to bed. In ten days her symptoms became bad again, though not as they had been. I gave her another injection, March 2nd. Again there was evidence of improvement, but this time for a shorter period. She developed pleurisy at the left base. Then she slowly but surely grew worse. I ordered her to try the country air for awhile. It was in vain. She died in July. The baby had begun to cough in the spring and died of tuberculosis of the lungs a few weeks after its mother.

Case IX.—Another unsuccessful case was a brother of the last named patient. He was taken sick at the time of the recrudescence of the disease in his sister and received an injection of X a few days after her first treatment. At the time he had lost twenty pounds and had symptoms of a very acute case. He lasted only a few weeks longer than his sister.

Case X.—Still another unsuccessful case was that of a tall, thin, unmarried youth, aged twenty-one years. He had a dull contracted chest with poor expansion, and had been sick only a few months and had only a few sticky râles in both lungs. His temperature had been persistently high; after the injection, the daily range became shorter for ten days, and as it began to increase again, another injection was tried but without material benefit this time. He died five months later.

Case XI.—My last unsuccessful New Haven case was a married woman, thirty-five years of age, a multipara who had been sick four months. Her husband, still living, had phthisis for two years before she took it. His sickness forced her to become the breadwinner of the family. She worked in a factory, making good wages until the cough and weakness and daily fever rendered her almost unable to walk. Then she came to see me. I found both apices involved. She had a temperature of 102.5° F. and a weak, rapid pulse. I found tubercle bacilli in her expectoration and in that of her husband. I injected X into both, and had them both sent to the Hartford Sanitarium. She seemed to improve for a few weeks after the injection. But then her fever returned and she lost strength rapidly. She died in September. Her husband who has had several cavities for a long while still lives, but is very low at present. As yet there are no signs of trouble with the children.

I will now briefly describe some local cases which have had a more encouraging outcome.

Case XII.—A. M., female, unmarried, aged forty years, born in Ireland. A domestic. One sister died of miliary tuberculosis and one brother of tuberculous bone disease. Patient has large goître hanging to the right of the medium line of her neck. Began to be sick early in December with cough, fever, and sweats, several small hæmoptyses, dyspnœa on exertion, loss of weight and appetite. At the time of the injection her weight was 111½ pounds. She had a severe chill and fever during the night after the injection, and felt weak the next day. Even on the second night she had a bad headache and some fever. After that she had no further symptoms. At the time of the injection she had tubercle bacilli in her sputa, and pleurisy at the left base and partial consolidation of the left apex to the third rib.

Now there are no tubercle bacilli in the sputa, there are a very few sticky râles at the left base, and no râles at the apex. There is some recession and dulness at the left apex, but no sign of actual trouble. She has returned to work and is without symptoms of any kind.

Case XIII.—Patient, M. M., female, single, nineteen years of age, born in New Haven, a student. Has had a cough since the spring of 1902. Slight hæmorrhage, July, 1902. Night sweats, day fevers, slight clubbing of finger nails. Spent the summer of 1902 in the mountains. Gained ten pounds during the vacation of eight weeks. Her cough persisted, though in a lessened degree. A feeling of pressure under the sternum entirely relieved by her sojourn in the hills. Lost in weight and grew worse in other symptoms as soon as she returned to New Haven. After two months' stay at home, she went back to the mountains and remained there a month. During this second stay there was no improvement, and she returned to New Haven, toward the end of January, in very bad condition. She had a distressing tight cough, with night sweats, day fevers, and loss of appetite. She now weighed 118 pounds.

I gave her a first injection on February 13, 1903. She had a restless night and complained of being sore all over. The injection was of an agar culture in boiled water to which had been added a few drops of glycerin. The only apparent effect was an immediate softening of the cough. She expectorated more profusely for some days and then the cough began to diminish in frequency.

On March 2nd, I gave her a second injection of 4 c. c. of a pure culture of X on blood serum. At the time of this injection there still remained in her groin a hard lump, the size of a chestnut from the first administration of X. The reaction was more severe than from the first injection. She had again a restless night and when she came down to breakfast the next morning, she fainted. She began immediately to show an amelioration of all her symptoms. Her cough lessened. In three months she had gained ten pounds. She has had no more fevers or sweats. The cough almost disappeared during the summer, but even now there is a slight cough in the morning. I have examined her sputa several times in the last month and have failed to find tubercle bacilli.

CASE XIV.—Patient, H. A. Mc., sent to me for treatment by Dr. Edward M. McCabe. Male, twenty-four years of age, married, born in New Haven. A polisher and buffer. One sister died ten years ago of phthisis. Patient has been sick eleven months. At first he had left sided pleurisy. Got worse in the early spring. Hæmorrhage April 28th. Bleeding continued three weeks. Anointed June 16, 1903. X injected July 15th; weight was then 112½ pounds. Anorexia, chills and fevers, and sweats, and loss of weight every week. Cough very hard; great dyspnœa on exertion, particularly on climbing the three flights of stairs to his apartments. Slight clubbing of nails. Serous fluid in left pleura to eighth rib and angle of scapula. Apex displaced to right of sternum. Expectoration full of tubercle bacilli. There did not seem to be enough effusion to account for the extreme cardiac displacement.

After the injection, he had a very restless night, but no chill, and no skin symptoms. The lump in the groin lasted for nearly three weeks and was painful for two days. He rapidly recovered in weight the first month. On August 6th, he weighed 125 pounds, and on September 17th, 138 pounds. His cough disappeared very rapidly. In three weeks, there was no night cough and very little day cough. The night sweats and fevers and chills all left. He was able to climb the three flights of stairs with almost as little dyspnœa as his very healthy wife. On October 23rd, and November 23rd, and December 12th, I aspirated and each time drew off a few ounces of pus. Despite the presence of this pus he has had no fever or chills since July. His weight has remained stationary since September.

CASE XV.—R. K., a school girl born in New Haven fourteen years ago. Her father died of consumption twelve years ago, and her mother of the same disease eight years ago, and a brother seven years ago. Her father's family alive and in good health. Of her mother's family of thirteen, eleven are dead, two of consumption, three of dysentery, one of dropsy, one of painter's colic, and four died in infancy. This girl has had a cough for five years, which was usually worse in the winter. Last year, she became seriously sick in the fall with cough and fever and sweats. She came to me in Christmas week. She had a suppurating cavity in the upper lobe of the left lung. She weighed 72 pounds. I treated her for a few weeks with guaiacol, but her symptoms became worse every week. There were many tubercle bacilli in her expectoration.

On February 6th, I gave her an injection of X in the groin. In forty-eight hours her symptoms began to improve. She gained in weight. In two weeks her cough had almost gone. Her sweats ceased in the first week. Her dyspnœa disappeared, and she begged hard to be permitted to go to school. Tubercle bacilli persisted in her sputa until late in the spring, when she weighed 90 pounds. She returned to school in the fall, but began again to cough and to have night sweats in November. I could find no tubercle bacilli in her sputa, but there were signs of softening in that old cavity, and on December 1, 1903, I gave her another injection. Her cough improved the next day. She has gained four pounds. Her fevers and sweats have ceased.

CASE XVI.—Mr. P. R., aged forty-five years, born in Ireland, a wheelwright, came to me three years ago with an attack of asthmatic bronchitis, which was quickly cured with potassium iodide. He had no return of his cough for eight months. Then it lasted six months under domestic treatment and the use of proprietary remedies. He came to me again, and again the iodide cleared up his lungs and they remained clear until last Christmastime. I saw him early in January and found that he had many sonorous râles on both sides. I gave him iodide again. The sonorous râles disappeared, but the cough remained, and despite all that I could do, grew worse. He had a few crepitant râles at the left apex, heard best posteriorly. He lost appetite, weight, and strength, and had fevers and sweats. In a third specimen of sputa that I examined, I found many tubercle bacilli. I gave him an injection of X on February 13, 1903. That very first night he had relief from the cough and his wife came down to see me three days later in great joy over the changed condition of her husband. His appetite and strength returned. By March 6th, his weight had increased from 137 pounds to 143 pounds. On April 18th he weighed 149 pounds, on June 16th 150½ pounds, and on November 28th, 156 pounds, which is more than he ever weighed before. He now has no cough. He eats well and sleeps well. He takes no medicine. He has been at work steadily since March. On November 28th, I could find no abnormal signs in his lungs.

CASE XVII. I had a patient come from Hartford for treatment last summer. She is an intelligent woman, a school-teacher. She has not taught, however, since October, 1902, because of her sickness. I found tubercle bacilli in her sputa, a small subclavicular cavity in her left lung, and a pleuritic patch at the axillary base of the right lung. Because I did not expect to see her soon, I asked her to keep a few notes of the effect of the injection. I hope it will not sound too much like an endorsement of a patent medicine, if I read part of what she has written. She had unusually violent reaction, and it may be well on that matter to give the patient's point of view. Her family history is negative. Before the injection she had severe dyspnœa and a most irritating cough, which was especially distressing at night. She writes: " I have been suffering with consumption for the past three years, have had a bad cough, night sweats, spitting up of blood, four hæmorrhages, chills and fever, and was obliged to give up my duties in October, 1902. I then weighed 122 pounds. On September 2nd I took the first treatment, about 10.30 a. m. About 3.30 p. m. a chill came on, a second one following at 4.30 p. m. I passed a very restless night and had a high fever and was sick all over. Shortly after taking the treatment (about twenty minutes), I passed urine, passing it about six times during the night. On September 8th, I was able to resume my duties, having gained between the October 2nd and 8th, six pounds. The night sweats, chills and fever, spitting of blood, all left me. Previous to the first treatment I was able to sleep on one side only (the right). Now, I can sleep on either side, equally well, and also on my back.

" My appetite failed for about two days after the treatment, but, after that, it returned with renewed vigor. On October 1st, I took a second treatment at 4.30 p. m.; about 8.45 a chill, very severe, came on, followed by a high fever. I passed a very restless night and passed urine as frequently as before.

" My increase in weight was continual from the very outset, my cough decreased until at present I have no coughing spells, only a little in the morning and evening. I can now sleep, whereas in the beginning I coughed all night.

" On November 26th, I took another (a third) treatment at 5.10 p. m. This time I received it not as before in the groin, but in the upper part of the left lung. The chill came on about 10.30 p. m. and nearly killed me, lasting about forty minutes; it too, was followed by a high fever. I do not know how long the fever lasted as I fell asleep during the fever. I slept fairly well that night and soundly all during the next day. I feel better after this treatment than ever before. My weight at present is 136 pounds and I have not been off duty one hour since September the eighth. The cough is still decreasing, yet I cough a little. Expectorations are less frequent. None of the other symptoms have made their appearance since the first treatment. My health, at present, is in a very good condition."

This injection that she says she was given in the lung, as a matter of fact, was given subcutaneously over the small cavity that I spoke of above. Since the last injection she has gained three pounds and a half.

CASE XVIII. L. S., male, married, thirty-eight years of age; a cigar-maker, born in Bohemia. Acutely sick four months, but had hæmorrhages nine years ago. Several sharp ones last summer, causing him to stop work. Has had distressing cough. Has lost eighteen pounds. Nails slightly clubbed. Some recession of both apices subclavicular and supraclavicular more marked on the left side. Tubercle bacilli in sputa. Dull tympanitic note subclavicular on the left. Poor expansion of both lungs. Many fine and medium moist râles at left apex heard best posteriorly.

Injected with X on October 17th. In a week he felt better. In two weeks returned to work. On November 22nd, I find no fine râles posteriorly at apex of the left lung, but a few coarse ones under the left scapula, and with difficulty a few in front in the supraclavicular region on forced inspiration. He coughs less. The sputa are thinner. He says he feels " lively and easy " since the injection. His appetite has improved. Has spat up blood-stained mucus once since the injection. Has worked hard. Has gained two pounds and a half in weight.

(To be continued.)

THE X RAY TECHNIC OF DR. H. ALBERS-SCHONBERG.*

By EUGENE R. CORSON, B. S., M. D.,

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Since Röntgen's discovery, in 1895, x ray literature has assumed vast proportions. On several occasions I have called attention to the excellent works on the subject which have appeared in Germany; I refer especially to the works of Donath, Gocht, and von Ziemssen, and Rieder. It was a pity that Donath's or Gocht's work was not translated at the time to give a wider circulation to these teachings from Germany, teachings directly in line with what I conceive to be the direction of x ray progress.

This new work from Dr. Albers-Schönberg sustains the same high level. I shall try to review it at sufficient length to give the reader an idea of its salient features and the principles of x ray technic which it so clearly and so ably sets forth. Dr. Albers-Schönberg is joint editor with Dr. Deycke, of the German x ray journal, *Fortschritte auf dem Gebiete der Röntgenstrahlen,* a very able publication, and he has undoubtedly had a very large experience in x ray work. His book abundantly proves this. If one is astonished by the great mass of x ray literature, the increase in apparatus to meet the demands of a more perfect x ray technic is more astonishing. The x ray specialist who wishes to keep abreast of this progress must bestir himself in more ways than one.

The source of energy recommended is the large coil with a 50 to 60 cm. spark gap run with a Wehnelt interrupter. The author admits, however, that in a general way, provided a good tube is used, the form of interrupter is irrelevant. "Radiographs of the best quality can be made with one as well as with another type of interrupter. . . ." "The advantages of the newer adaptations of the Wehnelt model consist, not in an improvement of the radiographs, but in its lighter, easier, and more certain workings." He admits that there is some difference of opinion as to the size of the coil, but that the consensus of opinion since the Congress of Naturalists and Physicians, in 1901, is in favor of the large coil. "It is indeed not to be denied that clear radiographs and very good screen work can be done with a small apparatus; it is none the less certain, too, that the tube suffers more from the use of a small coil on account of the more effective reverse current, than when a large coil is employed. As we shall see, the capacity of regulating the small coil is much less than that of the large coil. For difficult work, as photographing kidney stones, lumbar vertebræ, and the pelvis, the small coil is not efficient. When, therefore, with new furnishings the question of a choice of a coil arises, the advice should be to choose one with a spark length between 50 and 60 cm." Provided with the large coil and the electrolytic break, the Walter installation is employed and carried out in every detail. From the first experiments the electrolytic interrupter proved to be too much of a good thing. There was more current than the tube could stand, and a more effective reverse current, so that the tube rapidly aged or became too soft. It is largely to Walter that we owe a proper insight into the difficulties of the problem and their remedy. It was the influence of the reverse current from the make-spark that injured the tube. An improvement came with the introduction into the circuit of an impedance coil of high self-induction. The introduction of a second coil with a high self-induction between the Wehnelt and the first coil, improved still more the conditions. From a series of such coils, according to the quality of the tube, the reverse currents could be quite eliminated, and the softest tube could be run for hours without injury. Naturally, the length of the platinum point of the postive pole of the Wehnelt varied with each coil introduced. Even this arrangement, not to mention its clumsiness, did not prevent occasionally the rapid hardening of the tube. This drawback was first definitely overcome by reducing the voltage in the primary along with the change in the self-induction. By the construction of coils with an adjustable self-induction, the quality and the quantity of the secondary discharge could be adapted to each tube.

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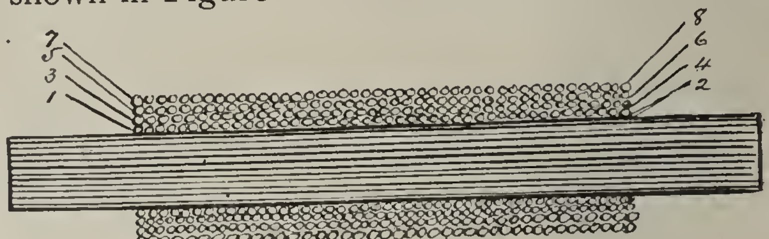
* *Die Röntgentechnik. Lehrbuch für Aerzte und Studierende.* Von H. Alberts-Schönberg, Dr. Med. Mit 85 Abbildungen im Text and 2 Tafeln. Hamburg: Lucas Gräfe & Sillem. 1903.

"By adjustable self-induction we understand that form of construction of the primary winding, as shown in Figure 1. Around an iron core, which must have a certain dimension according to the size of the coil, are four layers of spirally wound wire, each layer being carefully insulated from the preceding one. The current can be sent through one or all four together, or through two, three, or all four in series. If the current goes through one layer only, the magnetic field excited in the core is weaker than when the current passes through two or more layers. The effect of the magnetic field of the core upon the secondary winding is called the self-induction of the core. We are, therefore, in this given case of a four-fold winding of the core, able to obtain four different strong magnetic fields, that is to say, four different degrees of self-induction.



"In conjunction with the Wehnelt interrupter the spark length of such a coil is very evidently influenced by the degree of self-induction. The less it is so, so much the greater is the spark length of the secondary. With increasing self-induction, the spark length falls off. This difference of spark length, determined by the change in the self-induction, is also influenced by the positive pole of the Wehnelt, in a way that the more the platinum style dips into the fluid the greater the spark length, and vice versa, the shorter the style of the anode, the shorter will the spark length be. Consequently, to obtain the greatest spark length, choose the least self-induction with the greatest possible length of style. If the self-induction rises, the length of the style must be decreased correspondingly, as the highest self-induction corresponds with the shortest style. For example, a 60 cm. coil can be changed by a regulated self-induction and length of style to a 30 cm., 20 cm., or 5 cm. coil, so that the operator controls all the qualities which these small coils possess.

"Besides the spark length, the quality of the spark is evidently influenced by the self-induction and the length of style of the interrupter. The thickness of the spark increases with an increased self-induction as well as by increased length of style. If, for example, the thickest and most powerful sparks are required, the highest self-induction and the longest style are chosen. Thus, to influence the quality of the secondary discharge, we have two possibilities:

"1. The changing of the self-induction.

"2. The changing of the length of the style of the interrupter.

"We shall see later how necessary the proper working of the tube depends upon reducing as far as possible the reverse currents of the make-spark, as they are the cause of the early ageing and hardening of the tube. This secondary make-spark has its highest voltage when the discharge consists of thin, small, feathery sparks, as occurs when we employ a low self-induction and a correspondingly short style. The make-spark has the least tension when we use the highest possible self-induction with a long style. One must also find out the degree of self-induction and the length of style which will give the best secondary discharge for the specified vacuum of the tube. For a lower self-induction it will be a longer, for a higher self-induction a shorter style. Experience teaches that for each self-induction a specified style-length is adapted, so that the question of the relationship of style-length to self-induction determines itself. Thus, for example, under the supposition that a 60 cm. coil is employed, for a hard tube, self-induction marked 3 and style marked 1 on the switch-board, as shown in Fig. 4, are employed. For a medium soft tube, self-induction No. 4, and style-length No. 2, are indicated. And finally for a very soft tube, self-induction No. 5 and style No. 3 are used. Self-induction Nos. 1 and 2 serve only to carry out the different combinations of numbers of windings which do not concern us here.

"There is, moreover, another factor to be considered which is of importance when the apparatus is connected with a current of 110 or 220 volts, namely, the fact that the reverse current of the make-spark is the greater, the higher the primary voltage is, while, on the contrary, the tension is so much the less, the lower the tension in the primary. 'That is to say, the voltage of the secondary make-spark of a coil is directly proportional to the voltage of the current employed, and further, inversely proportion to the extent of the self-induction of the primary' (Walter). It is advisable, therefore, to bring down by a proper shunt this voltage to 60-80 volts. Resistance marked W_2 on the switchboard, parallel with the primary, shown in Figs. 2 and 3, accomplishes this. This is securely and permanently connected up for working with the Wehnelt, that by no possibility the higher voltages are used. The third possibility of affecting the secondary spark consists thus in

"3. Changes in the primary voltage."

I have here quoted the author somewhat at length to show how the Walter installation places the coil with the Wehnelt interrupter upon a scientific basis, enabling the operator to adapt his current to his tube to the very closest point, which is, in fact, the very heart and soul of x ray work. Tables are given with the dimensions of the core and the number of turns of wire corresponding to the different spark-lengths and to the different degrees of self-induction. The plans and figures of the switchboard show how readily the operator can carry out these principles of Walter.

Two models of the Wehnelt interrupter are shown and described. This electrolytic break is now too well known to require further notice.

In the second chapter on tube models and workings the author asserts that the tube constitutes two thirds of x ray technic, and that its proper working, using the Walter apparatus, consists in utilizing, as far as possible, the break-spark, to the exclusion of the make-spark, and in using that spark which is best adapted to the vacuum of the tube, and working always with a comparatively low voltage in the primary. Thus, a soft tube requires a short spark with high self-induction and a medium length of style; a hard tube a long spark, with low self-induction and a long style.

A good form of skiameter for testing the vacuum is figured and a special warning given against using the hand as a guide. To those who do any amount of x ray work this caution becomes imperative.

Chapter III is taken up with various forms of lead screens which have for their object the cutting off of outside and parasite rays, and help to give sharper and clearer radiographs. There is figured a table-screen, a wall-arm screen permitting all movements and positions, a wooden frame screen admirably adapted to chest and abdominal work, and a compression screen in the form of a cylinder which can be pressed firmly upon the part to be skiagraphed, absolutely limiting the field, and by its pressure bringing the parts closer to the plate, as well as aiding in their fixation. This is much more effective than the simple lead plate with diaphragm. It is the most effective apparatus yet devised for cutting off outside and parasite rays (Vagabonde Strahlen), and finds its greatest usefulness in photographing kidney stones, and the deeper and more difficult parts.

A chapter is devoted to the furnishing and arrangement of an x ray laboratory, a luxurious outfit, more adapted to institutional and hospital requirements, and more elaborate and costly than the ordinary x ray worker can afford. It shows the minute details which the German workers strive after. The plans are shown in two tables at the back of the book.

Chapter V is devoted to the photographic technic, and well repays a careful reading. As with many of the German workers, notably von Ziewssen, and Rieder, glycin is the developer used, and the author treats at some length of its advantages over other developers. "Above all things it is one of the best developers because there is always some doubt with x ray plates as to the proper time of exposure. This fault of exposure this developer most surely corrects; while on the one hand it brings out of the plate all its details, on the other hand, according to von Hübel, whose opinion I share, it corrects overexposures. It is not necessary, then, during the development of the plate to examine it by transmitted light, to ascertain how far the process has advanced, but it can be left in the solution without concern till after the specified time." This depends, I think, upon its slower action. I have myself used this developer and can speak well of it.

He recommends the alum bath in hot weather, and washes the plate in running water for two hours, especially when the plate is to be intensified. Many photographers consider this unnecessarily long. It is Carbutt's advice, however. He regards overexposure as the commonest mistake in photographic work. From my standpoint, I have always preferred overexposure as giving more bone detail in the print as well as throwing out the flesh.

He dwells at length on the intensification of the plate by corrosive sublimate. The importance of this process I have long recognized, and have carried it out in most of my own work where I wished prints for publication, for the very reason that I preferred a somewhat overexposed plate, as giving me more of the internal structure of the bone, and the flesh wiped out.

The advantages of the stand-development are shown, and apparatus figured. Here, of course, the glycin is preeminent. He has obtained his best results by this method.

Chapter VI, one of the most important, to my mind, is devoted to an emphatic note of warning against the dangers of x ray burns among those who do much x ray work. He advises heavy lead glasses for the eyes, rubber gloves, the protection of the face by a mask, and a protection of the body generally by a screen, and by keeping out of the direct field of the radiation. As the x ray is coming more and more into use, the danger of burns to the operator has greatly increased, and this word of caution cannot be made too emphatic. To the eyes, especially, should attention be directed. The skiameter should be used instead of the hand. By a disregard of this caution I have injured my own hands.

Chapters VII to XV treat of the special technics for the different parts of the body, and there is nothing especially new outside of his use of the compression tubular screen, in itself a very great addition to our technic. A most important feature dwelt upon is the complete immobilizing of the part skiagraphed by using screen, sand bags, and rubber bandages. This point has always impressed me as of prime importance, as I see so many poor skiagraphs due to this fault. I can testify to the value of sand bags and roller bandage, as they have been used by me a long time. The technic of kidney stones is gone into with much detail. Here again the compression cylindrical screen is used, and if necessary, five photographs are taken with it over each kidney area, and as much compression used as the patient can stand. A medium soft tube is used. The technic impresses me as the most thorough yet devised for this difficult part of x ray work. He gives the following requirements for a good skiagraph of the kidney area:

1. Bone detail in the transverse processes of the vertebræ.
2. Evident detail in the last two ribs.
3. Differentiation of the psoas and quadratus lumborum muscles.

The author is not enthusiastic over the results so far obtained in the detection of gall stones, but hopes that the future may accomplish something for us with an improved technic.

A short chapter is devoted to the œsophagus and the detection of its obstruction and dilatation by means of bismuth, the metallic probe, and the ballooning of the diverticulum. In this way, undoubtedly, much information can be obtained.

In Chapter XXII screen work is thoroughly discussed, both in the apparatus and the technic. Two models of lead-lined box-screens are described, which must facilitate immensely the use of the fluorescent screen, and which in addition must shield the investigator from the bad effects of the radiation. He is explicit in showing the province of the screen, as well as its limitations. "The detection of foreign bodies by the fluorescent screen is evidently limited to the upper extremities, the neck, the chest, and the lower extremity below the knee, and under certain conditions the skull. In all other parts of the body the photographic plate should be used." And again: "Screen work in surgery is of little value relatively," and he would limit it to the examination of the chest, and here he advises a soft tube, in conjunction with a lead screen with adjustable diaphragm, either as a plane screen, or the more complicated lead-lined box.

Chapter XXIII on orthodiagraphy shows a very distinct advance in this field of x ray work, and especially in the exact measurements of the heart and aorta. " The fact that all radiographs show a perspective aberration and an enlargement of their normal form is explained by the x rays diverging from a point in a cone shaped radiation, the apex of the cone being the glow point of the anticathode . . . that is to say, the enlargement of the shadow pictures is directly proportional to the distance of the body from the projection screen, and inversely proportional to the distance of the source of light from the body to be measured. Upon the recognition of this law, different authors, like Levy-Dorn, Moritz, and others, have developed a method which aims to represent the object in its natural size. When the source of light, as in Fig. 66, is placed perpendicularly over the point A, so will this point be marked upon the screen perpendicularly under A at A′. If now the source of light is moved along until it comes perpendicularly over B, so will the point B be perpendicularly projected upon the screen at B′. The line A′ B′ has thus the same size as the line A B; thus it is practicable to mark the line A B upon the screen in its natural dimension. This method of reckoning is called marking with the perpendicular x ray. In order by this method to indicate the natural proportions of the object to be measured, it is only necessary, according to Moritz, to record in a definite way, a certain ray projected perpendicularly upon the projection screen, out of the whole bundle of rays which come from the anticathode, and with this one ray to project the different points of the outline of the object in view upon the screen, and there to record them. It should be especially insisted here that to Moritz belongs priority in orthodiagraphy, for he first conceived the idea of combining a movable tube with a fixed style, an idea upon the elaboration of which the apparatus to be described rests."

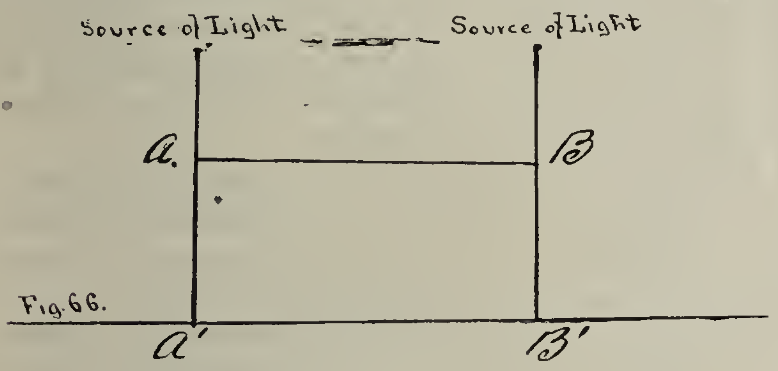


Fig. 66.

This orthodiagraph is figured and described at length, and in addition some simpler models, depending upon the same principle. The apparatus is too complicated to be described here, and the reader must turn to the original to understand its workings. The tube is moved in conjunction with a perforated screen, which permits marking out the points with ink or pencil upon the skin. Figures are given to show how accurately heart and aorta can be mapped out, practically to millimetres. All this necessarily demands practice, time, and patience; from the truly scientific standpoint the game is always worth the candle.

Chapter XXIV treats of the localization of foreign bodies. The geometrical method, especially for the chest, is clearly set forth. A simple method is given for locating needles in the hand and fingers. The last chapter deals with stereoscopic skiagraphy, and a simple apparatus described. A compression stereoscopic tube screen is figured and described at length. The author regards stereoscopy as chiefly valuable in congenital dislocation of the hip and in foreign bodies in the eye. What I have seen of stereoscopic skiagraphs has not impressed me as far reaching, but as rather a side track off the main line, of more scientific interest than practical value, though I am aware how careful we should be in denying practical results to what at the time seems of scientific interest only.

My review of this book is more in the way of an excerpt than of a criticism. The book is the work of a master in this field of research, and as a book of this kind should be, it represents his own work and his own methods. Individual as it is, he is still largely indebted to Walter for this investigator's researches in coil construction as adapted to the Wehnelt interrupter, and to Moritz for his able exposition of orthodiagraphy. The book is concise and direct, and the writer has resisted the temptation of introducing skiagraphs and historical and bibliographical matter which, however attractive in book making, would have been irrelevant to his chief object in view, namely, a concise work on x ray technic as he carries it out, and as representing the present state of our knowledge of the subject.

◆

The New Haven, Conn., Board of Health has appointed the following medical inspectors for the public schools at a salary of $240.00 per annum: Dr. Charles E. Park, Dr. Thomas C. Cahill, Dr. J. J. Cohane, Dr. H. F. Klenke, and Dr. Joseph B. Monahan. These gentlemen performed the same service gratuitously last year, with the understanding that remuneration would be furnished at this time.

Therapeutical Notes.

Smallpox.—After general instruction regarding the care of the invalid, *Journal des praticiens* for December 12, 1903, gives the following formula for local use:

℞ Corrosive sublimate...10 centigrammes (1½ grain);
Lanolin }
Vaseline } of each.........15 grammes (½ ounce).
M. Ointment.

For the facial eruption, use:

℞ Corrosive sublimate }
Tartaric acid } of each............1 gramme (15 grains);
Alcohol ....5 grammes (75 minims);
Sulphuric ether..........enough to make one pint.
M. Spray with this solution 3 or 4 times daily.

When using the spray, the eyes should be covered with cotton soaked in boric acid solution.

In hæmorrhagic smallpox, the following mixture has proved to be of value:

℞ Calcium chloride............6 grammes (90 grains);
Distilled water.........10 grammes (2½ drachms);
Solution of gum arabic, 30 per cent......40 grammes (10 drachms);
Tincture of cinnamon..10 grammes (2½ drachms);
Syrup of acacia........enough to make 150 grammes (5 ounces).
M. Take all by tablespoonfuls in the twenty-four hours.

In ordinary forms of the disease, use:

℞ Ammonium acetate.........15 grammes (½ ounce);
Peppermint water }
Melissa water } of each............45 grammes (1½ ounce);
Syrup of ether (Codex)....60 grammes (2 ounces).
M. Tablespoonful every hour.

The foregoing is valuable in the early stages; later on, quinine, opium, etc., may be given. Vaccination and, above all, revaccination sum up the prophylaxis.

Wasp Stings.—Paul Fabre, in *Journal des praticiens* for December 12, 1903, states that he has used the following prescriptions successfully in cases of severe stinging:

℞ Zinc oxide.................30 grammes (1 ounce);
Talc ....200 grammes (6$^{2}/_{3}$ ounces);
Powdered camphor.......20 grammes (5 drachms).
M. Apply freely.

℞ Spirits of Mindererus......4 grammes (1 drachm);
Syrup of ether (Codex)..20 grammes (5 drachms);
Syrup of opium (Codex)..............40 grammes (10 drachms);
Distilled water of lettuce.............125 grammes (4$^{1}/_{6}$ ounces).
M. Tablespoonful every hour.

Administration of Creosote.—*Bulletin médical* for December 19, 1903, gives Bouchard's formula:

℞ Beechwood creosote }
Iodoform } of each...........5 grammes (75 grains);
Licorice powder...........enough to make 80 pills.
M. Take eight pills daily.

Bouchard and Gimbert prescribe:

℞ Beechwood creosote..13½ grammes (3¼ drachms);
Tincture of gentian.......20 grammes (5 drachms);
Alcohol ....250 grammes (8$^{1}/_{3}$ ounces);
Malaga wine...............enough to make 2 pints.
M. Tablespoonful after each meal.

A powerful combination is the following:

℞ Beechwood creosote.......10 grammes ($^{1}/_{3}$ ounce);
Codliver oil..................................2 pints.
M. One tablespoonful after each meal.

The following elixir is sometimes better borne:

℞ Beechwood creosote........15 grammes (½ ounce);
Rum ....975 grammes (32½ ounces).
M. Tablespoonful in a cup of coffee after meals.

To administer creosote by the rectum, try:

℞ Beechwood creosote......16 grammes (4 drachms);
Oil of sweet almonds....250 grammes (8$^{1}/_{3}$ ounces).
M. Inject half an ounce.

A Galactogenous Syrup.—*Revue française de médecine et de chirurgie*, for December 14, 1903, gives Marfan's formula:

℞ Aqueous extract of galega }
Calcium chlorhydrophosphate } of each..10 grammes ($^{1}/_{3}$ ounce);
Tincture of fennel }
Oil of cumin............................15 drops;
Simple syrup..........400 grammes (13$^{1}/_{3}$ ounces).
M. Four tablespoonfuls daily.

Herpes Zoster.—Brodier in *Revue française de médecine et de chirurgie*, for December 14, 1903, states that treatment should begin with a saline purgative. The eruption should be protected from friction and ointments or powders used, or better still dry or alcohol dressings. Salzwedel controls pain immediately by bandaging with 6 or 8 double bandages, saturated in alcohol, and covered with an impermeable protective. Painting with concentrated solutions of picric acid or silver nitrate is also efficacious. The two following ointments are by Bleuler:

℞ Boric acid...................1 gramme (15 grains);
Starch }
Zinc oxide } of each.......2 grammes (30 grains);
Vaseline ....16 grammes (½ ounce).
M. Ointment.

℞ Cocaine hydrochloride..20 centigrammes (3 grains);
Vaseline }
Lanolin } of each.........10 grammes ($^{1}/_{3}$ ounce).
M. Ointment.

After opening the phlyctenules, a simple aseptic powder may be dusted thickly on and kept in place by a bandage. The powder should be renewed daily without washing the lesion. If the vesicles become infected, the following may be substituted for the simpler preparations:

℞ Boric acid }
Iodoform } of each.......5 grammes (75 grains);
Starch ....30 grammes (1 ounce);
Zinc oxide................10 grammes ($^{1}/_{3}$ ounce).
M. Dusting powder.

If there is much pain, 20 centigrammes of cocaine hydrochloride may be added to the foregoing.

In the aged, the disease often causes agonizing pain, for which Brodier advises:

℞ Extract of stramonium }
Extract of hyoscyamus } of each....15 milligrammes ($^{9}/_{40}$ grain).
Extract of belladonna }
M. One pill; take four such daily.

Insomnia is treated with chloral hydrate, bromides, opiates, etc. Herpes zoster often leaves a severe neuralgia in its train, which may be treated with careful doses of aconite, gelsemium, acetanilid, etc.

Subacute Gout.—Luff, in *The Practitioner*, for July, 1903, suggests the following pill:

℞ Colchicine ....$^{1}/_{60}$ grain;
Extract of nux vomica....................¼ grain;
Extract of gentian..........................1 grain.
M. For one pill; take three daily.

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THE LESSON OF THE CHICAGO HORROR.

As was only to be expected, the appalling disaster at Chicago has set the authorities everywhere, not only in America, but in most of the large cities of Europe, busily to work, overhauling the conditions of the theatres and other places of public assembly, in regard to protection from fire. Criticisms of existing conditions and suggestions for general improvement are freely bandied about, and the wave of apprehension seems to have aroused the usual state of excitement which seizes upon the people generally, whenever a long impending but disregarded catastrophe becomes an accomplished fact and brings home the lesson of neglected precautions.

That is only human nature. A serious outbreak of typhoid in one city is needed to cause the authorities of other cities to set their houses in order, literally and metaphorically. An epidemic of smallpox elsewhere rouses people from their apathy in regard to vaccination. An explosion, like that in the Tarrant building, in New York, calls attention to the violation of the laws concerning the storage of explosives. An appalling railway disaster such as happens only too frequently, calls attention to conditions by which safety is habitually disregarded for the sake of other considerations. But the worst of it is, this searching of heart continues but for a few days. The affair becomes a nine days' wonder, and ere long people drop into their former habits of reckless indifference, until some new disaster occurs to wake them up to a sense of the needless peril they are daily incurring.

Fire rarely breaks out in the auditorium of a theatre. It originates almost always behind the footlights. There are there fewer people, and consequently less danger from panic, and it is panic that is almost always responsible for the great loss of life that occurs. Given the panic, and a large part of the evil is sure to accrue, even though the alarm be a false one. It is obviously clear, therefore, that there are two main points to safeguard: To lessen the ground for a likelihood of panic, and to obviate its evil results should it occur. The first must be effected by the power to confine, temporarily at least, the fire behind the proscenium, and by taking means to prevent the auditorium at a critical moment from being plunged in darkness. The second by obviating all obstructions, both internal and external, to a speedy emptying of the theatre.

To accomplish the first aim various methods are available—real fire proof materials, the asbestos screen, automatic water sprinklers from the proscenium, etc. To effect the second, the auditorium should be fitted with a subsidiary lighting apparatus that can be operated from the front of the house; all overcrowding and all blocking of the aisles and staircases should be rigorously prevented, and ample exits opening outwards and incapable of being secured against a rush from within should be provided; and further, no place of public assembly should be allowed to be wedged in between other buildings, but all should be compelled to be open on the sides by at least an alley way communicating with the street, into which the side doors should open.

Many of these points are already matters of law in most cities. The gravest fault of all is that they are not enforced. We see in New York notices in the cars and elsewhere of a health board ordinance announcing that any person spitting in the car will be liable to fine and imprisonment —an ordinance in every way commendable on the score alike of health, decency, and æsthetics. Yet we believe we can say with truth that we have never once travelled in a car—surface or elevated—during the past twelve months, without seeing one or more persons spitting on the floor. And as in this, so is it in everything else. We have laws enough—good laws most of them—but because responsibility is in almost every matter too much divided, they are never, or only spasmodically and sporadically, enforced, and consequently they are broken broadcast with impunity.

The lesson of the Chicago disaster should be to have not too many laws, but what we have adequate and above all practicable; to have a punishment clearly defined and "fitting the crime"—neither too lax nor absurdly stringent; and then to ensure their enforcement by having no divided responsibility, but a specific person or persons, severally and collectively liable in heavy punishment for their nonenforcement. Better no laws at all than laws which are only spasmodically enforced "every little while." If the proper function of punishment is that of a deterrent to others, not an act of vengeance, and that is the commonly accepted view in civilized countries, then it should follow as inevitably on the discovered offence as a burn follows the grasping of a piece of hot iron.

NEW YORK'S NEW HEALTH COMMISSIONER.

Rarely indeed has the interested and critical observer of the affairs of a great municipality such justification in congratulating the people on an important appointment, as we now feel in felicitating the people of New York upon that of Dr. Thomas Darlington as commissioner of health. While medical men have always had a voice in administering the sanitary affairs of the city—at times even a leading voice, as in the days of Dr. Willard Parker's service and that of Dr. Stephen Smith—that voice has never been paramount. There was a recent period, indeed—one that endured far too long for the credit of the community—during which no member of the medical profession could legally hold the office of president of the board of health. Happily the new charter has done away with that anomaly, and now for the first time since the establishment of the old Metropolitan Board of Health we shall have the opportunity of showing the people what a purely medical administration can accomplish. Dr. Darlington is singularly well fitted to carry out the demonstration, and, with the honor of our profession in view, we have no fear for the result.

Dr. Darlington has been long enough in medical life to have imbibed an ample experience in matters touching closely upon the fundamental work of sanitary authorities, and circumstances have given him unusual experience in such matters, notably the management of tuberculous disease and the sanitation of school children. On the other hand, he is not so old as to have become imbued with theories difficult for an old man to discard as exploded or to hold on probation. He is in the prime of life, at the height of his powers. Above all else, Dr. Darlington has been a practising physician in the city for years, one who has met with the reward of material success and the esteem of the community. We feel sure that his professional brethren will support and assist him in his official work to the extent of his just expectations, and we look to his administration to reflect credit upon our profession.

THE ATTACK ON GENERAL WOOD.

As was, of course, fully to be expected, the report of the Senate committee on the promotion of General Wood has completely swept away the tissue of, well—"inaccuracies," with which it was sought to bolster up the opposition to his due and regular advancement in rank. It is abundantly clear that personal spite conceived the charges brought against General Wood, and that political intrigue and professional jealousy acted as doctor and midwife at their birth. The only shadow of exception that could possibly be taken to General Wood's promotion should have been taken when he was advanced at a bound, for services so conspicuous that no outcry could reasonably have been, or was, at the time made about it, over the heads of some of his seniors to the rank of brigadier general in the regular army. That appointment passed without criticism—nay, with general approbation. Now that it is proposed to confer upon him the step which is due to him by reason of his present rank, we are regaled with a lot of unsavory charges that certainly receive no added credibility from the sources from which they emanate, and have completely failed of substantiation, while personal animus has been clearly manifested. General Wood's actual crimes are, in the eyes of those who have so bitterly joined in the attack on him, First: That he entered the service as a medical officer, and consequently as a so-called "non combatant," and one, therefore quite incapable of comprehending the intricacies of real "military matters." Secondly, That he nevertheless showed an ability in such matters which was rendered all the more conspicuous by the background afforded by certain others who had been "combatant" officers from the outset. Thirdly, That in his subsequent career as governor general in Cuba he showed himself to be markedly superior as an organizer, an administrator, and last but by no means least, as a disciplinarian. Fourthly, and finally, that through the exercise of the last named qualification he made an enemy of certain individuals possessed of "pull" with persons of sufficient political lung power to be able to raise a storm in a teacup. General Wood is a conspicuous member of a small body of medical military men, whose careers form a brilliant refutation of the silly assumption in military circles of the inferiority of the medical officers to those of the line.

ACONITE AS A VASODILATOR.

There appears to be a growing tendency toward the more extensive employment of aconite in certain cardiac and circulatory conditions. One excellent authority lauds it highly as "much the best vasodilator which we possess and much more persistent in its action on the vessels than any of the nitrites," commending the drug above all other means to secure reduction of arterial tension in chronic renal disease. Other authorities condemn it utterly in cardiac hypertrophy and specifically advise against its employment when it becomes necessary to produce widespread vasomotor relaxation. So great a variance in practice would apparently indicate that the mode of action of this drug on the heart and arteries had not yet been determined. On the contrary, we find that authorities are in pretty general agreement as to its effects on the cardiovascular system. Our knowledge is not yet complete in all details; still, certain definitely established facts stand out from the mass of pharmacological data which experimentation has accumulated during recent years regarding the action of this drug. Its effects on the mammalian heart and circulation may be said to comprise two more or less definite and distinct periods—viz., vagus stimulation and vagus paralysis. The former of these two stages is one of the greatest interest to the physician, as the developments that it embraces are those which result from the administration of medicinal doses of aconite in individuals who are not subject to idiosyncrasy toward its action. The stage of vagus paralysis represents the lethal effects of aconite upon the cardiac mechanism.

Following the administration of therapeutic doses of aconite there are produced a slowing and steadying of the pulse with slight fall of blood pressure. The concordance of authority is that this effect is mainly if not entirely brought about by stimulation of the cardiac inhibitory centre in the medulla oblongata. Most authorities deny the influence of peripheral (vasomotor) factors in the production of this primary slowing and reduction of pressure. There is some evidence of an action on some part of the vasomotor mechanism, for it has been observed that after section of the vagi in the neck the administration of aconite was notwithstanding followed by a slight slowing of the heart, which would indicate that the peripheral inhibitory nerves were involved in the result. The slowing was exceedingly slight as compared with that produced when the vagi were intact (Mathews). Whatever share the vasomotor mechanism takes in the slowing of pulse and primary fall of blood pressure, it is, as matters now stand, a very subsidiary one as compared with vagus stimulation and can contribute but slightly to the result. The reduction of blood pressure is produced chiefly by decrease in the force of the heart's action and not by vasodilatation—is, in short, a cardiac and not an arterial phenomenon.

Large doses of aconite bring about a gradually increasing vagus paralysis marked by quickening of the pulse from stimulation of the accelerator and later from paralysis of the vagi. In advanced stages of aconite poisoning the sequence of ventricular upon auricular contraction is interfered with (Mathews, Cash, and Dunston), a condition of ventricular delirium supervenes, the muscular irritability of the heart is destroyed, diastolic arrest finally resulting (Boehm

Wartmann). After the stage of acceleration has set in the blood pressure becomes extremely irregular, rising and falling in obedience to alterations in the cardiac movements. The vasomotor centre seems eventually to become paralyzed, for it has been found that galvanization of the efficient vasomotor nerves still caused a marked increase, while afferent nerve stimulation produced no change in tension. No dilatation of the peripheral arterioles has been observed to result from aconite such as follows so speedily the use of the nitrites.

Aconite has been chiefly employed as a vascular sedative. By diminishing the force and frequency of the heart's action, it lessens blood pressure, and in doing this tends to allay spasm and relieve undue excitability of the nerve centres. Cardiac sedation is, however, a very different thing from vasodilatation, and in conditions of excessive peripheral resistance with high tension and cardiac hypertrophy, such as exist in chronic nephritis, it is doubtful whether in aconite we possess a substitute for vascular drugs of acknowledged potency such as the nitrites. It is unnecessary to dwell upon the fact that in the cardiac hypertrophy of renal disease and other chronic toxæmias the resistance is primarly in the capillary network. Circulatory crises in such cases demand relief to the heart from the peripheral obstacle. On *a priori* grounds a grave question mark may be placed against the employment of aconite under such circumstances. If the experimental evidence at our command is correct, aconite is not an active vasodilator. By means of its action in diminishing the force of the cardiac pump it may possibly to some extent relieve the arterial tension under the operation of Hale's law, that the real pressure of the blood in the arteries depends on the proportion which the blood thrown out of the left ventricle bears to the quantity that can pass through the capillary arteries into the veins at that time. In the face of the extremely vicious peripheral conditions which exist in renal disease, it is hardly to be believed that the relief obtained in this way will prove adequate. Moreover, any advantage secured in this manner is gained to the jeopardy of the heart. The hypertrophied heart of renal disease inevitably tends to failure, and it is impossible to predict in any given case that the myocardium is not already the seat of degeneration. Under such circumstances, by interfering with cardiac nutrition, aconite may work decided harm. The possibility of such an effect is not lessened by the fact that larger doses than ordinary will be required to produce its physiological action on the heart in cases of hypertrophy with tension because high intracardiac pressure renders vagus inhibition more difficult to secure. Toward no drug in the entire pharmacopœia is idiosyncrasy so often manifested. Numerous cases are recorded of dangerous syncope and even death having resulted from small medicinal doses of aconite (Ferrand, Leigh, Woodbury). Ferrand, indeed, emphatically condemns it as a dangerous drug, the use of which should be confined to the laboratory. While few would go the full length of Ferrand's condemnation, great caution is undoubtedly necessary in its employment, owing to the unexpected susceptibility which is often manifested toward its action. We may well pause before undertaking a more extensive use of this drug in cardiac therapy.

ARTHUR R. ELLIOTT.

TUBERCULOUS DISEASE IN THE POLICE AND FIRE DEPARTMENTS.

We are glad to see that a movement is on foot to weed out tuberculous policemen and firemen from among the force engaged in actual work. The danger to such policemen and firemen themselves is far too great for the community to allow it to continue. And the danger is still greater to their fellow officers in the close lodgings which alone the station houses and engine houses are able to afford. We say this in full confidence that the people of New York and our other large municipalities will not suffer the afflicted policemen and firemen to be deprived of their means of a livelihood. They must certainly be provided for in proper style.

THE MEDICAL PROFESSION AND THE CHICAGO HORROR.

We are firm in our conviction that in times of public peril the members of our profession never falter in the work of aiding the injured to the best of their ability. This was strikingly exemplified in the case of the " first aid " rendered to the sufferers by the recent burning of the Iroquois Theatre in Chicago. A force of public spirited citizens promptly set about the work of rendering such aid to the injured. It was at once perceived that the efforts in this direction should be organized and that they should be under the absolute direction of a competent medical man. A prominent senator voiced this conviction and nominated as the director of the work Dr. G. Frank Lydston. The nomination was unanimously carried, and we cannot doubt that Dr. Lydston displayed his well known intelligence and energy in the work.

THE TUBERCULOSIS CONGRESS QUESTION.

In view of the forthcoming meeting, to be held on January 28th, in Baltimore, for the purpose of considering the tuberculosis congress situation in America, details of which will be found in our news columns, we would call the attention of those of our readers who may not be sufficiently conversant with the situation, to an open letter by Dr. S. A. Knopf, of New York, entitled A Multiplicity of Tuberculosis Congresses, which was published in this journal for December 12, 1903. The situation is one that undoubtedly calls for action by the readers in the medical profession, and we trust that a representative meeting of those interested in the question, such as is likely to be held in Baltimore, will succeed in dealing with it in a broad, able, and effective manner.

A NOVEL ON EXPERT SCIENTIFIC EVIDENCE.

To those who have read Professor John Uri Lloyd's *Stringtown-on-the-Pike*, his latest work, *Red-Head*, will need no introduction. In point of fact, it is a re-telling, with additional matter, and in, we think, a more effective manner, of the main story of the former work. It is, indeed, like its predecessor, a novel with a purpose. Professor Lloyd holds strong views in regard to the question of chemical expert evidence in cases in which an accused person's life hangs in the balance. He affirms, and he is himself a chemist of authority, that, to take one specific instance, the mixture in proper proportion of morphine and hydrastine will produce reactions practically identical with those produced by strychnine under the usual tests employed for that poison. It is on the ignorance of that fact by an expert chemist that the conviction and—no, not the execution; we will not give the author's story away; those, who wish to know what follows, may read the book—the fate of Red-Head depend. The moral of Professor Lloyd's work is, if in one instance such things can be, why not in others? Is it safe to convict any man of a capital offense on expert evidence alone? Are not the seemingly infallible things that we do know always conditioned by many other things which we do not know, or even suspect?

News Items.

Society Meetings for the Coming Week:

Monday, *January 11th.*—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private); New York Ophthalmological Society (private); Gynæcological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence.

Tuesday, *January 12th.*—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private) (Election); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private) (Election); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

Wednesday, *January 13th.*—New York Pathological Society (annual); New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox Medical and Surgical Society (private).

Thursday, *January 14th.*—New York Academy of Medicine (Section in Pædiatrics); New York Academy of Medicine (Section in Otology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society (annual and election); Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

Friday, *January 15th.*—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynæcological Society; Manhattan Medical and Surgical Society (private).

Changes of Address.—Dr. H. J. Boldt, to 39 East Sixty-first Street, New York; Dr. Edwin Van D. Gazzam, to 4904 Forbes Street, Pittsburgh, Pa.; Dr. W. E. Ard, to Westchester, with Dr. J. Gorse Simmons.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending January 2, 1904:

	Week end'g Jan. 2.		Week end'g Dec. 26.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	584	15	438	6
Diphtheria and croup	461	59	379	50
Scarlet fever	345	23	277	30
Smallpox	1	1	1	0
Chickenpox	97	..	116	0
Tuberculosis	229	177	217	161
Typhoid fever	36	10	61	14
Cerebrospinal meningitis	..	3	0	4
Totals	1,753	288	1,489	265

The Nursery and Children's Hospital.—The annual charity ball in aid of this institution will be held at the Waldorf-Astoria on February 2nd. Mrs. F. N. Goddard, of 2 East Thirty-fifth Street. is in charge of the sale of boxes.

The New Norwegian Hospital, at Forty-sixth Street and Fourth Avenue, will benefit by a fair to be held in the building from February 1st to 6th. About $80,000 will be required to discharge the debt incurred by the new edifice.

The Contagious Diseases Hospital on Kingston Avenue, Brooklyn, is to be considerably enlarged by the action of the board of estimate in closing Hawthorne Street, between Kingston and Albany Avenues, which will give the city a plot of ground 700 feet in length.

Three Generations in Manhattan College.—Dr. Arthur J. O'Leary has been appointed to the professorship in Manhattan College made vacant by the death of his distinguished father, which we recorded with regret in a previous issue. Dr. O'Leary's grandfather occupied the same chair when the college was founded.

The Beth Israel Hospital Association held its annual meeting in the hospital building, Cherry and Jefferson Streets, on December 29th. This institution, which cost $250,000 to build, and costs about $100,000 annually to conduct, was built and is supported principally by the small contributions of the poorer Jews of the east side, most of whom come from the Kishineff district of Russia.

Fiftieth Anniversary of the New York Infirmary for Women and Children.—A meeting to celebrate the fiftieth anniversary of the New York Infirmary for Women and Children will be held at the Waldorf on Saturday, January 16th, at 8.15 p. m.. Addresses will be given by Dr. William H. Welch, of Johns Hopkins University; Miss M. Cary Thomas, president of Bryn Mawr College; Dr. Emily Blackwell, and Dr. Annie S. Daniels.

The Flushing Hospital, Brooklyn, held its annual meeting of the board of trustees on December 28th, and, among other business, appointed the following physicians as attending physicians and surgeons: Physicians, Dr. Rupert Folger, Dr. Joseph L. Hicks, Dr. Archibald W. Jaggar, Dr. L. D. McPherson, Dr. E. P. Lawrence. Surgeons, Dr. Joseph F. Bloodgood, Dr. E. A. Goodridge, Dr. George I. McElway, Dr. Charles B. Story. Associate physicians and surgeons, Dr. William A. Allen, Dr. Lucien R. McCollom, Dr. I. L. Doughty, Dr. I. F. Dick.

New York Academy of Medicine Section Meetings.—The section on Pædiatrics will meet on Thursday evening, January 14th, at 8.15 p. m., when the order will be: Presentation of Cases; Symptomatology, Differential Diagnosis, and Course of Bronchopneumonia in Children, by Dr. Matthias Nicoll, Jr.; Treatment of Bronchopneumonia in Children, by Dr. W. P. Northrup; discussion of these papers by Dr. L. Emmett Holt, Dr. Floyd M. Crandall, and others.

The section on Otology will meet on January 14th. Order: Presentation of Cases; Exhibition of New Instruments; Neglected Education of Partially Deaf Children, by Dr. Max Toeplitz; Difficulties and Methods in Teaching Children who are Hard of Hearing, by Dr. Maximilian P. E. Grossman; discussion.

The section on Orthopædic Surgery will meet on January 15th. Order: Presentation of Cases; Case of Multiple Osteitis, by Dr. Townsend; Case of Joint Disease, Syphilitic Subject, by Dr. Myers; Case of Arthritis of Wrist, by Dr. Brewer (by invitation); Case of Cervical Lateral Curvature, possibly Supernumerary Ribs, by Dr. Sayre; Case of Lateral Curvature, due to Hemiplegia, by Dr. Nathan; Case of Pott's Disease Simulating Malignant Disease, by Dr. Taylor; Three Cases of Typhoid Spine, by Dr. Townsend.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g Jan. 2.		Week end'g Dec. 26.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	74	11	66	14
Diphtheria	83	23	62	22
Scarlet fever	123	5	89	6
Typhoid fever	150	20	131	10
Consumption	..	62	..	59
Cerebrospinal fever	..	..	..	..

New York Medical Journal and Philadelphia Medical Journal's Change of Address.—The Philadelphia office of this *Journal* has been changed to the Professional Building, 1831 Chestnut Street.

The Methodist Episcopal Hospital, of Philadelphia, has received a bequest of $5,000 by the will of the late Cordelia A. Brown.

The New Jefferson Hospital.—Plans and estimates for the superstructure of this building, in process of erection at the southwest corner of Tenth and Sansom Street, Philadelphia, have been posted. It will be a seven story structure with a basement and roof garden and will measure 106.11 by 165.2 feet.

The Philadelphia Academy of Surgery held a meeting in the hall of the College of Physicians, Thirteenth and Locust Streets, on January 4th, at which the following was the programme: A Case of Rhinophyma, by Dr. W. W. Keen; The Annual Address in Surgery, by Dr. Gwilym G. Davis, on The Treatment of Fractures. William J. Taylor, M. D., secretary, 1825 Pine Street.

Dinner to Professor Woodhead.—Dr. M. P. Ravenel, assistant medical advisor of the Phipps Institute, of Philadelphia, gave, on December 30th, a farewell dinner at the University Club to the distinguished lecturer from England. Among the guests were Dr. S. Weir Mitchell, Dr. Talcott Williams, Dr. Wharton Sinkler, Dr. W. W. Keen, Dr. L. F. Flick, Dr. John H. Musser, Dr. A. O. J. Kelly, Dr. Leonard Pearson, Dr. James Tyson, and Dr. D. J. McCarthy.

Aftermath of the Typhoid Fever Epidemic in Butler.—The physicians who are returning from the fever stricken town of Butler are quoted to have reported altogether 1,328 cases and 115 deaths. An exhaustive investigation by Dr. George A. Soper, of the *Engineering News,* shows that on account of the failure of a dam the water had been obtained since last August from a polluted portion of the Connoquenessing Creek. Although at one time it had been filtered, the filters at the time were out of service. To quote from Dr. Soper, part of the report reads "Judging from all evidence in hand, Butler might almost as well have had no local board of health as the one which accepted the grave responsibilities of that position. In fact, perhaps, it would have been better off without than with the existing board, upon which more or less reliance was placed, until it showed its utter incapacity. Finally, we wish to repeat our warning of a week ago, that hundreds of communities in this country are liable any day to be overwhelmed with the horrors of such an epidemic as that at Plymouth, or Ithaca, or Butler. These communities merely had to pay the penalties for impure water and lax sanitary administration which other communities equally neglectful have been fortunate enough to escape."

The Health of Philadelphia.—There has been little if any change in the smallpox situation in Philadelphia during the week ending January 2nd, as compared with the statistics of many preceding weeks. The disease continues to persist throughout the city, notwithstanding all efforts and precautions on the part of the health authorities. Seventy-four new cases and eleven deaths were reported for the week ending January 2nd. Two hundred and fifty cases were at that time under treatment in the Municipal Hospital, and many were under rigid quarantine in their homes. There was also an increase in diphtheria, scarlet fever, and typhoid fever, with corresponding increase in mortality. During the week a case of smallpox occurred in the United States Mint, located in Philadelphia. Some friction is said to have occurred between the superintendent of the mint and the director of health and charities of Philadelphia, owing to the failure of the mint employees to submit to vaccination. It appears that such orders were not issued, owing to an alleged want of authority on the part of the superintendent of the mint. If the reports of new cases of smallpox for the present week continue, it is possible that they will surpass all records for two years. Fifty-five new cases had been reported up to Tuesday of the current week. The vaccination records of the fifty-four cases of smallpox taken to the Municipal Hospital last week bear strong testimony to the efficacy of vaccination as a preventive against the disease or to its modifying effect of the same. Out of the fifty-four cases, eighteen had never been vaccinated, twenty-five had not been since infancy, five had not been for five years, three had been vaccinated within eleven days, one within eight days and one within five days. Those vaccinated within a few days of the appearance of the disease were in all probability in the period of incubation at the time of vaccination. But these cases were reported much more mild than they would have been if not vaccinated.

GENERAL

The Boston Floating Hospital now has a fund of over $6,000 to help equip its new boat, to be put in commission next summer.

Eastern Asylum, of Frankfort, Ky.—Governor Beckham has appointed Dr. Alexander Bailey, of Franklin county, second assistant physician of this institution.

Columbia Hospital, of Washington, D. C., has appointed Dr. J. O. Skinner as superintendent, an appointment which meets with general approval.

A City Hospital at Huntsville, Ala., will soon be an accomplished fact, the residence of the late Miss Mollie Teal having been willed to the city for that purpose.

The Board of Health of Buffalo has appointed Dr. George H. Westinghouse, of 541 East Eagle Street, district physician at a salary of $400 per annum. The position does not interfere with private practice.

The Montgomery County, Md., Medical Association was organized on December 12th with the following officers: President, Dr. Roger Brooke; vice-president, Dr. Horace B. Haddox; secretary-treasurer, Dr. John L. Lewis.

The Western Wisconsin District Medical Society was organized at Eau Claire on November 18th by delegates from Eau Claire, St. Croix, Chippewa, Pierce, Dunn, and Pepin counties. Dr. Boothby, of Hammond, was elected president.

The Dane County, Wis., Medical Association elected the following officers on December 16th: President, Dr. C. A. Harper, of Madison; vice-president, Dr. W. T. Pinkerton, of Mazomanie; secretary-treasurer, Dr. R. H. Jackson, of Madison.

The Washburn-Sawyer-Burnett Counties, Wis., Medical Association elected the following officers on December 10th: President, Dr. J. B. Trowbridge, of Haywood; vice-president, Dr. J. P. Cox, of Spooner; secretary and treasurer, Dr. E. H. Hering, of Shell Lake.

The Kentucky School of Medicine opened its thirtieth annual session on the first instant with a reception to the students. A large lecture hall and clinical amphitheatre have been added to the institution, of which Dr. L. S. McMurtry is president, and Dr. P. Richard Taylor, dean.

Oldest Woman Graduate in Massachusetts.—Dr. Sophronia Fletcher, the oldest graduate in medicine in Massachusetts, if not in New England, recently celebrated her ninety-fifth birthday in Cambridge. Among her distinguished patients, was the invalid wife of Wendell Phillips, whom she attended for thirty years.

An Anonymous Manuscript from Tybee, Ga.—We are in receipt of an original communication from Tybee, Ga., entitled The Röntgen Rays in the Treatment of Fractures and Adjustment of Fragments Under the Eye, by Means of the Fluoroscope, to which the author has omitted to attach his name; will he kindly communicate with the editor?

A New Hospital at Waukegan, Ill., is in course of construction through the munificence of Mrs. Jane Macallister, who gave $21,000 for the purpose. It will be known as the Lake County Hospital, and is situated at the corner of North Avenue and Third Street. The building will be four stories in height, forty by ninety feet, and constructed of pressed brick, with stone trimmings.

The Board of Public Service, of Cincinnati, O., has appointed the following gentlemen to serve as district physicians, in addition to the twenty-four already appointed, each of whom receives a salary of $60 a month: Dr. W. T. Lindsay, Dr. W. R. Brown, Dr. F. J. Tischbein, Dr. A. B. Devers, Dr. C. S. Evans, Dr. Charles W. Cullen, Dr. Ernst W. Jacobs, Dr. W. W. Bailey, Dr. Morris May, Dr. Frank Fee, Dr. William Muhlberg, Dr. R. W. C. Francis, Dr. E. F. Nippert, Dr. L. C. Schrickel, Dr. Clifton I. Donnell, Dr. Harry Hines.

Physicians in the Philippine Service.—The United States Civil Service Commission will hold on January 27 and 28, 1904, an examination to secure eligibles from whom to make certification to fill vacancies in the position of physician in the Philippine service at salaries ranging from $1,200 to $1,800 per annum, and other similar vacancies as they may occur in that service. The examination will be held in several towns in each State, where papers for application may be secured. Applicants must be between the ages of twenty and forty years, and have passed one year as interne in a hospital or as assistant surgeon in the Philippine Islands with the United States army.

Statement of Mortality in Chicago, Ill., for Week Ending January 2, 1904, compared with the preceding week and with the corresponding week of 1902. Death rates computed on estimated mid-year populations of 1,885,000 for 1903, and of 1,820,000 for 1902:

	Jan. 2, 1904.	Dec. 26, 1903.	Jan. 3. 1902.
Total deaths, all causes	604	514	628
Annual death rate per 1,000	16.18	14.21	17.36
By sexes:			
Males	325	310	365
Females	279	204	263
By ages:			
Under one year	97	87	110
Between one and five years	54	59	76
Over sixty years	148	116	116
Principal causes of death:			
Acute intestinal diseases	15	14	26
Apoplexy	18	8	18
Bright's disease	52	30	33
Cancer	16	21	27
Consumption	56	49	58
Convulsions	15	14	15
Diphtheria	11	15	14
Heart diseases	42	53	57
Influenza	5	2	6
Measles	0	4	1
Nervous diseases	23	25	31
Pneumonia	146	139	110
Scarlet fever	3	2	5
Suicide	8	8	10
Typhoid fever	8	7	22
Violence (other than suicide)	29	20	35
Whooping cough	1	1	10

Including the 587 theatre fire deaths, accounted for by the coroner's office and the police department, but not yet reported at the close of the year to the bureau of vital statistics of the department, the total deaths for 1903 will number 28,940 instead of the 28,353 given in the appended statement of mortality for the year. This will increase the death rate from 15.04 to 15.35 per thousand of population. Deaths from violence were already more than 12 per cent. in excess of the average for the period since the census year 1900; but these 587 theatre deaths swell the excess to 41.5 per cent. over the yearly average of violent deaths.

The City Hospital, of Toronto, Can., has a new superintendent in the person of Dr. W. F. Langrill, who has succeeded Dr. McLaren. The salary, recently raised, is $1,800.00 per annum.

The Study of Asiatic Diseases.—Professor Maximilian Herzog is now *en route* to the Philippine Islands, whither he has been commissioned by the United States government to investigate the causes of various Asiatic diseases. Professor Herzog has charge of the chair of pathology and bacteriology in the Chicago polyclinic.

Coroner's Physicians for Albany County, N. Y.—The following physicians have been appointed by the board of supervisors to serve at the usual salary of $600.00 a year:

Dr. Alvah H. Traver, of Albany; Dr. Clarence E. Carruth, of Cohoes; Dr. Charles A. Schultes, of Rensslaerville, and Dr. Michael D. Stevenson, of Albany. Dr. Carruth's former position as jail physician, at $150.00 a year, will be filled by Dr. Charles L. Whitbeck.

A Conference of Health Officials, under the auspices of the Michigan State board of health, was held on January 7th and 8th in the medical building of the Ann Arbor university. Among the subjects discussed by the health officials present were Human and Bovine Tuberculosis, Typhoid Fever, Pneumonia, Diphtheria, Inspection of Meat, Certificates of Causes of Death, Sanitation of Michigan Summer Resorts, Artificial Cultivation of Trypanosomes (parasites of man and other animals), Pasteur Treatment of Hydrophobia.

The Tuberculosis Congress Situation.—On January 28, 1904, at 8.15 p. m., there will be held in Baltimore, at McCoy Hall of the Johns Hopkins University, under the auspices of the Maryland Tuberculosis Commission, an informal meeting of American physicians and hygienists interested in the tuberculosis problem of this country. The object of the meeting will be to form a national committee to represent the American medical profession at the International Congress on Tuberculosis, to be held in Paris, in 1905. There will also be a free discussion of the announced Congress on Tuberculosis in St. Louis under the leadership of Mr. Clark Bell, and the other tuberculosis congress to be held in Washington, in 1905, under the leadership of Dr. Daniel Lewis, or as it is now called The American Antituberculosis League. It is to be hoped that the deliberations at this meeting will result in an understanding between all parties concerned, and that all individualism and partisanship will be supplanted by true love to humanity, by genuine scientific and practical methods, and by the highest professional motives. If it is the unanimous opinion of the medical profession that there should be an American Congress on Tuberculosis previous to the one which is to meet in Paris next year, it should be thoroughly representative and an honor to the American medical profession.

Professor William H. Welch, of Johns Hopkins University, has kindly consented to preside. All communications relating to this meeting should be addressed to the secretary pro tem., Dr. H. Barton Jacobs, 11 Mount Vernon Place, Baltimore, Md.

Pith of Current Literature.

DEUTSCHE MEDIZINISCHE WOCHENSCHRIFT.

November 26, 1903.

1. Siderosis of the Retina and Bulb (*To be concluded*), By W. UHTHOFF.
2. Treatment of Acute Otitis Media, By HEINE.
3. Talma's Operation for Hepatic Cirrhosis, By R. LENZMANN.
4. Rapid Fixation and Imbedding Method, By O. LUBARSCH.
5. Ætiology of Endometritis Exfoliativa, By L. GOTTSCHALK.
6. Attempt at a Cancer Antitoxine, By C. S. ENGEL.

2. **Treatment of Acute Otitis Media.**—Heine regards paracentesis as an urgent and essential procedure when the triad of symptoms described by Kœrner is present: circumscribed or total bulging of the drum, fever, and pain. If the last two are absent, one can wait, and try rest in bed and applications of acetate of aluminum. Very intense pain, sensitiveness over the mastoid, and the presence of meningeal irritation are indications for a paraceutesis. In the acute stage irrigations are avoided, but sterile gauze is placed in the ear.

3. **Talma's Operation for Hepatic Cirrhosis.**—Lenzmann says that congestion of the portal vein depends not only upon disease of the liver, but upon the functional activity of the heart and from the various means of the establishment of a collateral circulation. The congestion can take place with an hypertrophied, smooth liver, and may be absent after the liver has atrophied. The author regards Talma's operation (the artificial establishment of a collateral circulation) as indicated 1. in those cases in which a distinct atrophy of the liver has not yet occurred, but in which certain signs of portal congestion are present, such as ascites; 2. in cases in which the liver is already atrophied and in which ascites is present, in which there is little or no jaundice and in which it may be safely assumed that considerable portions of the liver are still functionating. He regards the operation as contraindicated 1. in cases showing intense jaundice; 2. in cases in which urobilin jaundice is seen; 3. cases in which submucous hæmorrhages and delirium indicate a practical cessation of the liver's function. Lenzmann records a case in which there was great ascites, and in which great benefit was derived from a wide fixation of the omentum to the abdominal wall and the suture of the spleen to the tenth rib.

4. **Rapid Fixation Method.**—Lubarsch recommends his method for the rapid fixation and imbedding of specimens obtained by surgical means. By this method sections can be made and a diagnosis established within three hours. It consists of placing thinly cut pieces in ten per cent. formalin for ten or fifteen minutes, keeping them in the thermostat, changing the fluid two or three times. They are then placed in ninety to ninety-five per cent. alcohol for five to ten minutes from which they are transferred to absolute alcohol for ten minutes. They then go into clear aniline oil until they are quite transparent, are cleared with xylol, and are finally imbedded in paraffin.

5. **Ætiology of Endometritis Exfoliativa.**—Gottschalk has examined repeatedly the cast from a case of membranous dysmenorrhœa, and has found numerous fresh venous thrombi in the uterine mucosa, similar to the thrombi found in the decidua in cases of premature separation of the placenta. Curetting and caustics were not curative, but cardiac tonics, gymnastics, diet, baths, brought about a cure.

BERLINER KLINISCHE WOCHENSCHRIFT.

November 30, 1903.

1. Intestinal Tumors in the Left Iliac Region. (*To be concluded*), By C. EWALD.
2. Acute Sigmoiditis, By G. EDLEFSEN.
3. Methods of Rectoscopy, By H. STRAUSS.
4. Acute Primary Pyelitis of Nurslings, By M. HARTWIG.
5. Experiences in Gastric Surgery, By F. KRAUSE.
6. Antituberculosis Serum and Vaccine, By A. MARMOREK.

2. **Acute Sigmoiditis.**—Edlefsen regards acute sigmoiditis as a particular variety of a localized peritonitis. In all cases observed by him there were high fever and a general systemic disturbance. The disease runs its course with the involvement of the serous covering of the sigmoid and the formation of an exudate in its neighborhood. It appears to be not uncommon during the puerperium. The principal element of treatment is to be directed toward a regulation of the bowels.

4. **Acute Primary Pyelitis.**—Hartwig describes a number of cases of this kind in young infants. He finds the urine cloudy and containing many bacilli and pus cells, but no casts. The albumin corresponds to the amount of pus. The method of entrance of the bacilli is uncertain, but it is possible that the intestine supplies them. Therapeutically, Hartwig recommends small doses of urotropin.

5. **Experiences in Gastric Surgery.**—Krause discusses the surgical treatment of gastric ulcers and gastric hæmorrhage. In the latter, he operates as soon as the diet for the ulcer is seen to be useless and the patients can no longer stand the disease. The author no longer uses the Murphy button in any operation on the stomach, but always employs, instead, a suture. He refers to the frequent good effect of gastroenterostomy in cases of gastric ulcer. He considers the pyloric stenosis accompanying an ulcer and the dilatation of the stomach. an indication for operation, and in these cases resorts to pyloroplasty. Perigastric processes and the hour glass stomach, also offer surgical indications. Krause next discusses gastric resection for cancer and says that the gain in weight after the operation is often remarkable. In all cases of pyloric closure and retention of the gastric contents. Krause prefers to perform a gastroenterostomy when possible, as its result is often an improvement in the general condition so that the patient can return to his work. Occasionally, gastrostomy and colostomy give good

results. Krause always uses general anæsthesia in his operations, and he concludes by saying that the smallest possible amount of the anæsthetic and the most rapid surgical work are often important elements in the patient's recovery and convalescence.

6. **Antituberculosis Serum.**—Marmorek concludes from his studies that tuberculin represents but one of the reactions of the organism against its disease, which in its turn irritates the tubercle bacilli into secreting an entirely different kind of toxine. The tuberculin reaction is, therefore, caused by a toxine secreted by the bacilli because the tuberculin has come into contact with them. Marmorek's experiments lead to the conclusion that the bacilli can be stimulated to excrete this real toxine, as it has been possible by means of this toxine, to immunize animals against later infection by tubercle bacilli. The author has prepared an antitoxic serum in horses.

The unity of bovine and human tuberculosis he regards as demonstrated, and he has found his toxine efficient in tuberculosis of rabbits. In human tuberculosis, Marmorek believes that his serum is valuable as depending more upon the age of the disease than upon its extent. Surgical cases of considerable age yielded to the serum, and in several cases of pulmonary tuberculosis a visibly favorable influence upon the local and general condition could be demonstrated. In recent cases, the author is hopeful of excellent results. In seven cases of tuberculous pleurisy, six were beneficially affected, especially in the diminution of the transudate. In over 2,000 injections, abscesses were noted but three times. The serum gives rise to no local or general reaction and the hectic fever of the disease disappears after a few injections. The later results of Marmorek's studies are promised in the near future.

LYON MEDICAL.

December 13, 1903.

1. Action of the X Rays on Nutrition, By LÉPINE, and BOULUD.
2. A Malignant Tumor of the Parotid Gland (*Concluded*), By G. LECLERC.

1. **X Rays.**—Lépine and Boulud found that a guinea pig weighing 780 grammes lost 80 after four days' exposure to the rays, regained 50 after two days' rest; four more days' exposure caused death with a total loss of 18 per cent. of its weight. The loss of weight was not the cause of death, as guinea pigs will stand a 25 per cent. loss; this animal, however, was not fed upon the usual bran. Another well nourished guinea pig was subjected to the rays twice a day for two days and on the third day three times; each exposure was followed by a rise in temperature, and the urine, small in quantity, contained a large percentage of urea. On the fifth day, the animal had convulsions and was killed. Notwithstanding its rich food and slight loss of weight, there was but little glycogen found. The authors then experimented on two portions of the same liver with the result of proving that the rays do destroy glycogen; they also favor glycolysis. *(To be continued.)*

REVISTA DE ESPECIALIDADES MEDICAS.

December 5, 1903.

1. Meningitis and Meningismus, By D. F. A. RISQUEZ.
2. Hygienic Direction of Cough and Expectoration in Catarrhs and Tuberculosis, By MALO.

1. **Meningitis and Meningismus.**—Risquez holds that many cases of socalled meningitis which are reported as cured are in reality but meningismus, which he defines as a functional condition presenting much of the symptomatology of the former disease, but depending upon stimulation of the meningocortical zones by some exciting influence such as selfintoxication through gastrointestinal disease, etc., in contradistinction to the inflammatory changes taking place in true meningitis. That meningismus may pass on to meningitis, the author deems unquestionable and hence, he believes that while the physician is justified in making a diagnosis of meningismus in a number of cases, and treating them as such, with the remedies suitable to the condition, such as hot foot-baths, warm baths, cold applications to the head, laxative enemas, intestinal disinfection, and alkaline bromides, no diagnostic resource should be neglected which would reveal the transition from meningismus to meningitis, at a period sufficiently early to render effective treatment of the latter condition. For this reason, he advises early exploratory puncture and examination of the cephalorachidian fluid from the chemical, cytological, bacteriological, cryoscopical, and hæmolytical viewpoint.

2. **Direction of Cough.**—Malo sounds a note of warning against unnecessary coughing, that is, coughing which has not the expulsion of sputum for its object. In his opinion, excoriation of the laryngeal epithelium and especially of that covering the vocal cords, is the too frequent result of coughing; the surfaces being robbed of the protection of their investing epithelium and laid bare to the inoculation *in situ* of pathogenic organisms contained in the sputum. He believes, therefore, that the patient should be instructed to cultivate that selfcontrol necessary to the repression of excessive and violent coughing; and the danger of infection of the respiratory and alimentary tract through the swallowing of sputum, should also be pointed out. The author gives specific directions as to the expulsion of sputum with a minimum of exertion to the patient and of danger to those surrounding him; and emphasizes the necessity for the observance of the generally recognized precautions against transmission of infection through the sputum.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

October 10, 1903.

1. The Symptoms of Dyspepsia, By G. CAMPANELA.
2. The Muscular Sense and Romberg's Sign, By C. MANNINI.
3. Antidiphtheritic Serum in Pneumonia and Infectious Meningitis. The Multivalency of Serums, By M. GAY.
4. A Scarlet Fever Epidemic, By A. DE FABRITIIS.
5. A Case of Anuria Lasting Twenty-seven Days, By N. NATALE.
6. Epithelioma of the Lower Lip Disappearing During a Pernicious Malaria and Reappearing After the Latter, By S. PORTANOVA.

2. **Romberg's Symptom.**—Mannini says that the lack of equilibrium in walking or standing (Romberg's sign) is not always linked to a lesion of the muscular sense. There are cases which confirm the opinion of Grasset, that Romberg's sign sometimes depends upon a vertigo induced by the mere closure of the eyes. Either these cases are exceptions to the general rule, or, what is more probable, Romberg's symptom does not indicate a lesion of the muscular sense.

3. **Antidiphtheritic Serum in Diseases Other Than Diphtheria.**—Gay says that antidiphtheritic serum is useful in the treatment of lobar pneumonia and reports two grave cases of this disease in which this serum was administered with marked success. Centanni and others have used antidiphtheritic serum in pneumonia, and it seems that the good effects obtained show that all the serums are equivalent (multivalent). Bordoni-Uffreduzzi recently suggested the use of antidiphtheritic serum in a case of infectious non-tuberculous meningitis dependent upon a bacillus analogous to that of Fraenkel's pneumococcus. In addition to diphtheria antitoxine Gay uses bleeding in small amounts as evacuant for the toxines, in lobar pneumonia.

5. **Anuria Lasting Twenty-seven Days.**—Natale reports a case of anuria in a man aged sixty-eight years, which lasted the extraordinary length of time of twenty-seven days. The patient suddenly ceased to pass urine, and had no desire to void it. He was easily catheterized, but no urine was withdrawn. The diagnosis of reflex anuria from exposure to cold was made. This continued for twenty days, and the patient complained of nothing but sleeplessness. He did not perspire excessively, but purges seemed to relieve him of a good deal of liquid. Œdema began to appear at the extremities on the fifteenth day. On the twentieth day he began to vomit, on the twenty-fifth he became dyspnœic, and on the 27th he died. No autopsy was obtained.

RIFORMA MEDICA

October 28, 1903.

1. Experimental and Clinical Studies on Tuberculosis During the Year 1902-1903, By E. Maragliano.
2. The Surgical Treatment of Varicocele (*To be continued*), By A. Virdia.
3. The Treatment of Infected Wounds of the Kidneys, By F. Sorrentino.

1. **Tuberculosis.**—Maragliano, in a review of the work of his pupils and of himself during the scholastic year 1902-1903, announces that he has only to overcome certain difficulties in technics in order to be able to apply in man the method of inoculation against tuberculosis which he expounded for the first time at the Madrid Congress. He believes that we shall soon have prophylaxis against tuberculosis now.

3. **Infected Wounds of the Kidneys.**—Sorrentino epitomizes the treatment of infected wounds of the kidneys as follows: The treatment must vary according to the degree of the lesion; the complications of the lesion, such as hæmorrhage; the presence of local septic infection. A wound of the kidney, if it is of any size, almost surely gives rise to an infection of the renal region. When such an infection occurs, the surgeon must unhesitatingly perform nephrectomy, on account of the grave condition of the patient, inasmuch as the result may be favorable, as in a case here reported. After nephrectomy the bladder should be carefully watched, for it may become the seat of a septic focus as the result of the retention of septic clots. A second operation, suprapubic cystotomy, may then be needed to save the patient. In the case reported both operations were required.

ROUSSKY VRATCH

November 1, 1903.

1. Physical Exercise in Disease, By I. V. Zabloudovsky.
2. Two New and One Old Sign of Tetany. Their Application in the Diagnosis of Nervous Diseases in Children and of Latent Tetany (*Concluded*), By R. A. Peters.
3. A Few Cases of Pulmonary Tuberculosis Treated with Raw Meat (Zomotherapy), By B. S. Knotte.
4. The Value of Cystoscopy and Uretheral Catheterism in General, and in Diseases of the Kidneys in Particular, with Demonstration of Nitze's Uretercystoscope (*Concluded*), By B. G. Sheftel.
5. Some Ophthalmological Observations, By S. P. Roshtchevsky.

2. **Diagnosis of Tetany.**—Peters discusses Trousseau's well-known sign of tetany and two new signs of this condition which he has worked out. The first of these is the "toy dancer" sign. It consists of contractions of the lower limbs, exactly imitating those of the toy dancer when the string is pulled, when the anode is placed on the chest and the cathode on the lumbar region of the spine; the same phenomenon occurs in the upper limbs when the cathode is placed between the shoulder blades. The other sign was an increase in the amount and pressure of the cerebrospinal fluid. An increased amount was only conceded in these cases when the fluid exceeded ten grammes on puncture, while ordinarily any amount thus obtained over one gramme is considered increased. The tension was evident from the fact that the fluid issued in a steady stream and did not dribble. It was increased when the infant cried, and as a consequence of peristaltic efforts, etc. In nineteen out of twenty cases of tetany this sign was conspicuously present. The author considers these three symptoms as the most trustworthy signs of tetany, and does not give so much importance to Chvostek's signs or to the spasm of the glottis, as has been done by other writers. Latent tetany was found in 22 cases out of 600 sick children. In 17 of these there was rickets, in two there was no sign of rickets, and in 3 there was no note as to this factor. Of the patients with latent tetany, 13 were boys; 6 girls; and in 3 the sex was not noted. Trousseau's sign occurred in all cases but one. The "toy dancer" sign was present in about half the cases, and Chvostiek's sign was found in 8 cases, and was absent in 10. In four patients out of six the lumbar canal was found filled with fluid in increased amount; in 2 it was found almost empty.

The author does not regard latent tetany as an expression of a predisposition to muscular spasm—spasmophilia—nor as a result of an increased irritability; for it occurs in healthy children and in those suffering from diseases in which the nervous system does not take part. It occurs with equal frequency in the ages of from one month to one year, which ages are considered as specially predisposing to convulsions, as well as in the second year of life.

3. **Zomotherapy in Tuberculosis.**—Knotte thinks that zomotherapy (the use of muscle juice) in tuberculosis acts in two ways: in the first place, as a general nutritive process; and secondly, as a specific agent against the infection. He cites the experiments of Richet and Héricourt, who found, after experimenting upon five hundred dogs, that there was a large number of remedies that acted specifically against tuberculosis, showing a sort of multispecificity. Possibly there are some such substances in meat. According to Richet's theory of "metatrophism," the cells of the organism, uniting with the specific elements of the meat, lose their chemical affinities for the tuberculous poison.

5. **Foreign Bodies in the Cornea.**—Roshtcehvsky calls attention to the difficulty experienced in locating a dark foreign body when it has lodged in the central part of the cornea, opposite the pupil. In such cases it is difficult to see, on account of the black background, and it is not always possible to find the foreign particle by asking the patient to turn the eye in various directions. The author recommends the instillation of eserine or pilocarpine, in order to bring the foreign body against the background of the iris when the pupil has contracted. This is to be followed by cocaine for the relief of pain. The cocaine somewhat diminishes the action of the eserine, but not perceptibly so. After the foreign body has been extracted, atropine is to be instilled into the conjunctival sac, so as to dilate the pupil once more. When the particle is of a light color the reverse process is used; atropine is employed first, as it is then more convenient to operate on the dark background.

MEDICAL NEWS.

January 2, 1904.

1. The Management of Typhoid Fever Epidemics, By George A. Soper.
2. Anomalies and Difficulties of Diagnosis in Typhoid Fever, By Henry L. Elsner.
3. Management and Treatment of Typhoid Fever, By Egbert Le Fevre.
4. Thoughts on Chlorine and An Antiseptic Technic, By Douglas H. Stewart.
5. Excision of the Frænum Preputii Following Laceration During a Suspicious Intercourse, By Charles C. Miller.
6. Chickenpox Concurrent with Smallpox, By Philip D. Bourland.
7. Morbid Anatomy and Histology of Pulmonary Tuberculosis in Relation to Its General Pathology and Clinical Manifestations, By G. Sims Woodhead.

2. **Anomalies and Difficulties of Diagnosis in Typhoid Fever.**—Elsner reviews the chief sources of difficulty in reaching a correct diagnosis in cases of suspected typhoid fever. We call attention to some few unusual points only. The author in one case observed a typical positive Widal reaction in a woman who had had typhoid eighteen years previously. It is important to bear in mind, therefore, that a positive Widal reaction may be the expression of a previous attack of typhoid. It must, on the other hand, not be forgotten that typhoid may occur twice in the same person. The study of the blood pressure will not help in the diagnosis of typhoid. All that can be said is that typhoid is a hypotonic disease. When it comes to correctly diagnosticating the complications of typhoid a study of the blood pressure is of distinct value. When the blood pressure suddenly rises, one should be on the lookout for abdominal complications. A study of the blood pressure will also serve to throw light on the condition of the kidneys. The author makes these observations: "The differential diagnosis of nephrotyphoid and typhoid in which the albuminuria is due to a preexisting chronic nephritis, without positive knowledge of previous disease, may be strengthened by the study of blood pressure. This fact we have recently demonstrated in a number of cases. There are at the present writing two cases of albuminuria associated with typhoid at St. Joseph's Hospital, the one a pure nephrotyphoid, the other a typhoid with preexisting chronic diffuse parenchymatous nephritis. The blood pressure in the latter has been uniformly high; at the height of the disease it registered 168 mm. The blood pressure chart shows no record below 140 mm., while in the nephrotyphoid the highest arterial pressure registered 130, and as the disease advanced, repeated tests showed the fall of the ordinary uncomplicated case." There is another point with regard to typhoid that should be constantly kept in mind, and that is that the disease is far more frequent in childhood than has generally been supposed.

3. **The Treatment of Typhoid Fever.**—Le Fevre discusses the management and treatment of typhoid fever in a very up to date manner. He is one of those who believe in a more liberal diet than the routine milk diet that is so often recommended. The portion of the author's paper devoted to diet will be found full of suggestion. There is another point the author lays special stress upon, and that is the necessity of cathartics. By preference, he uses castor oil in small doses repeated once or twice a day.

5. **Excision of the Frænum Preputii.**—Miller advocates, as an addition to circumcision, the excision of the frænum as prophylactic measures against syphilis in certain selected cases. The author believes that if only one per cent. of cases could be saved from a subsequent syphilis the operation would be worth while. The author does not furnish any real proof of the efficacy of the method.

6. **Chickenpox Concurrent with Smallpox.**—Bourland, from a study of a number of cases of chickenpox concurrent with smallpox, formulates the following conclusions: "(1) The concurrence of smallpox in no way caused the course of my

cases to depart from that typical of chickenpox. (2) Vaccinated and unvaccinated children showed equal susceptibility to infection, and the course of the sickness was the same in each class. This fact excludes varioloid. (3) None of my patients had ever been exposed to smallpox or had ever had it. (4) No adults were attacked notwithstanding absence of vaccination in a majority. (5) Five of the children exposed had had chickenpox in a previous epidemic, these previous attacks conferring immunity, except in one instance. (6) Smallpox and chickenpox are distinct pathological entities, and though in intimate association, neither disease influences in any way the natural history of the other."

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 2, 1904.

1. Arthritis Deformans. The Report of a Series of One Hundred and Ten Cases from the Johns Hopkins Hospital (from the Clinic of Professor Osler) (*To be continued*), By Thomas McCrae.
2. Acute Otitis Media: The Necessity of an Early Diagnosis and Treatment, By Frank D. Boyd.
3. Some Recent Experiences with Chronic Suppurations of the Ear, By Philip Hammond.
4. The Efficacy of the Treatment of Acute Purulent Otitis by Aseptic Drainage, By H. Gradle.
5. The Great Value of Drainage and Ice in the Early Stages of Mastoiditis, By Sargent F. Snow.
6. Diabetes Mellitus: The Limitations of Its Dietetic Treatment, By Arthur R. Elliott.
7. Empyema of the Antrum, By O. N. Heise.
8. The X Ray as a Therapeutic Agent; with Especial Reference to Carcinoma, By Arthur Dean Bevan.
9. Perisinusal Abscess of the Lateral Sinus, with Metastasis in Liver and Sternoclavicular Joint, By Gordon King.
10. Syphilis in the Negro, By Frank Jones.
11. Rapidly Growing Sarcoma of the Femur. Report of a Case: Disarticulation at the Hip Joint; Recovery, By C. M. Nicholson.

2. **Acute Otitis Media.**—Boyd asserts that it is important to make an early diagnosis of acute otitis media for three reasons: (1) Because of pain which usually accompanies all acute attacks; (2) because of deafness which very frequently follows, and (3) because of the frequent danger to life by extension of the inflammation to the brain. The author concludes his paper with the following advice: We should consider earache as a warning note of danger to the patient both as respects function of hearing and life. Secondly, in making the diagnosis, especially as to the inspection of the trouble, we should avoid opiates as much as possible, for they always mask the symptoms, and it would be difficult to thoroughly diagnosticate the extent of the disease. If the membrana tympani has not already ruptured, after we have made a diagnosis we should perform paracentesis, whether there is much bulging of the membrane or not, for the incision of the drum membrane is important to hasten the evacuation of the pus or serum that is contained behind the tympanum and also to relieve the pain.

4. **Aseptic Drainage in the Treatment of Acute Purulent Otitis Media.**—Gradle writes to urge the advantages of treating acute purulent otitis media by aseptic drainage. This method requires skillful supervision in order to be successful. When the treatment has been intelligently carried out it will give quick results and the disease will run a mild course. The author has never observed any complications in the cases in which he has succeeded in keeping the discharge serous.

5. **The Value of Drainage and Ice in the Early Stages of Mastoiditis.**—Snow sums up his advice thus: "In conclusion, I would say: 1, A conscientious observation of my cases has impressed me with the great advantage we at once obtain over the disease if we secure such free drainage from the middle ear and attic that a tympano-canal incision will give; 2, while many cases will get well simply because we secure proper drainage, the constant and continual application of ice does much to reduce morbid activity and hasten recovery."

6. **Diabetes Mellitus.**—Elliott considers the limitations of the dietetic treatment of diabetes mellitus. If success in causing the sugar to disappear from the urine were equivalent to curing the disease we should all have a number of recoveries to our credit. What is required, however, is a restoration of the assimilitive power and improvement in general strength and well-being. Clinically there are two classes of diabetes, the mild and the severe. To the first class belong the slight controllable glycosurias which are accompanied with but mild systemic symptoms. To the second class belong all the intractable and rapidly progressive types of the disease which invariably end fatally. In the severe grades of diabetes it is generally accepted that the sugar is derived from the systemic albumin as well as from the carbohydrates of the food, whereas in the light form it comes entirely from the latter source. It is for this reason that the treatment of the two forms of the disease must vary, at times considerably. The author's specific recommendations as to diet are expressed thus: "It becomes apparent from the foregoing considerations that the course to be pursued in the dietetic treatment of diabetes is, in the amenable stages of the disease, to allow the patient as liberal an allowance of carbohydrates as the patient can assimilate, and in the severe stages as much as is found necessary to hold in check the dystrophic advance, bearing in mind the important fact that carbohydrates only act as albumin-sparing bodies when their ingestion is followed by at least partial assimilation. At the same time every artifice must be employed to introduce the largest amount of fat that the patient can take. If this method is pursued it does not become necessary to restrict the nitrogenous elements of food, for by the judicious introduction of carbohydrates and fats little necessity exists for excessive devotion to any one class of foods, and seldom is the patient led into overindulgence in animal foods. The point is frequently made that it is as necessary to limit the quantity as it is the quality of the foods in diabetes. It seems to the writer an unnecessary cruelty to limit the amount of available foods to these patients, for the bulimia is the outcry of starved tissues, deprived of the food values necessary for their preservation, and to meet this tissue

hunger by further starvation seems both cruel and unscientific."

MEDICAL RECORD.

January 2, 1904.

1. A Plea for Justice to the Consumptive, By S. A. KNOPF.
2. The Diagnostic Significance of Certain Reflexes and Tendon-Phenomena, By H. OPPENHEIM.
3. Commentaries Upon Lues and Leprosy as Subcatabolic Diseases, By HOMER WAKEFIELD.
4. Diagnosis of Acute Lobar Pneumonia, By STEPHEN SMITH BURT.

1. **Justice to the Consumptive.**—Knopf divides his paper into three parts. He speaks first, of official; secondly, of private; and thirdly, of professional phthisiophobia. By phthisiophobia the author denotes the exaggerated fear of the presence of a consumptive. As an example of official intolerance, the author cites the recent ruling of the head of the Marine Hospital Service, by which tuberculous immigrants can now be excluded from the United States. The Goodsell-Bedell law, in New York, is another case in point. The effect of the law is to make it practically impossible, hereafter, for cities of the first class to establish sanatoria in suitable parts of the State for the care of their tuberculous citizens. Private phthisiophobia is to a great extent the outgrowth of federal and State example. As a contributing factor may be added a natural excess of caution born of ignorance. The saddest thing of all is professional phthisiophobia. Knopf vigorously attacks such teaching and records, in support of his position, the specially collected testimony of about a dozen of the best known authorities on tuberculosis. The paper contains many particulars we cannot even refer to, and is, as a whole, a vigorous defence of the consumptive as a useful and not very dangerous citizen.

2. **Reflexes and Tendon Phenomena.**—Oppenheim considers the diagnostic importance and significance of the knee phenomenon, the Achilles tendon reflex, the Babinski reflex, and of a phenomenon which occupies a position very close to the Babinski and which was first observed by the author. It is as follows: If, in a normal individual, on stroking the inner surface of the leg from above downward, with either the thumb or the handle of a percussion hammer, or by pinching a fold of skin on the inner surface of the leg, either no reflex movement will follow or a flexion of the toes will result. Under pathological conditions—that is to say, in affections of the pyramidal tracts—instead of a plantar flexion of the toes, a dorsal flexion of the toes and foot is observed. This reflex differs from Babinski's, not alone in the point from which the reflex is brought about, but especially therein, that not only the extensor hallucis longus participates in the reflex movement, but likewise as constantly the tibialis anticus and often the extensor digitorum communis and the peronei. There are a few cases in which the estimation of the toe reflex, according to Babinski, is uncertain, and it is in such cases that the behavior of the author's reflex may prove decisive.

4. **Subcatabolic Diseases.**—Wakefield's paper is a further contribution to the discussion of his theory of subcatabolic diseases. Leprosy, according to the author, is perhaps the best example of the extreme condition of catabolic stasis. Syphilis in many respects resembles leprosy and belongs to this same class of suboxidation diseases. To those who are not as yet familiar with the author's theory, the paper will not appear altogether clear. The theory may in a very general way be stated thus: Disease symptoms, whether the disease is due to a microorganism or not, are due to toxines or chemical poisons. These toxines or poisons act by reducing the catabolic functions of the body tissues, and the result of such a state of depressed activity is the disease as we know it. This, of course, refers only to what the author calls the catabolic diseases.

AMERICAN MEDICINE.

January 2, 1904.

1. The Early Diagnosis of Arteriosclerosis, By ALFRED STENGEL.
2. A Bacteriologic Investigation of Commercial Vaccine Virus, By WILLIAM TRAVIS HOWARD, JR., and WILLIAM H. WEIR.
3. The Methylene-Blue Eosin Stains, By WALTER BAUMGARTEN.
4. Some Remarks on the Ætiology of Hyperplasia of the Pharyngeal Tonsil in the Light of Recent Investigations, By THOMAS J. HARRIS.
5. Percentage Solutions, with Reference to the Metric System, By JOSEPH W. ENGLAND.
6. Seasickness: Ætiology and Prophylaxis, By E. KIRKLAND SHELMERDINE.
7. The Morbid Anatomy and Histology of Pulmonary Tuberculosis in Relation to Its General Pathology and Clinical Manifestations, By G. SIMS WOODHEAD.

1. **The Early Diagnosis of Arteriosclerosis.**—Stengel notes that arteriosclerosis may be a localized or a diffuse process. The kind he has especially in mind is the one that approaches the normal or senile type of change. With rare exceptions, the author believes, this form of arteriosclerosis to be a general disease, and that while slight changes in the smaller vessels are capable of producing serious consequences, and similarly slight alterations in the larger vessels are of comparatively little significance, both the large and the small vessels are as a matter of fact involved simultaneously or nearly so. The author takes up the consideration of the ætiology and symptomatology of the affection and then passes on to a study of the symptoms. Four physical signs should attract the attention of the clinician: *(a)* Changes in the character of the pulse wave, as determined both by the finger direct and by the sphygmograph; *(b)* elevation of the blood pressure; *(c)* accentuation of the aortic second sound; and *(d)* gradual loss of the muscular element in the first sound at the apex. While these four signs are suggestive of arteriosclerosis they may also occur, the author believes, in other conditions. One must, therefore, turn to the general symptoms for aid. These will vary greatly, as the sclerotic process may be more or less localized. Among the symptoms that are likely to at-

tract attention, the following will usually be found: (1) Reduced vitality. Many cases of neurasthenia are of cardiovascular origin. (2) The arteriosclerotic facies. This consists of a peculiar pallor specially conspicuous around the mouth, temples, and eyes. (3) A change in the activity of the sweat glands. Late in the disease there is dryness of the skin, but early there may be hypersecretion. (4) Renal activity is altered. The urine is more abundant, and is apt to have a variable specific gravity. Later in the disease there is usually albuminuria, at times intermittent, and later still, casts will make their appearance. (5) The early heart symptoms may be vague. Arrhythmia in persons near forty is too often attributed to gastric disturbances, tobacco, tea, coffee, etc. When the disease is well advanced the heart signs may be quite definite. (6) Ophthalmoscopic diagnosis may at times be possible. Thickening of the retinal arteries is evidenced by the high light of the arterial image and the compression of the veins where the arteries cross them. Attention has been called to these conditions by de Schweinitz, and in a number of my cases he has found these ophthalmic peculiarities very early in the course of the disease.

3. **The Methylene Blue Eosin Stains.**—Baumgarten describes the development of mixtures, for staining the blood, composed of eosin and methylene blue. The article ends with a complete list, with formulæ, of all the methylene blue eosin stains.

4. **The Ætiology of Adenoids.**—Harris concludes his paper as follows: "Two facts, however, are beyond dispute. 1. The peculiar susceptibility in childhood to infectious diseases. 2. The mode of invasion is by the upper respiratory tract. *Conclusions.*—As corollary to these we venture to add as a result of this study, the following conclusions: 1. The pharyngeal tonsil possesses a distinct function or functions. 2. This function is of the nature of a defense against the entrance of bacteria and consists in a certain irrigation of the tonsil surface by a lymph stream loaded with lymphocytes. 3. This protection function carries with it the inherent qualities of the tonsil to enlarge on the slightest irritation for the affording of further power of defense. 4. This inherent tendency of the tonsil to enlarge is further seen in the frequent recurrence of the tonsil after removal. 5. Strictly speaking, then, in the great majority of cases such enlargements are not a pathologic, but a physiologic process."

5. **Seasickness.**—Shelmerdine believes that most cases of seasickness may be prevented by following this advice: Treatment should start ten days before sailing. Podophyllin 3 milligrammes ($^1/_{20}$ grain) 4 times daily. Third, sixth, and the day before sailing, give calomel, 0.13 grammes (2 grains) in divided doses. The night before sailing, a bottle of magnesium citrate should be given. Five days before sailing give sodium bromide 0.32 grammes (5 grains) twice daily, and continue this until the patient has acquired "sea-legs." On board ship great care must be taken to keep the bowels in a loose condition until all danger of nausea has passed away. According to the individual, the doses may have to be increased or diminished. The main object is to cleanse the bowels thoroughly and thus get rid of as much bile as possible. In many cases this treatment will prevent seasickness, and if a person becomes sick who has followed this method, he will have a very light attack and will not suffer so much as he would have suffered had he gone abroad without having had a good cleaning out.

BOSTON MEDICAL AND SURGICAL JOURNAL.

December 31, 1903.

1. Typhoid Fever in Children (*To be continued*), By Adolf Baginsky.
2. Acute Flexion of the Gall Bladder as a Cause of Biliary Colic. Its Relief by Operation, By A. T. Cabot.
3. Some Remarks on Chronic Sphenoidal Sinusitis, By Albert E. Rogers.
4. The Case of Louis Bitzer, By Edward B. Lane.
5. A Brain Hardened by Kaiserling's Method Showing the Track of a Bullet, By William F. Whitney.
6. What Was the Cause of Death? By A. Elliott Paine.

2. **Acute Flexions of the Gall Bladder.**—Cabot records two cases in which characteristic attacks of biliary colic seem to have been caused by the acute flexion of the gall bladder about its middle. Both cases were operated on. Under like conditions the author believes that cholecystectomy should be the operation of choice.

3. **Chronic Sphenoidal Sinusitis.**—Rogers, in 600 cases he examined in a throat clinic, found 29 cases of accessory sinus disease. Empyema of the sphenoidal sinus occurred sixteen times, four times more frequently than empyema of any of the other sinuses. These results do not agree with the published results of other observers, who usually consider sphenoidal disease as fairly rare. The author gives, in great detail, his method of arriving at a diagnosis, which consists essentially of introducing a probe into the sphenoidal cavity and feeling for roughened bone and spongy granulation tissue. The treatment recommended consists in enlarging the normal outlet from the sphenoid. The method of doing this and the instruments required are described at length. The histories of eleven of the author's cases are given.

LANCET.

December 19, 1903.

1. The Modern Treatment of Fractures of the Clavicle, Wrist and Ankle; Dislocations of the Shoulder, Elbow, and the Semilunar Cartilages of the Kneejoint, By F. F. Burghard.
2. Remarks on Fifty Consecutive Cases of Perforated Gastric and Duodenal Ulcer Treated by Laparotomy, By T. C. English.
3. Cleft-Palate and Hare-lip; The Earlier Operation on the Palate, By E. Owen.
4. Note on the Respiratory Movements in Hemiplegia, By J. S. Bury.
5. A Case of Arterial Thrombosis of Gonorrhœal Origin, By F. C. Moore.
6. A New Silver Salt in the Treatment of Gonorrhœa, By J. S. Purdy.

1. **Fractures and Dislocations.**—Burghard tells us that until quite recently the treatment of fractures had remained unchanged for centuries. The more important changes involved in modern methods of treatment are the use of the x rays, the employment of general anæsthesia, and the free use of massage and passive movements from an early period. The x rays have greatly simplified diagnosis of almost any fracture in the body, and where there is any doubt it is encumbent upon the surgeon to use this method. In cases of fracture into a joint the x rays are of the greatest assistance: they localize and define exactly the extent of the fracture, they make clear the displacement, and are often of assistance in the actual setting of the fracture. But two points must be remembered: (1) that a perfect result for all practical purposes may look very badly in an x ray photograph; and (2) that greenstick fractures in very young children cannot be traced as such by the x rays.

With but few exceptions general anæsthesia should always be employed in the treatment of fractures and dislocations. It quiets spasm, stops pain, relaxes the muscles, and what is most important, it keeps the patient quiet until the splints have been applied.

The use of massage and early passive movements is the most important improvement of recent years. The old doctrine that absolute immobility of a fractured limb is no longer tenable: the surgeon's aim now is to see that the soft parts are ready to resume their functions immediately union is complete. In any fracture there are two distinct lesions besides the fracture itself—the tearing of the tissues and the extravasation of blood. Massage promotes the limitation and absorption of the effused blood, but is not sufficient for the treatment of the torn musclar structures, and the tendency of these latter to become adherent must be counteracted by passive movements begun quite early—so early that the adhesions are non-existent or quite plastic. Massage and passive movements also prevent wasting of the muscles. Massage is begun on the day of fracture, passive movements about the third day; at first they should be practised only for a few minutes once a day, but they are to be gradually increased until they occupy half an hour twice daily.

In dislocations there are exactly the same reasons for the use of early massage, passive movements, and even careful active movements.

In fractures of the clavicle the author uses a figure-of-eight bandage, passing over the point of the shoulder and under the axilla, a pad being placed in the axilla on the injured side so as to lever out the head of the bone. Two handkerchiefs, each rolled around cotton-wool, form an excellent bandage. A large elbow sling is put on and gentle smooth massage made over the seat of the fracture downwards. It is in cases of Colles's fracture that the results of massage and passive movement are especially brilliant, all stiffness about the wrist being avoided. The bone should be set as accurately as possible after having reduced any impaction present, preferably under an anæsthetic. Carr's splint is the most comfortable, but straight anterior and posterior splints do equally well provided the former does not reach lower than the transverse crease of the palm. Passive movements should begin before the end of the first week. Pott's fracture is likewise preeminently suited for treatment by massage and early passive movements. The first point in the treatment is to reduce the outward and backward displacement of the foot which may be very marked. This may usually be done by manipulation if the knee and thigh be fully flexed. The main indication is to keep the astragalus in position—the fracture of the fibula is of secondary importance. With proper treatment a patient suffering from ordinary uncomplicated Pott's fracture should be able to walk without pain immediately the fracture is sufficiently consolidated to bear his weight. Dislocations of the humerus are hard to reduce because of muscular spasm; under an anæsthetic the dislocation will become reduced either spontaneously or after very little manipulation. Smooth rubbing of the muscles about the articulation should be begun immediately after reduction, and passive movements (underhand) should be begun on the third day. The only movement to be guarded against is abduction of the limb. In dislocations of the elbow prompt recognition of their nature is most important, and in all the cases an x ray photograph will show at once the true nature of the case.

Dislocations of the semilunar cartilages of the knee joint are best reduced by still further flexing the already semi-flexed knee and pressing firmly over the region of the protruding cartilage, at the same time vigorously extending the knee. The cartilage usually slips in with a distinct snap and the knee can be fairly easily moved. The next point is to subdue the acute synovitis that is practically certain to follow the injury, and this is best done by rest, passive movements, and massage. When the trouble recurs the question of operative treatment must be considered; no form of apparatus is of any real value. The operation consists in opening the joint freely and in removing as much of the displaced cartilage as can be got at. Recurrence is very rare after operation.

2. **Gastric and Duodenal Ulcer.**—English's paper is based on a series of fifty consecutive laparotomies for gastric and duodenal ulcer performed during the past six years at St. George's Hospital. Forty-two were cases of gastric ulcer of which twenty-two (fifty-two per cent.) recovered. Of the remaining eight duodenal cases, two (twenty-five per cent.) recovered. In thirty-four cases there had been definite dyspepsia or gastric ulceration, hæmatemesis having occurred in eight cases. In five cases there had been no gastric symptoms. In forty cases there were no special symptoms immediately preceding operation. In the majority of cases the onset was sudden and unexpected. In only two cases did hæmorrhage immediately precede perforation. Such symptoms as progressive increase in discomfort and pain after taking food, greater frequency of vomiting, and increase of epigastric tendencies should always suggest the danger of

perforation. The situation of the pain is no guide to the situation of the lesion. The pain may be most intense in the lower part of the abdomen, and acute appendicitis be closely simulated. The intensity of the collapse bears a fairly constant relation to the size of the perforation. Vomiting occurred in thirty-seven cases. The condition of the hepatic dulness forms an obvious and striking physical sign but experience shows that it is of comparatively little value and likely to mislead if relied upon. Perforations most commonly take place in ulcers situated close to the lesser curvature. In more than half the successful cases complications occurred during the period of convalescence. Parotiditis occurred in five cases, of which one was fatal. Pleurisy was by far the commonest complication, occurring in seventeen cases, eleven proving fatal. The fluid was usually sterile. Thrombosis occurred in three cases. All the symptoms and signs of perforation may be present, and yet the organ found intact on opening the stomach. In thirteen of the twenty-one fatal cases coming to autopsy other peptic ulcers were present. Of seventeen successful cases which were followed up there was no return of gastric symptoms in eleven.

3. **Cleft-palate.**—Owen states that for twenty years he has been accustomed to operate upon harelip in early infancy but to postpone treatment of the cleft-palate until the child was over two years old. Of late he has adopted the method originated by Brophy, of Chicago, and he considers that its advantages are so great that any extra risk may be unhesitatingly accepted. Brophy operates in early infancy and deals with the palatine cleft by boldly thrusting the maxillary and palate bones together in the middle line. Serious as is the operation on the palate the infant may be expected to survive it. Inasmuch as the maxillæ are closely approximated, the halves of the velum can be stitched together without tension and without the need of interfering with the muscles of the soft palate, so that the prospects of securing a natural voice are greatly increased. As the maxillæ are brought together in front, the subsequent operation upon the harelip is rendered much easier of performance, and a more artistic result is obtainable.

4. **Hemiplegic Respiration.**—Bury states that in over sixty per cent. of the cases of hemiplegia examined by him, the movement of the upper part of the thoracic cage during ordinary breathing was a little greater on the hemiplegic than on the sound side of the body. In one case in which tracings were made, it was found that the converse obtained during forced respiration.

5. **Gonorrhœal Thrombosis.**—Moore reports the case of a man aged twenty years, who was suffering from a dry gangrene of the leg of insidious onset. He also had a gonorrhœal discharge from the urethra, which contained gonococci. His condition rapidly grew worse and he died four days later. At the autopsy it was found that the aorta below the renal arteries was completely occluded by a firm reddish-gray adherent thrombosis. Scattered throughout the thrombus were found diplococci, answering in morphological and staining characteristics to the gonococcus. No cultures were made before or after death. The thrombosis was probably a local complication of a general gonococcus septicæmia.

BRITISH MEDICAL JOURNAL.

December 19, 1903.

1. An Address on Medical Politics, By Sir V. Horsley.
2. An Introduction to the Study of Clinical Surgery, By C. B. Lockwood.
3. The Operative Treatment of Cranial Depression (Greenstick Fracture of the Skull), By J. H. Nicoll.
4. Case of Congenital Deformity of the Nose Associated with a Degree of Median Harelip, By A. Maclennan.
5. Transplantation of the Insertion of the Biceps Tendon for Persistent Contraction of the Kneejoint in a Case of Rheumatoid Arthritis, By C. M. Moullin.
6. Case of Sarcoma of the Femur, with Description of a Recent Method of Amputation at the Hip-joint, By C. A. Griffiths.
7. "Indiarubber Jaw": a Peculiar Carcinomatous Invasion from the Submaxillary Salivary Gland, By W. B. Cleland.
8. Abdominoperineal Excision of the Rectum by a New Method, By L. B. Aldrich-Blake.
9. Three Cases of Gastric Ulcer Perforating Acutely, By C. W. Smeeton, C. C. Smith and J. G. E. Colby.
10. Three Cases Treated by the X Rays, By F. O. Stedman.
11. Duration of Mediterranean Fever, By P. W. Bassett Smith.

3. **Cranial Depression.** — Nicoll reports six cases of cranial depression or greenstick fracture of the skull occurring in children of from two months to four years of age. All six cases were treated as out patients and the operation was similar in all—inversion of the depressed area of bone. Scalp and pericranium having been deflected in one layer, the depressed portion of skull was cut out by trephine (1½ to 2½ inches in diameter), inverted on the dura mater, and fixed in position by suture over it of the replaced scalp and pericranium. In five of the cases the deformity was completely, and in one case partially corrected. The rapidity of union observed in the bone was very striking.

5. **Tendon Transplantation.**—Moullin reports the case of a woman aged thirty years, suffering from rheumatoid arthritis in which transplantation of the insertions of the biceps tendons was performed for persistent contraction of both kneejoints. It was hoped that by transplanting the tendon from the flexor to the extensor side of the joint, the balance of power might be restored and the knees straightened. An incision was made on the outer side of each limb; the tendon detached from the fibula; the quadriceps exposed, and the tendon of the biceps passed through a slit made in it, so that it lay upon the anterior aspect. A few sutures were passed through the

two tendons to secure them, the ordinary dressings applied, and the knees secured in their contracted position until the wounds were healed. The same weight extension that had been ineffectually used before, was applied again and the knees began to straighten out at once. The patient is now able to stand without support and to walk about sufficiently to attend to her ordinary household duties.

6. **Sarcoma of the Femur.**—Griffiths reports the case of a girl suffering from sarcoma of the right femur and thigh, necessitating amputation at the hip joint. This was successfully performed with the aid of Thomas's forceps-tourniquet, and the patient made a rapid recovery. For the immediate success of such a severe operation as amputation at the hip joint, it is essential that the loss of blood shall be reduced to a minimum, and that other factors in the production of shock should be excluded by every means possible. Immediate disarticulation is preferable to dividing the femur first and then dissecting out the rest of the bone. Sawing the femur must add to the shock.

7. **"Indiarubber Jaw."**—Cleland reports the case of a man aged fifty-five years, suffering from a peculiar carcinomatous invasion of the lower jaw from the submaxillary salivary gland. The jawbone seemed broken at the symphisis, and the two halves could be readily moved on each other. The jaw was removed under chloroform, and one year later there was no sign of recurrence. The horizontal ramus of the removed jaw was found to be swollen into a pear shape on cross section. Macroscopically no bony tissue remained, the original structure being replaced by a dense whitish neoplasm, easily cut by a knife and yielding a creaking sensation. The teeth were quite perfect and imbedded in this new tissue. The microscope showed narrow epithelial-lined ducts branching between fat cells, and terminating in rounded alveolar ends. The muscle tissue seemed to escape invasion. The condition is a rare one, and the case was remarkable for the general good health of the patient, the peculiar characteristic of elasticity on the part of the jaw affected (indiarubber jaw), and the absence of practically all degenerative processes even where the cells were aggregated into considerable masses.

11. **Mediterranean Fever.**—Bassett-Smith states that the prolonged course of Mediterranean fever (six months or more) is explicable by the fact that the organism (Micrococcus melitensis) can remain more or less latent in the spleen for long periods, to be again and again let loose in the general circulation causing an exacerbation of the fever. Such latency is due to any cause or causes which decrease the phagocytic power of the leucocytes: these latter are feebly active and deficient in number, and the bactericidal power of the serum is slight. These facts warrant the statement that the only rational and effective curative agent will be found in the preparation and administration of an antigermicidal serum which will attack the organism *in vitro.*

Letter to the Editor.

CREDIT TO AMERICANS FOR AMERICAN WORK.

UNIVERSITY OF PENNSYLVANIA,
DEPARTMENT OF VETERINARY MEDICINE,
PHILADELPHIA, PA., *December* 21, 1903.

To the Editor,

Sir: Men doing original work in this country frequently complain that their work is ignored by foreign writers, and there can be no doubt that there is much cause for complaint on this score. Three explanations for this annoying condition have been offered: 1. American publications are not carefully read by foreign investigators. 2. There is doubt in the minds of foreign investigators as to the accuracy of some of the original work that is carried out and published in this country. 3. There is no *Zentralblatt* in this country to present concise reviews of the work done by our investigators.

There is, however, gratifying growth of interest abroad in original work done in this country, so that investigators here who judiciously select the proper means for bringing their work to the attention of workers in similar lines in other parts of the world have less and less difficulty in obtaining the recognition they deserve. One cannot fairly take exception to the tardiness with which our meritorious work has been received abroad in view of the rather prevalent tendency on the part of American writers to look to foreign sources for their quotations and authorities even when they might quote better work and as high authorities at home.

An illustration of this tendency on the part of American writers is given in a recent paper on tuberculosis published in the *New York Medical Journal,* December 19, 1903.*

In this article the writer refers to Koch's statement as to the action upon cattle of tubercle bacilli of bovine and human origin, and says "It must be accepted as correct, and this distinguished authority be conceded to have established the first proposition which he advanced at the Tuberculosis Congress in London." Here is a statement which, in effect, credits Koch with a discovery that was made, remade, and confirmed years before in this country by Theobald Smith, Dinwiddie, Ravenel, and de Schweinitz. The writer adds: "Koch found that the bovine bacillus was pathogenic for all experimental animals, while the human bacillus had a much more restricted range in pathogenesis." While it is undoubtedly true that Koch reported this finding, it was not, as might be inferred from the text, his discovery. Very much more complete evidence of this fact, based upon work done prior to that of Koch, was reported to the same congress before which Koch's paper was read by Dr. M. P. Ravenel, bacteriologist of the State Live Stock Sanitary Board of Pennsylvania. In the same paper the writer states: "Kossel used bacilli of human origin from the mesenteric glands in one case and from the peritonæum in another for the injection of calves, both of which showed generalized tuberculosis at death. Many others have confirmed the findings of Kossel." Here, again, credit is given to a foreigner for work that was done a long time ago in this country, and has been reported by Ravenel, de Scheinitz, and Smith. It is intimated by the form of the statement regarding Kossel's work that it was original work and that it has been confirmed by the work of others. On the contrary, Kossel was but following lines of work previously conducted in this country and, instead of being confirmed, he confirmed the work done here.

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* On the Natural Habitat of the Tubercle Bacillus. By J. W. Kime, M. D.

In the article under consideration, no direct reference is made to any investigations in this country; American authorities are wholly ignored.

It would be interesting to know why American writers go abroad for authorities and ignore their colleagues in this country in instances where they have done earlier work, more work, and better work than that cited.

Leonard Pearson, B. S., V. M. D.,
State Veterinarian.

Proceedings of Societies.

THE SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

SIXTEENTH ANNUAL MEETING.

Held at Atlanta, Ga., December 15, 16, and 17, 1903.

(*Concluded from page 45.*)

Pus Collection in the Pelvis.—Dr. C. N. Chavigny, of New Orleans, La., discussed this subject and reported three cases.

The Technics of the Vaginal Method.—Dr. J. Riddle Goff, of New York, said in his own hands the scope of the operation, namely, the conditions to which the vaginal method was applicable, was steadily widening. It was no longer confined, on the one hand, to simple puncture and drainage, or limited, on the other, to the radical operation of hysterectomy. All the intermediate procedures that were called for by the multifarious pathological conditions found in a woman's pelvis found their most direct route through the vagina.

There were two vaginal incisions through which the pelvic cavity could be reached, one, posterior to the cervix into Douglas's pouch, and the other anterior to the cervix, separating the bladder from the uterus and opening up to view and touch the entire contents of the pelvis. The latter was the one which afforded the greater facilities for operative procedures, and the one which he depended upon almost exclusively. The posterior incision was frequently used in connection with it, to afford additional opportunity for the purpose simply of securing drainage and in some cases for manipulation. The procedure was described.

The simplest application of the vaginal method, and the one that probably commended itself most universally to the profession, was incision and drainage of pelvic abscesses.

The author's cases had embraced every variety of disease from simple retroversion, with or without adhesions, to prolapsed and cystic ovaries, unilateral and bilateral salpingitis, ectopic gestation, fibroid tumors of the uterus, and dermoid cysts. The method lent itself to every form of conservative work upon the uterus and its appendages that had been suggested in the trend of recent modern gynæcology. The successful application of it required patience, experience and skill, but when once the profession had been convinced of its superiority, he believed it would steadily and rapidly grow in favor and become the accepted method for the man who practised the specialty of gynæcology.

Tuberculous Osteitis of the Knee.—Dr. A. R. Shands, of Washington, D. C., said that the management of a case of white swelling could be embraced in the terms immobilization and protection in any and all stages of disease. The indication was to preserve the function of the joint as far as possible, to arrest the progress of the disease, to prevent and correct deformities. Immobilization and protection with the best hygienic surroundings and the best tonic treatment appropriate to the individual case would best accomplish the indication just mentioned. If the diagnosis was made early and this line of treatment faithfully carried out, a large percentage of cases would yield very favorable results, many recovering with little or no disability. When it became necessary to incise and drain a joint, it should be done thoroughly and good drainage should be kept up just so long as there was any discharge. When the infection of the joint was due to an osteitis that was near the surface of the ends of the bone, often the diseased bone sloughed away, and when it could be easily located and curetted, most excellent results were obtained. A case was cited in point.

Excision of the knee should never be done in children except in extreme cases, and even then the author believed that amputation would be best, for an artificial leg was more useful than such a leg as a child would have after excision.

Bilateral Diffuse Virginal Hypertrophy of the Breasts.—Dr. George Ben Johnston, of Richmond, Va., reported the case of a white girl, aged sixteen years, four feet ten inches high, weighing 112 pounds, who had this disease. The breasts hung from the chest wall at about the fourth rib and reached to a point just above the symphysis pubis. The nipple was flattened and stretched. The substance was soft and of similar consistence to that of a well-nourished multipara's breast; the glandular masses scattered throughout were distinctly palpable. The breasts were almost symmetrical, with the exception of a lobular division at the base of the left breast of the same general structure as the main tumor. Two small scars near the right nipple indicated the site of former abscesses. The anteroposterior circumference of the left breast was 19¼ inches; the anteroposterior circumference of the right breast was 21¼ inches; the superior inferior circumference of the left breast was 32 inches; and of the right, 31 inches. Operation was performed under ether anæsthesia, and occupied thirty-five minutes, the left breast being removed first, followed immediately by the removal of the right. The breast was held above the field of operation, and the amputation carried on as rapidly as the vessels could be caught by assistants. Healing was by primary intention, and the patient was up and about in six days.

A Case of Excision of the Psoas Magnus Muscle for Sarcoma was reported by Dr. George H. Noble, of Atlanta.

The Differential Diagnosis of Syphilis and Cancer of the Vulva.—Dr. Barton Cooke Hirst, of Philadelphia, read a paper on this subject. After referring to the diffential diagnosis of these two affections, he reported the case of a woman, twenty-eight years of age, single, who had never been pregnant. She denied ever having led an immoral life, and the possibility of venereal infection. Ten years ago she was operated on for hæmorrhoids and fissure in ano. The wound of the operation did not heal properly. More than a year ago the patient noticed an ulcerated condition of the vulva, and a short time afterward incontinence of fæces, followed soon by incontinence of urine. For two years past there had been amenorrhœa. On making a specular and digital examination, a fistula between the fossa navicularis and the rectum was discovered. The whole urethra was gone; there were three little tubercles at the neck of the bladder, these being all that was left of it. The vagina above the neck of the bladder was perfectly healthy. The cervix was normal except that it was atrophic, as was the whole uterus. The case, at first sight, looked like an inoperable epithelioma of the vulva. It was so pronounced by one of the most experienced dermatologists in Philadelphia. But there was none of that extensive infiltration and elevation of the skin surface around the edges of the ulceration, such as was seen in an example of extensive epithelioma of the vulva. considerably advanced, but not yet inoperable. Moreover, numerous pieces of tissue from different places in the ulcerated area showed nothing characteristic of cancer. There was everywhere the most extensive round-cell infiltration and necrosis of tissue. The microscopical study, as well as the macroscopical appearance, suggested syphilis in the ulcerated gummatous form as the most likely possibility, epithelioma being excluded.

Accordingly, the patient was put on specific treatment in spite of her negative history, and the entire absence anywhere upon her body of signs indicating an old syphilitic infection. The treatment was given up within a week, as the patient was severely ptyalized and could not endure large doses of potassium iodide. Lupus next suggested itself. On two separate occasions, under anæsthesia, twelve or fifteen pieces of diseased tissue were removed for microscopical examination. No tubercles or bacilli could be discovered anywhere. Inoculations in animals were negative. The urine contained no tubercle bacilli. The bladder itself was healthy. There was a response to the tuberculin test, but the woman had a patch of consolidation in the apex of one lung. Meanwhile the patient was given x ray treatments every other day for from eight to ten minutes. Withing three weeks the external ulceration was healed. The local appearance at that time showed great improvement. Two weeks later the recto-vaginal fistula spontaneously closed under the continuance of the x ray applications. Nothing remained of the original disease except the absence of the urethra and an elephantiatic condition of the labia majora. The former had been corrected by urethroplasty. The speaker had not yet joined the new urethra to the opening in the bladder, so that the establishment of continence of urine was still doubtful, but he was quite hopeful of making the patient eventually entirely comfortable.

Appendicitis.—Dr. George R. Dean, of Spartansburg, S. C., read a paper in which he considered it a surgical disease, outside of the pale of the physician, and when it was once discovered, operation should be done at the earliest possible moment.

Appendicitis and its Relation to Pelvic Inflammations.—Dr. J. M. Baldy, of Philadelphia, Pa., expressed himself as being unable to follow the reasoning of those who adopted the practice of removal on the ground that the condition of adhesion implied appendicitis or future danger of this disease. He did not agree with that class of surgeons who removed the veriform appendix as a routine practice as a prophylactic measure. He thought 95 per cent. of the mixed class were in origin cases of pelvic inflammatory disease, and the adhesion of the vermiform appendix was a mere coincidence due to inflammation of contiguous serous surfaces, as was commonly the case of adhesion of intestines in pelvic inflammatory diseases. His experience had led him to differ from those gentlemen who held that appendicitis generated pelvic inflammatory disease, or that pelvic inflammatory disease caused appendicitis. The two diseases were rarely associated, and only then as a coincidence. He was firmly of the opinion that the one never caused the other.

Retroperitoneal Infection a Result of Appendicitis.—In a paper on this subject, Dr. I. S. Stone, of Washington, D. C., said it was our plain duty in certain specific cases to investigate the retroperitoneal space with the same care as the cavity of the peritonæum. First, one should consider every delayed case with anxiety, lest there should be retroperitoneal infection. Second, one should be careful to give a guarded prognosis in every case of appendicitis ushered in by or complicated by chills or any symptoms of sepsis. Third, if operating on such cases, one should consider retroperitoneal infection as already started, and act accordingly. The discovery and proper treatment of such infection was quite as important as the usual intraperitoneal technique.

In view of the possibilities of retroperitoneal infection, the surgeon assumed great responsibility by advising nonintervention in appendicitis, and while one would often advise delay, when he believed the lesions were strictly intraperitoneal, yet it would appear to the writer that such a course is unsafe, and should be condemned when there was reason to fear complications.

Short Incision in Appendicitis.—Dr. Robert T. Morris, of New York, said the beginner in surgery was inclined to make incisions that were too short, rendering his work more difficult and very likely incomplete. The surgeon could not do good work, particularly in abdominal surgery, if he began his work with incisions that were too short. He could not do the best work if he continued to make incisions that were too bold or too free. After one had acquired a certain amount of skill in technics, he could return to the shorter incisions, which would allow the patient to escape with the least possible shock of incision. With long incisions there was more shock; more adhesions, because the exposure of the peritonæum through a long incision excited greater inflammatory reaction, and this resulted in more peritoneal adhesions, which must be disposed of, or which might remain, to make the patient lifelong trouble. The longer the incision, the greater the danger of infection from the aerial bacteria. With long incisions the patient's general resistance was interfered with. He would make this statement, however, that the surgeon should make as long an incision as he felt was necessary, and by no means be guided by the idea that he was to conform to any length of incision. If one could allow a patient to escape with a short incision, he should do so.

The Significance and Management of Paralysis of the Bowel.—Dr. George S. Brown, of Birmingham, Ala., emphasized the views held by the surgeons of the past generation, that paralysis of the bowel in the presence of inflammation of the peritonæum was to be regarded, not as a pathological condition to be combated, but rather as Nature's way of allowing the plastic exudate to form adhesions, the use of which was to confine the infection to as limited a field as possible. He held that it was not the paralysis, but the over-distention of the bowel, that should be fought. Following the plan of keeping the upper uninflamed portion of the bowel quiet until the inflammation subsided, rather than of attempting the difficult or impossible feat of waking up the inflamed and paralyzed portion by the use of purgatives, he believed would cure many or the majority of the worst cases of diffuse peritonitis with which the surgeon had to deal. This rest treatment should be applied after the offending appendix or tube had been removed, and the infected site properly treated and drained. It seemed to him that if the Öchsner plan of treatment would tide over a patient with a gangrenous appendix, such a patient could have a much better chance if the appendix was removed, and to the Ochsner treatment was added the tight abdominal binder, with water to relieve thirst, and wash out the stomach if there was vomiting, together with opium *ad libitum,* to relieve pain and keep down peristalsis.

In a total experience of 90 cases of appendicitis he had had 66 pus cases, 24 of which had been treated by the plan of starvation, except as to water, prolonged irrigation of the stomach before leaving the table, a tight abdominal binder, and opium. Eighteen of these patients had more or less diffuse peritonitis, and 12 of these were so severe that they had to be extensively disemboweled in order that adhesions could be broken up and septic material wiped away. Only two of these patients died. They might have recovered had they been tided over without operation, but as they were both *in extremis* at the time, probably the only thing saved would have been the reputation of the surgeon. Of five other deaths occurring in the 90 cases, two were due to subdiaphragmatic abscess rupturing into the lung, one to regurgitant vomiting, due to the presence of a large quantity of castor oil in the bowel, which was not washed out, and two early cases where abscesses that had already set up a diffuse peritonitis were merely incised.

Septic Thrombosis of the Femoral Vein Following Influenza.—Dr. D. F. Talley, of Birmingham, Ala., reported a case of septic thrombosis due presumably to influenza, from which the patient was recovering when the phlebitic trouble arose.

Five Recent Successful Laparotomies for Gunshot Wounds of Abdominal Viscera, Including One With Twenty-eight Perforations of Intestines and Mesentery.—Dr. Robert W. Johnson, of Baltimore, Md., read a paper with this title. The first case was one of gunshot wound of the stomach and liver; laparotomy, with recovery. The second, a gunshot wound of the liver; laparotomy, with recovery. The third was a gunshot wound of the liver; laparotomy; recovery. The fourth was a gunshot wound of the intestine; laparotomy; recovery. The fifth case was one of gunshot wound of the intestine, in which there were 17 perforations of the gut, and 11 of the mesentery. The patient was a colored man, aged seventeen years. A wound from a 32 calibre ball was found in the left side, just above Poupart's ligament, which, after washing, was found to go directly into the abdominal cavity. A median incision was made below the umbilicus and the belly found to be full of blood. Through this incision the gut was drawn out on to warm towels and seventeen perforations of the small intestine, and eleven of the mesentery, were successfully closed by silk Lembert sutures. The patient had no setback after the operation, and was discharged well three weeks after injury was received.

Cases of Intestinal Obstruction Treated by Resection.—Dr. W. H. Doughty, Jr., of Augusta, Ga., reported three successful cases of resection of intestine for obstruction due to gangrenous umbilical hernia, volvulus, and intussusception respectively. One of the cases was rather unique, in that the strangulated loop of intestine in the hernia was a part of a greater segment which had been strangulated by volvulus. The descent of the herniated coil took place shortly after the occurrence of the volvulus, and its strangulation was occasioned by the congestion which followed the latter.

The almost invariable fatality which attended the operation he attributed to the toxæmia which was induced by gangrene of the intussusception. In one case, in spite of the unmistakably gangrenous patches upon the intussusucipiens and involving even the mesentery, the patient, though far from being in a satisfactory condition, stood the operation fairly well, rallied promptly from the depression which attended it, and recovered without interruption.

Free Growths in the Tunica Vaginalis.—Dr. Edward A. Balloch, of Washington, D. C., reported the case of a colored boy, sixteen years of age, who came under his care in December, 1902. Family and personal histories threw no light upon the case. There was no history of injury. Present trouble began eight years before, as an enlargement in the upper part of the right of the scrotum, which continued to grow painlessly from that time onward.

Examination showed a scrotum reaching nearly to the knees and measuring twenty-one inches in circumference at its longest point. Both testicles and both cords could be made out and felt normal as to size, shape and consistence. There was no fluid in the scrotum, but a peculiar gelatinous, flabby feeling of the scrotal tissue. Three separate tumors were felt in the right side of the scrotum. The growths were freely movable in relation to the cord, testis, and scrotal tissues.

The diagnosis of fibroid growths in the tunical vaginalis was based partly on the history of a slow, painless growth, and absence of ulceration and fistulæ, excluding cancer, syphilis, and tuberculosis, and partly on the physical characteristics of the growths, together with a keloid behind the right ear, which was interpreted as indicating a tendency to fibromatosis in the patient. Operation, December 15, 1902, showed the tunica greatly enlarged and thickened, and converted into a gelatinous mass. The upper tumor ran into the inguinal canal and was attached there by a pedicle. The other two showed no distinct points of attachment. All the tumors were enucleated and the thickened tunic removed. The testicle was removed accidentally in dissecting out the tunica. The tumors weighed 38 ounces, and the tunica 20 ounces. The specimens were shown. The report of the pathologist showed that the growths were soft fibromata, with areas of fatty and myxomatous degenerations. The testicle also showed areas of beginning myxomatous degeneration.

The pathology of the condition was considered briefly, the conclusion being reached that the growths had their origin in the subserous connective tissue.

Examination of the literature showed but one case at all resembling the one reported, although there were several reports of minute fibrous growths on the tunic following hydrocele treated by the injection of iodine.

Dr. J. McFadden Gaston, Jr., of Atlanta, Ga., dealt with the complications encountered in the surgical treatment of disease of the testicle.

Extrauterine Pregnacy.—Dr. T. J. Crofford, of Memphis, Tenn., reported a case and exhibited a specimen in which the gestation sac was so thoroughly developed and so strong, that it was enucleated without the loss of any blood. The sac was completely intact all around the fœtus. The speaker supposed it to be a parovarian cyst, but after the sac was slit open, out came the fœtus.

Colloid Carcinoma of the Rectum, with Excision by the Combined Vaginal and Inguinal Routes.—Dr. J. Horace Whitacre, of Cincinnati, Ohio, reported a case of colloid carcinoma of the rectum which presented unusual pathological and clinical features. After giving a complete history of the case and describing the operation, the author stated that his chief reason for presenting it was the unusual nature of the primary tumor. He had never before seen a carcinomatous tumor of the bowel which had developed as a hard, uniform thickening of the entire circumference of the tube. The tumor involved the wall of the rectum to almost a uniform degree for six inches of its length, and the organ was transformed into a tube that might very well be compared to a flattened lead pipe with very thick walls. The tube was very rigid and non-collapsible when in a fresh state.

A second point of interest was the strong naked eye resemblance to tuberculosis. The minute bodies which were scattered over the pelvic peritonæum could not be distinguished from miliary tubercles. Large caseous lymph nodes were found in the hollow of the sacrum. The great predominance of fibrous tissue, the uniform involvement of a long segment of the bowel, and the appearance of minute nodules resembling miliary tubercles in the primary tumor of the rectum all spoke for hyperplastic tuberculosis of the bowel.

A third point was the exceedingly rapid development of the solidly carcinomatous ovarian tumors from half a dozen minute miliary metastases on the peritoneal surfaces of each. These tumors were friable, and almost jellylike, as were all of the metastases, whereas the original tumor was as hard as cartilage.

Pneumatic Rubber Suit.—Dr. George W. Crile, of Cleveland, Ohio, said that the pneumatic suit was constructed of a double layer of specially made rubber, which, when inflated, exerted a uniform pressure upon the surface, constituting an artificial peripheral resistance. It was so constructed that one or more limbs or the abdomen might separately or in combination be subjected to pressure by inflation by means of a bicycle pump. The air valves were so adjusted that the rate of decompression might be completely controlled.

Several cases were reported showing the value of the pneumatic rubber suit in shock and collapse.

Resuscitation of Animals Apparently Dead.—Dr. Crile also presented a short paper on this subject, in which he gave a summary of experimental data. When asphyxia caused failure of the heart and respiration, vigorous artificial respiration usually restored their function when administered within a few seconds. It was effective in an inverse ratio to the time that had elapsed; it was rarely effective after forty seconds. By the addition of saline infusion a larger proportion of animals could be resuscitated after the lapse of a little longer time. Rhythmic pressure upon the heart, either through the thorax by pressure upon the ribs over the heart or direct pressure within the thorax was also an aid. The effect of the traumatism to the heart by the direct method partially counterbalanced the benefit from this measure. Nitroglycerin, alcohol, and digitalis were useless; rapidly alternating the posture, head up, then head down, was not effective. Suspending the animal head down and making rhythmical pressure upon the heart was an effective method. This method gave the brain the advantage of gravity; it provided a moderate artificial circulation as well as respiration. It could be promptly applied. The addition of saline infusion increased the effectiveness of the method. Animals apparently dead for periods up to fifteen minutes were resuscitated by the combined effect of artificial respiration, rhythmic pressure upon the heart, and the infusion of adrenalin. When the blood pressure had risen to 30 or more mm. Hg., the heart began to beat and the blood pressure was rapidly restored. The return of respiration was signaled by a short, almost imperceptible movement of the diaphragm, the respiratory action becoming gradually stronger and more frequent.

The conjunctival reflex returned early. Some of the experiments failed on account of too great elevation of the adrenalin bottle; some on account of an overdose of adrenalin; several were only partially successful, owing to the great dilution of the adrenalin. Adrenalin, when injected directly into the chamber or into the wall of the heart, caused fibrillar contractions, after which the heart could not be resuscitated. After final cessation of the heart, by employing manual compression of the heart, and infusing adrenalin, the blood pressure could be raised even higher than the normal. Respiration in some instances was partially restored.

Experiments in which saline infusion was substituted for adrenalin, and which were unsuccessful, were promptly successful on adding adrenalin. In a patient with crushed skull, whose heart had ceased beating for nine minutes, resuscitation of the heart for thirty-one minutes by this method was made. During the operation for the elevation of the depressed bone, the patient moved his head.

Another patient apparently dead from a severe crushing of the base of the skull was partially resuscitated twenty-four minutes after the apparent death. The proofs of the apparent death were absence of respiration, absence of heart sound on stethoscopic auscultation, and as a final proof, on opening the jugular vein there was absolutely no circulation. In this case the blood pressure rose to 80 mm. at one time; voluntary respiration appeared. These evidences of vital action continued for thirty-four minutes.

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Book Notices.

A Textbook of Operative Surgery. Covering the Surgical Anatomy and Operative Technics Involved in the Operations of General Surgery. Written for Students and Practitioners. By WARREN STONE BICKHAM, Phar. M., M. D., Assistant Instructor in Operative Surgery, College of Physicians and Surgeons, New York, etc. Pp. 984, with 559 Illustrations, Entirely Original. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Cloth, $6.00 net; sheep or half morocco, $7.00 net.

The text of this excellent book is fully in keeping with the title, for there is omitted from its pages all discussion of the principles of surgery and anæsthesia, two extensive subjects whose introduction would have made great inroads on the space of the work. The main purpose of the author has been to give in detail everything pertaining to the technics of surgery.

The subject matter is arranged in two parts. The first covers operations on the individual structures, with the topographical and surgical anatomy bearing on them. The second part is devoted to operations on the different regions for varied pathological conditions. This is, therefore, an operative surgery such as any surgical interne, and a practical surgeon for that matter, would find most useful.

The subject is handled in such a manner that, with the aid of the complete index and table of contents, information bearing on the practical aspects of almost any accepted operation is readily found. By virtue of this feature the work becomes somewhat encyclopædic in character. The strong emphasis of the handicraft of surgery is well balanced by the regard given in the critique as to the choice of operation and indications for the same. Furthermore the multiplicity of facts and conscientious consideration of every detail incident to the successful execution of the operation are masterfully handled.

The position of the patient, general considerations, primary incision, topography, the operation and the technical steps of the operation, is the order followed. This array of facts makes such a book difficult off-hand reading; its great merit, therefore, will be as a work to which the nurse, the student, the surgeon, and his assistant, can ever turn to with profit to acquire such facts as are hourly called for in the daily routine of active surgery.

Diseases of the Nose and Throat. By CHARLES HUNTOON KNIGHT, A. M., M. D., Professor of Laryngology, Cornell University Medical College, etc. 147 Illustrations. Philadelphia: P. Blakiston's Son & Company. 1903. Pp. xv-423. (Price, $3.00 net).

In his preface the author states that the contents of the book have formed the basis of a course of lectures at Cornell University Medical College, and have been arranged chiefly for the convenience of students. The reader will find that, while this purpose has been admirably fulfilled, the volume contains much to instruct and interest the practitioner and specialist. Perhaps the most valuable characteristic of the work is the evidence, on almost every page, of its having been written from the ripe experience of actual practice and from a thorough acquaintance with the latest advances of rhinology and laryngology. The textbook of which as much can be said is the exception, not the rule, and "compilation" covereth a multitude of sins.

While only the essentials of anatomy and physiology have been included, these are so well presented in text and illustration that no need of further detail is felt. It is in the chapters on clinical examination, treatment, and operative technics that we find, what is so often missed, namely, a complete yet succinct account of each step in the procedures described. The presentation is so clear, the essential points are so well brought out, accentuated, and individualized, that we get the impression of a demonstration rather than that of a lecture. This is especially noticeable and welcome in the division treating of the accessory sinuses. We are not limited to one operation, but have the choice of two or more, all well described with their respective indications.

The latest developments in the use of the x ray and of phototherapy in general, recent therapeutic suggestions in hay fever, and the prosthetic use of paraffin are given with a minimum of verbiage. In conclusion, a word must be said in regard to the press work. Clear type, good paper, illustrations which are artistic, well chosen, and numerous, go to make up a very attractive volume.

The Principles and Practice of Surgery. Designed for Students and Practitioners. By GEORGE TULLY VAUGHAN, M. D. (University of Virginia); Assistant Surgeon General, Public Health and Marine Hospital Service of the United States, etc. Philadelphia and London: J. B. Lippincott Company. 1903. Pp. xiii-569. (Price, $4.00 net).

We are told in the preface that the author's endeavor has been to present the subject in a practical manner. This is a familiar plea, but hardly furnishes a sole reason for the appearance of another new book in the face of so many existing practical surgeries. But, after a perusal of these pages we find a justification of the author's claim, resting, however, as seen through our eyes, on a due appreciation of the principles of surgery. These principles are everywhere in evidence. In the opening sentence, by his definition of inflammation and in very few words, the author clearly shows his colors. On such a good foundation, naturally excellent teaching follows. Though the book is not very voluminous, we can candidly say that there are very few omissions. The instructions and descriptions are concise, for they rest on recognized principles. Gynæcology, ophthalmology, and otology are not embraced in the scope of this work, yet their diagnostic importance is emphasized when it has a bearing on the topics discussed.

Following the chapter on inflammation, the succeeding chapters cover the technical principles of surgery, asepsis, antisepsis, and anæsthesia. A brief consideration is given to minor surgery. The acute and chronic infections are then taken up with a wholesome regard for the teachings of modern bacteriology. The remainder of the work is devoted to a consideration of regional surgery.

The illustrations, numbering eighty-one, for the most part original, are judiciously selected and located near the text descriptive of them.

In every instance due credit is given to the originator of any method, but literary references do not abound.

This very creditable volume forcibly reminds one of Billroth's *Surgical Pathology*, and we trust that it will enjoy a like popularity.

The American Illustrated Medical Dictionary. A New and Complete Dictionary of the Terms Used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, and the Kindred Branches, with their Pronunciation, Derivation, and Definition, including much Collateral Information of an Encyclopædic Character. By W. A. NEWMAN DORLAND, A. M., M. D., etc. Third Edition, Revised and Enlarged. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Pp. 798.

American Pocket Medical Dictionary. Edited by W. A. NEWMAN DORLAND, A. M., M. D., etc. Fourth Edition, Revised and Enlarged. Philadelphia and London: W. B. Saunders & Company, 1903. Pp. 566.

Short and lucid definitions still constitute the strong point of Dr. Dorland's excellent dictionary, and the edition now under notice has been brought quite up to the time of its printing, at least so far as it could be done without recourse to a supplement. In the matter of the spelling of many words we do not agree with the author, but that is a minor matter. The pocket edition is a very satisfactory specimen of abridgement.

A Manual of Hygiene and Sanitation. By SENECA EGBERT, A. M., M. D., Professor of Hygiene and Dean of the Medicochirurgical College of Philadelphia, etc. Third Edition, Enlarged and Thoroughly Revised. Illustrated with 86 Engravings. Philadelphia and New York: Lea Brothers & Co. Pp. 473.

It is not quite two years since we noticed the second edition of this excellent textbook. That a third edition should have followed it so soon is proof that it is appreciated by the profession. In a comparatively small volume the author gives us the essentials of hygiene and sanitation. In this revision we find abundant evidence of painstaking work, and we believe it contains an ample presentation of the advances that have been made since the previous edition appeared. We commend it without reserve.

BOOKS, PAMPHLETS, ETC., RECEIVED.

Court Testimony of Medical Experts in Mental Diseases. By B. D. EVANS, M. D., Morris Plains, N. J., Medical Director of the New Jersey State Hospital at Morris Plains. Newark, N. J.: L. J. Hardham Printing Co., 243-5 Market Street. 1903. Pp. 12.

A Compend of Pathology, General and Special, A Student's Manual in One Volume. By ALFRED EDWARD THAYER, M. D., Professor of Pathology, University of Texas. Second Edition, Containing 131 Illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1903. Pp. xxiv-711.

Illinois State Board of Health. Report on Medical Education and Official Register of Legally Qualified Physicians. 1903. Embracing—Medical Practice in Illinois, Medical Colleges in Illinois and Faculties, Medical Societies in Illinois and Officers, Pension Examining Boards in Illinois, Requirements for Practice in the United States, Medical Colleges in the United States, Official Register of Physicians. Second Edition. Springfield: Illinois State Register. 1903. Pp. clxix-380.

Essentials of Pelvic Diagnosis, with Illustrative Cases. By E. STANMORE BISHOP, F. R. C. S., England, Author of Uterine Fibromyomata, Their Pathology, Diagnosis, and Treatment, Honorable Surgeon Ancoats Hospital, Manchester, etc. And an Appendix on Examination of Blood, etc., by CHARLES H. MELLAND, M. D. (Lond.), M. R. C. P., Honorable Physician Ancoats Hospital, Manchester, etc., etc. New York: William Wood and Company. 1903. Pp. vii-297.

Handbook of Diseases of the Ear. For the Use of Students and Practitioners. By RICHARD LAKE, F. R. C. S., England, Surgeon Royal Ear Hospital, Lecturer on Practical Otology, Medical Graduates College. With Three Colored Plates. New York: William Wood & Company. 1903. Pp. x-232.

The Right to Life of the Unborn Child. A Controversy Between Professor HECTOR TREUB, M. D., REVEREND R. VAN OPPENRAAY, D. D., S. J., Professor TH. M. VLAMING, M. D. With an Appendix on a New Method of Operating, Ejecting, the Fœtus Alive. New York: Joseph F. Wagner. Pp. 125. [Price $1.00 net].

Tesis de Doctorado. Exploracion Radiografica Del Torax, Como Medio de Diagnostico Medico Y Quirurgico. Por ANTONIO ESPINA Y CAPO, Premio Extraordinario en el Grado de Licenciado de la Facultad de Medicina de Madrid. Madrid: Imprenta Y Libreria de Nicolas Moya. Garcilaso 6 y Carretas 8. 1903. Pp. 72.

Transactions of the American Surgical Association. Volume XXI. Edited by RICHARD H. HARTE, M. D., Recorder of the Association. Printed for the Association. For Sale by William J. Dorman, Philadelphia. 1903. Pp. xxxi-630.

Miscellany.

The Control of Hæmorrhage in Pelvic Operations.—Sampson (*Johns Hopkins Hospital Bulletin,* September, 1903) gives a number of cuts showing clearly the methods which he advocates. The steps of his procedure are as follows: (1) The lower end of the abdominal incision is opened sufficiently to admit the proctoscope. (2) The sterilized proctoscope properly lubricated is pushed down into the pelvis. Its obturator is then removed and the pelvis inspected, reflected light being introduced by means of a head or hand mirror. The obturator must be replaced if the instrument is to be carried more deeply into the pelvis. (3) The pelvis is then packed with gauze by means of a forceps or a packer, the proctoscope being turned as required to permit one to reach the various parts of the pelvis. If the lumen of the instrument becomes filled with gauze the instrument must be removed and reinserted, the packing being then continued. (4) The ends of the separate pieces of gauze should be folded over the incision and covered with gauze pads. Pressure from without should be exerted by means of a tight abdominal binder. The vagina is packed by placing the forefinger under the cervix, raising the latter and carrying the gauze behind and under the cervix. The vagina should be packed firmly and a snug fitting T bandage be applied. The advantage from the use of the proctoscope are facility in discovering and relieving hæmorrhage, comparative painlessness, absence of danger from infection, if the instrument has been properly sterilized. In order to reach the bottom of the pelvis the proctoscope should be at least eighteen centimetres long, with a diameter of two and five-tenths centimetres.

Phototherapy and Radiotherapy. — Boggs (*Pennsylvania Medical Journal,* July, 1903) believes that the advancement already made with this means of treatment is convincing as to its far-reaching possibilities. The general effects of the sun's rays on metabolism, on disease germs, on dampness, etc., is referred to; also the fact that the health of the average individual is better in summer than in winter, because the sun's rays can then more easily reach the body. In the spectrum of white light we have the greatest heat rays beyond the visible red, and the richest chemical rays beyond the visible violet. Beyond the infra-red rays are the Hertian waves, used in wireless telegraphy, and beyond the invisible ultra-violet are the Becquerel rays, which give off uranium and other salts. The x rays probably lie beyond the Becquerel rays. The ultra-violet rays are actinic, fluorescent, bactericidal, and can discharge a body when negatively electrified. The Finsen light is composed of the blue, violet, and invisible ultra-violet rays of the spectrum. These are chemical rays, and must be passed through rock crystal rather than through ordinary glass. They produce, in a painless manner, an erythema which passes away more rapidly than that which is produced by the x ray. The x ray has been sucessfully used in the treatment of cancer, lupus, tuberculosis, acne, eczema, psoriasis, tinea tonsurans, favus, sycosis, rodent ulcer, keloid, sarcoma, and goitre. The dosage must be varied, of course, with different conditions and susceptibilities. On normal tissues the following results have been observed: 1. Small doses stimulate and increase nutrition. 2. Slightly larger doses cause mild erythema. 3. Moderate doses, long continued, will cause atrophy or degeneration. 4. Large doses will cause inflammation with increased supply of blood. Leucocytosis will occur, followed by stasis, the circulation being cut off the tissues will die from want of nourishment. 5. If necrosis has resulted, the necrosed tissues will decompose and will be discharged or absorbed. 6. If normal and diseased tissues are treated at the same time the former will not be injured unless the dosage is large and the latter will be destroyed. 7. The treatment will vary according as the effect desired in stimulation, atrophy, inflammation, or necrosis. The author reports some cases.

Typhoid Perforation of the Intestine in Children.—Elsberg (*Annals of Surgery,* July, 1903) thinks the mortality after abdominal section for typhoid perforation is greater than statistics show, though probably less than when the operation was a novelty. The prognosis after operation in children is more than twice as good as in adults. The author's paper records cases in children between the ages of six and fifteen years. There are no records of operations upon infants or very young children. Mikulicz was the first to operate for perforation of the intestines, and the general opinion now is that the only treatment for perforated bowel during typhoid fever, the diagnosis having been made, is the surgical one. It is desirable to diagnosticate a preperforative period whenever possible and operate at that time. This paper attempts to demonstrate: (1) That perforation of the intestine in typhoid fever is nearly as frequent in children between six and fifteen years of age as in adults. (2) That the symptoms are essentially the same as in adults. (3) That though recovery occasionally takes place without operation, surgery should, as a rule, be resorted to when the diagnosis has been made. (4) That very early operative intervention offers the best hopes of recovery.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending January 2, 1904:

Smallpox—United States.

Places.		Cases.	Deaths.
Arkansas—Fort Smith	Dec. 12-19	1	
California—San Francisco	Dec. 13-20	3	
Colorado—Denver	Nov. 14-28	3	
Illinois—Chicago	Dec. 19-26	4	
Indiana—Evansville	Dec. 19-26	1	
Louisiana—New Orleans	Dec. 19-26	1	
Maine—Brewer	Dec. 19	1	
Maine—Old Town	Dec. 19	9	
Maine—Orono	Dec. 19	1	
Massachusetts—Brockton	Dec. 19-26	1	
Massachusetts—Fall River	Dec. 19-26	1	
Massachusetts—Haverhill	Dec. 19-26	1	
Michigan—Flint	Dec. 19-26	1	
Michigan—Port Huron	Dec. 19-26	2	
Nebraska—Omaha	Dec. 19-26	1	

New Hampshire—Manchester	Dec. 19-26	2	
New York—New York	Dec. 19-26	1	
Ohio—Cincinnati	Dec. 18-25	8	
Ohio—Dayton	Dec. 19-26	4	
Ohio—Youngstown	Dec. 12-19	12	
Pennsylvania—Altoona	Dec. 12-19		1
Pennsylvania—Erie	Dec. 19-26	1	
Pennsylvania—Philadelphia	Dec. 19-26	66	14
Pennsylvania—Pittsburgh	Dec. 16-23	18	6
South Carolina—Charleston	Dec. 19-26	1 imported	
Tennessee—Memphis	Dec. 19-26	17	
Wisconsin—Milwaukee	Dec. 19-26	10	

Smallpox—Foreign.

Austria-Hungary—Prague	Nov. 28-Dec. 5	20	
Austria-Hungary—Trieste	Nov. 28-Dec. 5	1	
China—Shanghai	Nov. 14-21		1
Colombia—Barranquilla	Dec. 5-13		3
France—Paris	Dec. 4-12	17	
Great Britain—Birmingham	Dec. 5-12	2	1
Great Britain—Glasgow	Dec. 11-18	28	1
Great Britain—London	Dec. 5-12	2	
Great Britain—Manchester	Dec. 5-12	2	
Gt. Britain—Newcastle-on-Tyne	Dec. 5-12	1	
Great Britain—Nottingham	Dec. 5-12	1	
India—Bombay	Nov. 24-Dec. 1		1
Netherlands—Rotterdam	Dec. 5-12	1	
Russia—Moscow	Nov. 21-Dec. 5	5	3
Russia—Odessa	Nov. 28-Dec. 5	6	
Russia—St. Petersburg	Nov. 16-23	41	
	Nov. 28-Dec. 5	40	2
Turkey—Beirut	Nov. 28-Dec. 5	Present.	
Turkey—Smyrna	Nov. 22-29		7
Uruguay—Montevideo	Sept. 5-26	8	
	Oct. 1-31	4	

Yellow Fever—United States.

Texas—Laredo	Dec. 26	1	

Yellow Fever—Foreign.

Colombia—Cartagena	Nov. 23-30		1
Mexico—Ciudad Victoria	Dec. 6-12	3	2
Mexico—Merida	Dec. 6-12	2	1
Mexico—Vera Cruz	Dec. 6-12	9	2

Plague—Insular.

Philippine Islands—Manila	Oct. 24-Nov. 14	2	2

Plague—Foreign.

Australia—Brisbane	Sept. 1-30	1	1
China—Hongkong	Nov. 7-14		1
Egypt—Alexandria	Nov. 21-28	1	1
Egypt—Minieh	Nov. 21-28	3	1
India—Bombay	Nov. 24-Dec. 1		51
India—Calcutta	Nov. 14-28		43
India—Karachi	Nov. 22-29	8	7
Mauritius	Nov. 12-19	71	32
	Nov. 19-26	77	41
	Nov. 26-Dec. 3	60	41

Cholera—Insular.

Philippine Islands—Manila	Oct. 24-Nov. 4	19	18
Philippine Islands—Provinces	Oct. 24-Nov. 14	551	418

Cholera—Foreign.

India—Madras	Nov. 14-20		3
Japan—Nagasaki	Nov. 21-30		1
Straits Settlements—Singapore	Nov. 7-14		5

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending January 4, 1904:

BRISTER, J. M., Assistant Surgeon. Detached from the *Isla de Cuba* and ordered home.

FREEMAN, G. F., Passed Assistant Surgeon. Ordered to the Naval Station, Olongapo, P. I.

GUTHRIE, J. A., Passed Assistant Surgeon. Ordered to the *Franklin,* navy yard, Norfolk, Va.

MARCOUR, R. O., Assistant Surgeon. Detached from the *Franklin* and ordered to the *Dixie,* for duty with the Panama marine brigade.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending January 2, 1904:

BUSHNELL, GEORGE E., Major and Surgeon. Detailed to represent the Medical Department of the Army at the Tuberculosis Exposition to be held in Baltimore, Md., January 25 to 31, 1904.

COX, WALTER, First Lieutenant and Assistant Surgeon. Detailed as a member of the examining board at Fort Banks, Mass., vice George M. Ekwurzel, first lieutenant and assistant surgeon, relieved.

DESHON, GEORGE D., Captain and Assistant Surgeon. Relieved at Boston, Mass., to take effect February 1, 1904, and will then proceed to Des Moines, Ia., for duty.

KULP, JOHN S., Captain and Assistant Surgeon. Relieved from duty at Fort McDowell, Cal., and ordered to proceed to Philadelphia to assume the duties of attending surgeon and examiner of recruits, relieving Charles F. Kieffer, captain and assistant surgeon, who will proceed to Fort D. A. Russell, Wyo., for duty.

RAND, I. W., Captain and Assistant Surgeon. Returned to station at Fort Wright, Wash., and relinquished unexpired portion of leave of absence.

TRUBY, W. F., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month from December 29, 1903.

WALES, PHILIP G., Major and Surgeon. Relieved from duty at Fort Assiniboine, and will proceed to San Francisco, Cal., for transportation to the Philippine Islands.

WILLIAMS, A. W., First Lieutenant and Assistant Surgeon. Leave of absence extended for twenty-three days.

Births, Marriages, and Deaths.

Married.

DUNNING—MORSE.—In New York, N. Y., on Saturday, December 26th, Dr. William Dunning and Miss Rose Morse.

HERZIG—HAMBURGER.—In New York, N. Y., on Wednesday, December 30th, Dr. Arthur J. Herzig and Miss Blanche Hamburger.

JUDD—CRITTENDON.—In Morrisville, Virginia, on Wednesday, December 16th, Dr. Harry Weston Judd, U. S. N., and Miss Mary Crittendon.

RANDALL—ALTENBRAND.—In Brooklyn, N. Y., on Wednesday, December 23rd, Dr. Edwin Thompson Randall and Miss Lillian Altenbrand.

SEWARD—FOREMAN.—In Columbus, Ohio, on Wednesday, December 23rd, Dr. Ira E. Seward and Miss Laura J. Foreman.

TRUDEAU—MARTYN.—In Chicago, Illinois, on Monday, December 28th, Dr. Edward Livingston Trudeau, Jr., and Miss Hazel Martyn.

Died.

ANDREWS.—In Shelby, North Carolina, on Tuesday, December 22nd, Dr. W. P. Andrews, in the eighty-first year of his age.

BOOCOCK.—In Flatbush, New York, on Monday, December 28th, Dr. Robert Boocock.

BUSHONG.—In New York, N. Y., on Sunday, December 20th, Dr. Charles H. Bushong, in the forty-seventh year of his age.

CARR.—In Pittsfield, New Hampshire, on Tuesday, December 22nd, Dr. E. L. Carr, in the sixty-third year of his age.

DAGGETT.—In Buffalo, N. Y., on Wednesday, December 30th, Dr. Byron Hiram Daggett.

O'MALLEY.—In Philadelphia, Pennsylvania, on Saturday, December 26th, Dr. Michael O'Malley, in the seventy-ninth year of his age.

OTTO.—In New York, N. Y., on Tuesday, December 29th, Dr. John M. Otto.

QUIMBY.—In Salem, Massachusetts, on Monday, December 21st, Dr. S. Foster Quimby, in the sixty-fourth year of his age.

RUGGLES.—In New York, N. Y., on Sunday December 27th, Dr. Augustus D. Ruggles, in the sixty-fourth year of his age.

SAMPLES.—In Stillmore, Georgia, on Wednesday, December 23rd, Dr. C. L. Samples.

THOMAS.—In Constantine, Michigan, on Friday, December 18th, Dr. Daniel E. Thomas, in the seventy-fifth year of his age.

WEEKS.—In Malden, Massachusetts, on Wednesday, December 23rd, Dr. William J. Weeks, in the forty-first year of his age.

WHITE.—In Jamaica Plain, Massachusetts, on Tuesday, December 29th, Professor Frances E. White.

YOUNG.—In Springfield, Massachusetts, on Saturday, December 26th, Dr. William H. A. Young.

New York Medical Journal
AND
Philadelphia Medical Journal.
CONSOLIDATED.

A Weekly Review of Medicine

VOL. LXXIX, NO. 3. SATURDAY, JANUARY 16, 1904 WHOLE NO. 1311.

Lectures and Addresses.

PSYCHIC HEALING, OR, PROPERLY SPEAKING, THE TREATMENT OF DISEASE OR SUPPOSED DISEASE BY MENTAL INFLUENCE.*

BY EDWARD WALLACE LEE, M. D.,
NEW YORK.

Psychic healing, psychotherapeutics, has reference to the treatment of disease through mental impressions produced by suggestive speech, or by some agency not acting directly upon the organic system.

That mental impressions have played a very important part in the healing art cannot be denied. This condition exists to a wonderful extent to-day. It has always existed, and will exist so long as ignorance and superstition affect people in general. Superstition is born of ignorance, and psychic influence produces the greatest impression among the ignorant and superstitious class.

Psychic healing is a factor that has naturally entered into the treatment of disease, for in the earliest periods of history the credulity of people was taken advantage of, much as it is to-day. This is not to be wondered at when one remembers that even the god of medicine, Æsculapius, was a myth. He was thought to be the son of the god Apollo and the nymph Coronis, and the old mythological story is that Æsculapius was so successful in his saving of lives and curing of disease that Pluto, the god of Hades, became jealous of him, as his wonderful success diminished to an alarming extent the number of daily arrivals at Pluto's abode. Pluto complained to Jupiter that this audacious healer was interfering with his domain, therefore the mythical god of medicine was put to death.

To us this mythological story is absurd; but it is not more absurd than the nonsensical healing schemes that are promulgated and accepted to-day as absolute scientific facts. The limited knowledge the ancients had of anatomy, physiology, and pathology made it necessary that they should resort to all sorts of incantations, witchcraft, etc., for the relief of suffering humanity. There were, even in the most ancient times, educated men; but the masses were ignorant. The same conditions obtain to-day: the masses are ignorant, and are more willing to accept some incomprehensible, pseudophilosophy than plain, simple truth. The Hindu priests, or Brahmans, who alone had the privilege of practising medicine, taught from their Organon that the human body consisted of 100,000 parts, of which 17,000 were vessels, each one of which was composed of 7,000 tubes, giving passage to 10 species of gases, which by their combustion generated disease or health. They placed the origin of the pulse in a reservoir located in the middle of the abdomen, from which 72,000 canals distributed various energies and vital influences to all parts of the body.

From such ignorant sources has much false philosophy originated and been promoted, until to the present day there is no subject of which people in general are so ignorant as that which pertains to what may be termed the true science of the healing art. The history of the development of medicine does not differ from the history of the development of any other science. It has been simply a natural evolution, the result of acquired knowledge, and it is only by acquired knowledge and hard study that it has been possible to eliminate what would seem to be inherent ignorance.

Every demonstrated scientific fact has its pseudoprototype. This pseudoprototype has been the principal factor in almost all systems of psychic healing. I emphasize "almost," for psychic healing has its legitimate place in honest therapeutics and is indicated in many conditions; but the use of this form of healing should be restricted to those, and those only, who have a proper knowledge of disease.

There are so many different names given to various forms of psychic healing that it would be almost impossible even to enumerate them. But no matter what the name may be, no matter what the system may be, it all depends upon one principle, and that principle is what is known to-day as suggestion, suggestive therapeutics, or hypnotism. I do not know of any of these systems which, after having received careful scientific investigation, is not found to depend on suggestion or hypnotism, but largely upon suggestion, for there is a marked difference between suggestion and hypnotism; a difference not only of degree, but of kind.

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* An address delivered at St. Luke's Hospital, Bethlehem, Pa., on Memorial Day, October 18, 1903.

Hypnotism, as it is generally understood by the profession, and we believe the understanding to be a correct one, is very much more than suggestion. It is an abnormal excitation of hysterical disturbances of consciousness, and even what we may call epileptiform conditions of forgetfulness, and in some cases double consciousness. The hypnotized individual receives impressions while in a state of sleep—hypnotic trance. It is an abnormal condition, and therefore a very dangerous condition, and should be used only by those who are especially qualified by long training. Suggestion is a milder form, and, as I have said, enters largely into the healing art. Not only is it daily employed by every conscientious and skilled physician in a legitimate way, but it is the sole basis of the success of the Dowieites, Eddyites, etc. It has its limitations, however. There are limits even to normal suggestibility, and it is altogether possible that even waking suggestion may have its perils in special cases. Nevertheless, it is a subject that deserves to be more studied by the medical profession, for when suggestion can be used honestly, it will often be found a valuable aid in the treatment of certain conditions. But who are the ones to determine what class of cases suggestion, hypnotism, etc., should be used in? The medical profession *only:* those who understand diseased conditions. Suggestion not only plays a very important part in healing, but it is a most potent factor in the dissemination of what may be termed the condition of unhealthy-mindedness—a perverted mental state from which many people suffer; a condition that is to some even a joy. There is a class of people who really enjoy being pessimistic. Their principal topic of conversation is generally along morbid lines. They love to discuss distress, sin, sickness, and death. They discuss not only their own troubles in a very extravagant way, but also those of their friends. An accident, illness, failure, scandal, is to them a relish, and they are not content until they have discussed to the limit all the details of any unpleasant incident which has been brought to their notice. Such people have a very depressing influence upon all those with whom they come in contact.

Pathological suggestion is not only promulgated in this way, but through the daily press. Our great religious dailies, which contain elaborate editorials supposedly written for the betterment of mankind, often contain vulgar and obnoxious advertisements in the form of seductive, insidious articles which cast a feeling of horror and gloom over all who read them. Many people have consulted me, stating that they were suffering from this or that horrible disease. They were sure of it, for their symptoms corresponded exactly with the descriptions of cases they had read in the newspapers. It is a shame, a sin, a crime, that the great, powerful press should be so subsidized by commercialism that it will permit many of the advertisements that daily confront us. Some ministers of the gospel are too prone to give their endorsement to quack nostrums whose ingredients and effect they know positively nothing about; and I hope the day will come (but I fear it will not in our time), when our daily papers will exclude descriptions of diseases and the quack medicines recommended for their cure.

I should like to ask what moral right any one has to assume the responsibility of treating a disease or a condition of the nature and character of which he is totally ignorant? The healing art depends upon the knowledge of, first, physiology, which means the study of natural conditions as pertaining to the physical body; second, pathology, which teaches us about diseased conditions. Without a knowledge of these two sciences, no one has a moral right even to attempt to treat people that are really sick, or even those that are supposedly sick.

Do you suppose for one moment that any rational person would trust himself at sea in the hands of one whose only claim to such trust was that of self-appointed divinity? When we cross the ocean, our feeling of security is based upon the belief that we are on a staunch ship controlled by a captain who understands the laws of navigation. Should we be content to stand by, watching our property burning and have some one try to subdue the flames by what he called his divine or magic power? Yet that would be as sensible as thousands of cases we hear of to-day, where people stand by and see their friends, their dear ones, treated by self-appointed apostles of God, people who claim magic, people who claim divine power.

No honest physician could pretend to special magic or divine power, which is the essential element of the success of charlatans of the pseudo-religious and mind cure variety. Not only do these false, magnetic divine healers sacrifice innumerable useful lives, but they promulgate the seeds of ignorance and superstition. They are no better to-day than the witches of old. I deny that any one to-day possesses a divine power, a magnetic power over any one else. There is no such thing as divine power in human hands. There is no such thing as animal magnetism. Magnetism is a form of electricity, and it is utterly impossible for one human being to impart any form of electricity generated in his own body, to that of another.

As I have said before, suggestion is the foundation of all these schemes. You may say that the results are at times satisfactory, but that is not the question. The point that I maintain is that those who do not understand disease have no right to treat it. Often an individual, suffering from a very serious condition, is lulled into a fool's paradise by the plausible incantations of some charlatan, and, for the time being, made to forget his true condition. But herein lies the danger. Such cases often by rational treatment could be benefited, but under the influence of quack suggestion, the disease goes on until it is too late to be amenable to scientific treatment.

There are many apparent cures which to the uneducated seem miraculous; but to the student of pathology there is no cure, however wrought, but can be explained satisfactorily on natural physical grounds. The most virulent and malignant forms of disease have been known to recover without treatment whatever. Cancer has been known to disappear, those blind from cataract have been known to regain their sight, the paralytic has been restored, the leper has been known to recover, without treatment of any character, and the cause is perfectly plain to those who understand the nature and character of disease.

All pathologists know that the natural tendency of all acute diseases is to recovery, and in fact the great principle of *vis medicatrix naturæ* enters into every pathological condition. Nature is constantly asserting itself, and no matter what diseased process is going on, there is an effort on the part of Nature to eliminate disease.

I am fully aware of the great benefits of healthy suggestion, of the great benefits of an optimistic mind. Every conscientious, honest physician practises healthy and helpful suggestion. It is the duty of physician, nurse, and friend to carry comfort, cheerfulness, hope, to those suffering from either mental or physical ills. But let it be done with an honest purpose. Let our healthful suggestions be based upon common sense, let them come from an honest and earnest desire to give help, and not resemble the methods of a charlatan who first throws his victim into an abyss of despair by depicting to him his horrible condition in extravagant language, and then, by assuming the opposite tack, carries him into a paradise by tales of his wonderful power to produce a cure of his terrible malady.

It is a sad fact, but nevertheless true, that many of these mental healing schemes are based on some form of religious doctrine.

How shall we define the word "religion"? Let us say that religion means the feelings, the acts, and the experiences of individual men in their solitude, so far as they apprehend themselves to stand in relation to whatever they may consider the divine. Therefore, out of the many forms of religious theories have grown as many forms of psychic healing. The poor heathen of Siam must look to an elephant for divine power, and above all, that elephant must be white, in order to be sacred. Other deluded nations look upon hand-made gods, alligators, certain birds, etc., for comfort; not only for the salvation of their souls, but to benefit their physical conditions.

A state of things exists in India which is a disgrace to the intelligent, civilized world. I cannot help but refer to a description in John L. Stoddard's *Lectures*, of a city in India, Benares, on the river Ganges. The principal feature of Benares is the river Ganges, which surpasses all others in sanctity. It is not the town that makes the river sacred; it is the filthy, dirty, nasty river which sanctifies the town: the holy Ganges, where thousands of Hindus flock every year to wash away their sins and to be cured of their bodily ailments.

To think of this river with sewers discharging their contents into the midst of all the bathers! Bushels of flowers which have served as offerings in the temples, are cast into the river here, and float in fœtid masses on its sluggish surface. Moreover, among these rotting and offensive weeds, are the remains of human bodies which have been partially cremated on its banks. Add to this fact that all day long thousands here cleanse their bodies and their clothing, and one can but faintly comprehend the condition of the water. Yet every bather takes up in his hands some of this filthy, mucilaginous fluid and drinks it, for the purpose of curing his physical maladies and washing away his sins. Even worse than this, beasts of burden carry away into the country gallons of this river water, which finds ready purchasers. The English government has done much to control this, and has established good filtered water for the people of Benares; but, owing to their religious fanaticism, they prefer the water of the holy Ganges, and come long distances to fill their jars to take it home, that they may use it as a panacea for their physical ills.

What wonder, then, that there is always cholera at Benares, and that this valley of the holy Ganges is a perfect laboratory of infection: a constant source of danger to the western world! In almost every instance where cholera has ravaged Europe, its origin has been distinctly traced back to a starting point in India, where it first appeared among the religious fanatics of the Ganges.

This form of psychic healing is only one of the many that infest the known world. The seeds of pestilence, ignorance, and disease originate and are carried to unprotected humanity by people whose logic is defective on account of religious fanaticism.

These things occurring in the Far East do not produce such a profound impression upon us. We look upon these poor deluded individuals as heathens, knowing that they have been clothed in ignorance for thousands of years; and we think but little of it. But the same dangerous condition exists in our own so-called civilized land today. Not a day passes but that we are confronted with some new form of psychic healing carried on by people who are totally ignorant, or, if not ignorant, too bigoted to appreciate and accept the laws of Nature; who carry on their nefarious health schemes under the cloak of some religious doctrine.

It was not many years ago in the city of Denver that a man by the name of Schlatter claimed divine power and the ability to heal. Thousands of people from all over the country flocked to this man, and all he was expected to do was to bless their handkerchiefs. Apparently intelligent people went away with these blessed handkerchiefs, in the belief that they would be cured of their ills. But the cure was only temporary, and most of the people in a short time realized the delusion.

We have these various psychotherapeutic institutions all over our country. They stand not only in the way of true scientific medicine, but in the way of the development of intellectuality. I want to call your attention to mind healing by telepathy, a system which claims to be able to cure afar off by what is known as telepathy and thought transference, i. e., absent treatment.

"The principles involved in absent treatment," according to Professor Weltmer, whose institution is in Nevada, Missouri, "depend upon a *thought atmosphere*, which, like the invisible ether, permeates all things in all space. The movement of this atmosphere is called vibration. The primary movement is divine, is the movement of the Infinite. The Infinite movement never changes. The finite movement, which is another movement given to the same atmosphere by man's thoughts, *is* changing. When a man thinks in perfect harmony with the Infinite thought, on any one of these planes, he vibrates in unison with the Infinite mind, and in doing so lives in compliance with law. But if the vibrations produced by the thought of man do not harmonize in the plane in which it belongs, it produces discord, which in the physical organism produces the various degrees of sickness, disease, and finally death."

Now, think of a system of healing based upon the above principles! And yet there are people foolish and ignorant enough to permit, not only themselves, but those over whom they have influence and for whom they are responsible, to be placed under the care of the exponents of such doctrine. I should like to quote one of Professor Weltmer's cases. It is Case V, page 190, in his book on *Telepathy and Thought Transference:*

> Early in our experience in this city, a business man of immense fortune living in the city, became intensely interested in our method of healing. Both he and his wife took the course of lectures, and came to believe wholly in our system. Having business interests in another city, this gentleman went thither, taking with him his wife and two children. They left three children at home.
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> Scarlet fever broke out in Nevada, and those three children were each taken with the fever at about the same time. The house was quarantined. The parents being notified of the facts, wrote me to take immediate charge of the case by absent treatment, as I could not pass the quarantine. They wrote the grandmother to call in a physician, and have him prescribe for the children, to comply with health regulations, but to destroy the medicine as soon as the doctor left; that Professor Weltmer would take charge of the cases by absent treatment; that she should state this to the children, and have them lie quiet at the fixed hour for treatment, and be certain that Professor Weltmer could cure them.
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> As a result, no fever ran over twenty-four hours, and in three days all were well. The healer could say, "I have believed, and therefore have I spoken." The patient could say, "Of the person who healed me, I know not; of the power, I am totally ignorant. But this I do know: whereas I was sick, now I am well." Divinity answers prayers under this condition, because some soul on earth has recognized that the Creator alone can restore a depletion within His own creation; and of such is the disordered body. The answer

to prayer under such conditions, is natural compliance with law. The suggestion of passivity for a definite period of relaxation, is thought transference. Absent treatment more clearly demonstrates thought transference and telepathy in the same individual than anything else.

I should like to ask all honest, intelligent fair-minded people to analyze what I have just quoted. In the first place, it shows deception. A physician was called in and asked to prescribe. He left with the feeling that these children were under his care. Suppose (and we have a right to suppose) that these cases of scarlet fever had become malignant. These children not under proper medical observation, would have suffered the ravages of this disease, and the physician would have been blamed. Any one who knows anything at all about scarlet fever knows that it is an acute, infectious disease, with a tendency to speedy recovery. In an uncomplicated case, such as these were, a recovery without any special medication would naturally be expected. But here is a man who, under the guise of a divine power, so far prostitutes himself as to take the responsibility of treating something of the nature of which he is totally ignorant, and who has the audacity to report it as a case cured through the influence of divine power.

Perhaps the most prevalent psychic cure scheme which confronts us to-day is that known as Christian Science.

I will not attempt to discuss Christian Science from the theological point of view, for I am not a theologian. Neither can I discuss Christian Science to any extent from the metaphysical point of view. I can only say that it seems to me inconsistent from either of these points of view.

In the first place, Christian Science bases its divine healing power upon the words of Christ to His disciples, " Go, ye, preach the gospel, and heal the sick." The word " heal " does not necessarily mean to go and take a case and treat it. Christ's words, it must be remembered, were spoken to definite disciples, and those were the days of miracles. But to " heal " may mean to go and give comfort, and to care for those who are ill. Also it must be understood that at the time Christ spoke those words, the science of medicine had not developed. People at that time were as ignorant of pathology as they were of the existence of this hemisphere. To interpret literally in these days words spoken to definite disciples at a time when the supernatural idea predominated (a supernatural power given direct by Christ Himself, and ending with His crucifixion), is presumptuous and sacrilegious. For any one indiscriminately to lay claim to a power which does not exist to-day, and to assume a miraculous ability by the mere laying on of hands and praying over a person suffering and in need of a physician, is blasphemy. We have nothing in the Bible to make us believe that Christ ever intended that a system of healing would grow out of those words, especially a system of healing conducted by a class of people who are not only absolutely ignorant of disease, but who also deny its existence. Mrs. Eddy, the great exponent of Christian Science, emphatically states that there is no such thing as matter. " All is mind." She makes this dogmatic statement based upon no reason whatever.

Such doctrine passes the comprehension of any one possessed of common sense. Christian Scientists not only deny the existence of matter, but they deny the most simple physical laws; the laws of gravity are set aside, and, in fact, any physical law to them is nothing. They even deny and refuse to accept the natural healing properties that God has given them through sunlight, pure water, pure atmosphere. They argue that it is not necessary for the poor consumptive to leave a climate that is helping to promote his killing disease. Change of climate to a devout Christian Scientist is a material absurdity. They speak of matter as metaphysical. Surely the physical must first exist before the metaphysical can be thought of.

Christian Science is simply treating disease by suggestion. I have investigated a large number of these so-called cures, and they can all be explained from an ordinary mental and physical source. I have also seen many cases under the care of Christian Scientists that promptly recovered when placed under rational common sense treatment.

I wish to report one case. A man, suffering from softening of the brain, was dying. He had a convulsion. A Christian Science healer (and he was the most prominent in that community) comforted the poor deluded wife by saying that the convulsion was simply error leaving the body, and that on the morrow, at the rising of the sun, error would be gone and her husband restored to health. But before the morning came the man was dead, and the comfort given to the poor deluded widow was that her husband was not dead; he had simply " passed on."

I have often heard of the wonderful cures of Christian Science, but I have yet to see one scientifically demonstrated. Christian Scientists will not give their divine aid or influence unless they have a monopoly of the case. No matter how much one may be suffering, they will not attempt to exert, or even permit to be exerted, their influence, where a physician is in attendance, which seems to me the most un-Christian procedure imaginable. Is there a true Christian on top of earth, who, if he could impart comfort to a suffering human being, would not do so under any circumstances? Yet the Christian Scientist, claiming to possess a divine and omnipotent healing power, will not give his aid unless he has a monopoly. And herein is one of the chief arguments to show that their method is only another form of suggestion. Would any honest, conscientious physician refuse his patient the benefit that the prayers of his clergyman might offer? Is it not always the physician's duty to send for the priest or clergyman in the time of distress, so that the patient may receive the spiritual comfort his soul desires? But not so with the Christian Scientist. His hide-bound, dogmatic bigotry says, " No. We cannot treat this case if it is under the care of material influence."

I have been told (I do not know that it is true; if the statement I make is not true, I apologize to Mrs. Eddy and her devotees) that Mrs. Eddy has cured cancer while the surgeons were preparing the patient for operation. There is only one thing I can say in regard to that statement; and modesty prevents my saying that. I have been informed that Mrs. Eddy herself has been under the care of a dentist. If matter does not exist, why should she need a dentist? I have also been informed that while under the care of a dentist, it became necessary for the dentist to resort to an anæsthetic. Mrs. Eddy's argument for taking the anæsthetic was that the dentist believed that what he was doing would produce pain; consequently their minds were not *en rapport*. I want no better argument to show that suggestion is the principal factor in this healing scheme. If this statement is true, I will tell you why Mrs. Eddy had to resort to an anæsthetic. It was simply due to the fact that her autosuggestion was not sufficient to overcome the irritation of her material nerves.

Recently, a lady consulted me who had been under the care of a Christian Scientist for some time. She said the healer gave up her case, saying, " You had better consult another practitioner; " simply going to show that her mental influence was not sufficient to impress the patient with the belief of cure. I have seen too many apparent cures wrought by Christian Scientists who did not even possess the first principle of Christianity; but they did possess the power of enforcing suggestions.

As I have said before, suggestion has its place, and suggestion has its limitations. But the one great principle that I wish to impress is, that no one has a moral right to undertake the treatment of conditions whose nature he is not familiar with. When these various healing schemes are criticized, the cry goes up that we are interfering with religious liberty; that we are interfering with the free expression of thought; that doctors are jealous. Yes, I admit that we are jealous. We are jealous for the truth. We do not like to see the truth prostituted by charlatans and ignoramuses. We have a right to interfere with so-called religious liberty. It is a physician's duty to promote health and protect the community from anything that may engender disease. I would ask, in the name of all that is holy, what influence Christian Science, or any other psychic factor could have over ridding the country of pestilence, such as has existed, for instance, in Havana, where health was restored by instituting hygienic procedures. All common sense people have recognized the necessity of living proper and clean lives; yet, if a system goes on and is allowed to flourish that teaches there is no such thing as disease, you can imagine the disastrous results.

There is such a thing as common sense. There are laws based upon common sense. Mormonism is based upon a religious principle that is not allowed to exist in this country. The anarchist is not allowed to promulgate his ideas and carry out his desires in this country. That which interferes with the health of the community should be stamped out; for good health is the foundation on which every community must stand. The happiest, healthiest people that I know of, are those that bother themselves least with health subjects. If they are unfortunate enough to be ill, they have sense enough to recognize it, and consult a physician. They are wise enough to abide by his counsel.

And herein is where the truth lies. Accept situations in a philosophical manner. Worry as little as possible, and trust in the divine power that the great Creator has given to mankind in the way of *common sense*.

71 CENTRAL PARK, WEST.

Case Against Philadelphia Hospital Keepers Dropped.—Not long ago two keepers employed in the Philadelphia Hospital were charged with brutality toward an insane patient. It appeared that rather competent testimony was given by one of the resident physicians, who exerted most laudable efforts toward assisting in the administration of justice. It is now stated, that in as far as the only evidence procurable was that of witnesses who themselves were insane, that such action would hardly hold in law, and for that reason the case was dropped.

Original Communications

THE RELATION OF EARLY DIAGNOSIS AND TREATMENT TO THE PREVENTION OF TUBERCULOSIS.*

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Aside from the measures for strengthening the individual's resisting power and those for the destruction of sputum, there is none which should assume a more important place in our fight against tuberculosis, than that of early diagnosis.

If early diagnoses were made, the care of the sputum would gradually become less and less a factor (providing there were adequate facilities for treating cases when discovered, and means for supporting the families in case they were dependent upon the ones afflicted); for, with proper care, from 75 to 95 per cent. of early cases should be cured. An early case of tuberculosis is not a source of great danger; but in the later stages, when expectoration is profuse and bacilli are thrown out by the millions, unless painstaking care is exercised there is some danger. When we remember that every case of this disease arises from a previous one; and that, on an average, each case infects about one new one, then we can see what importance must be attached to early diagnosis which will place those afflicted under treatment at that time when three fourths of them should get well.

In order to detect tuberculosis, it is not necessary to wait until bacilli appear in the sputum. If these cases should present themselves to a physician who is thoroughly conversant with the disease and who is a master diagnostician, he should be able to determine the presence of the disease in the vast majority of the cases before bacilli appear in the sputum, by the clinical history and physical examination, [1], [2]. If not by these, the tuberculin test can be used with confidence and safety.

Too much stress must not be laid upon physical signs unless the examiner is very expert in making physical examinations; and, even then, the changes detected will be very slight.[3]. Most careful attention, however, must be given to the clinical history. In many a case of incipient pulmonary tuberculosis the patient has come to the physician's office complaining of "being run down," and has been turned away with a few pills and assurances that nothing was the matter. It cannot be impressed upon us too strongly that these early changes are slight and that they produce only very slight symptoms.

The reason that early diagnosis bears such an important relation to the prevention of tuberculosis is because the character of the disease completely changes as it progresses. At first, while it is a pure tuberculosis, it consists, locally, of nothing more than a few tubercles, made up of tubercle bacilli, leucocytes, and proliferated fixed cells, with a very slight irritation of the portion of the lung adjacent, and constitutionally, of a slight general disturbance caused by the presence of these new growths, as well as by the action of the toxic products of the germs upon the organism.

Later, the whole picture changes. The number of tubercles multiplies. They increase in size. New tissue is invaded. That which at first was a slight irritation, becomes a congestion with exudation; and, a pneumonic process supervenes. Later still, retrograde process begins. The tubercles soften, break down and form cavities; at first, small; later, quite large, consuming the lung. Other germs enter and cause a mixed infection which makes the picture more complex and the prognosis more grave. Accompanying these gross local pathological changes, there are fever, chills, night sweats, loss of appetite, emaciation, prostration more or less severe, and a great depression of all the vital forces. The picture now is not tuberculosis, it is consumption. Tuberculosis is curable; but, in regard to consumption, no one has yet been empowered with the ability to generate new cells. It is true that a certain proportion of cases of consumption (I here use the word in its true meaning, referring only to those cases with advanced retrograde processes in the lung) can be arrested, the patient regaining a measure of health and continuing to live; but absolutely to cure consumption would necessitate the regeneration of new lung cells and the restoration of the organs and vital forces which have suffered during the destructive process. This has never been done and never will be. Instead of spending time and money trying to find cures for consumption, it would be far more practical and far better from both a humane and an economic standpoint to perfect methods of early diagnosis and to educate the laity to seek aid at the first signs of trouble. Until this is done, however, we must continue our work of relief to all who are afflicted.

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* Read before the Orange County Medical Society, Fullerton, Cal., June 9, 1903.

[1] Brandenburg: *Berlin. klin. Wochenschrift,* 1900, No. 16.

[2] Pottenger: The Diagnosis of Incipient Pulmonary Tuberculosis Based Upon the Pathology of the Disease. *Jour. of Tuberculosis,* 1902, July.

[3] Trudeau: *Med. News,* January 29, 1901, p. 1013.

There are three purposes to be kept in mind in the treatment of communicable diseases:

1. The cure of the patient, if possible.
2. The relief of suffering, whether the case is curable or not.
3. The prevention of the communication of the disease to others.

As regards the disease in question, it has only been a few years that medical men have attempted to cure it. And even to-day a large percentage of them is found who believe it to be incurable. This is due to inadequate knowledge. We have long been in the habit of using the words tuberculosis and consumption as though they were interchangeable, which is not the case. There are two distinct processes, and we must distinguish between them. In the beginning, when the bacillus and tubercles are the main factors, it is tuberculosis; later, when degenerative processes are present and wasting of tissue is taking place, it is consumption. The former is curable in a very large percentage of cases, the latter, fatal in a percentage just as large.

There is one truth, however, which will apply and should be applied to both tuberculosis and consumption, and that is that they are both conditions which should be treated. It is true that in some cases health will be restored without treatment. The same can be said of any disease. In some cases of diphtheria the patients will get well without medical assistance, but that does not justify a "let alone" policy. More will get well with it than without it. Suffering will be lessened and the danger of spreading the disease will be minimized.

Tuberculous patients are, as a rule, apt to be indiscreet. During a portion of the time, they feel well and, during this period, are apt to over-do and prejudice their recovery. Then, too, few patients are burdened with so much useless and meddlesome advice as these. As a result, everything is tried, whether rational or irrational, and the early days, when a possibility of cure is present, are frittered away in the vain expectation that patent medicines and neighborly advice will cure the disease. As a rule, the patients reach the physician when suffering from that complex series of symptoms which make up the picture of consumption. The great majority of our patients have been suffering for from one to three years before they come to us; and, although their stomachs are worn out and their constitutions ruined by indiscretions, yet they hope that medical skill will soon cure them of their supposed "throat trouble." Such a condition could not exist if we treated our patients from the outset. We should guide our patients. We must do it, and, we must begin when the disease begins.

The manner in which the medical profession has dealt, and is still dealing, with its tuberculous patients is, to say the least, a great mistake. We are not dealing with them fairly. We are not treating them as we should wish to be treated if we were in their places. If they come to us in the beginning, we are apt to tell them that they have a "tendency to lung trouble," or that their "bronchial tubes" are affected, or that there is a "weak spot" in their lung. To tell a patient such a thing instead of the truth, at the present state of our knowledge of tuberculosis, is little short of criminal. Biggs is quoted as saying, in a recent address, "Thousands, tens of thousands, of people die, because their physicians have not the moral courage to say to them, 'this is tuberculosis!'" And in the same address: "Tuberculosis is an absolutely preventable disease. It is not only preventable but curable. It is simply a question of how soon a diagnosis is made. If it can be made at the beginning, eighty per cent., at least, of the cases are curable, if placed in a pure atmosphere."

An early diagnosis alone is not sufficient, but a rational plan of treatment must be begun at once. If begun at once, we shall cure our patients; if begun later we shall not attain this end so often; but, in both cases, we shall relieve suffering and train our patients so that they will not become a source of danger to others.

That is to be considered the proper treatment of either tuberculosis or consumption which corrects all those things that tend to lower the resistance of the individual and relieves the symptoms of the disease by medicinal, mechanical, or specific measures. No matter what remedy is used, it should be reinforced by every means which can be utilized for the advantage of the patient.

Of all methods of treatment, none is so popular as the hygienic, and none is worthy of consideration unless this is at its foundation. It consists of so guiding the patient's life that all the forces of Nature shall contribute toward the upbuilding of his strength and the throwing off of the disease. It includes a life in the open air, a proper regulation of rest and exercise to suit the individual needs, food of a nourishing nature suited to the patient's powers of digestion and systemic demands, and baths with tonic, as well as cleansing, properties.

When Nature's forces are properly turned to the advantage of the patient there is not much need of medicines. Yet, now and then, we shall find cases, especially in the later stages, when a few well chosen drugs will benefit very much. At the present time there seems to be a revulsion against that indiscriminate use of drugs which was formerly so common; yet, the use of drugs in the form of general tonics, stomachics, intestinal antiseptics, nebulæ and sprays, will doubtless always occupy a place in the treatment of tuberculosis, while those for the relief of cough, pain, and the extreme weakness of the latter stages will continue to be a God-send to the afflicted.

As specifics I would mention those preparations made from the bacillus and its cultures, and also those from the sera of animals rendered immune by inoculation of specific toxines. That these are specifics seems to be proved by their selective action upon tuberculous tissue. The use of tuberculin as a diagnostic agent is proof of its specificity. The observations, which are gradually accumulating, where tubercles have disappeared and tuberculous nodules and ulcerations have healed under the use of these remedies, claim for them, at least, the respectful attention of the medical fraternity. That these products have proved disappointing to many observers, is due partly to fear and prejudice, partly to the want of a definite plan by which their action can be observed, and partly to the fact that those who have used them have not understood their nature or what was to be expected from them. It must be understood that their specific action is on tuberculosis, and not on consumption.

Whatever plan of treatment is to be carried out, military regimen is necessary for the best success. The patients must be under the absolute control of the physician. He must guide every act of their lives, and make them feel that getting well is their chief business.

Such a course of treatment can best be followed out in a sanatorium; but, all cannot go to sanatoria, and there are not accommodations for all, even if they could. While it is scarcely possible to have the same control over patients outside of an institution that can be had in one; these measures, nevertheless, can be carried out with slight modifications, and the patients can be cured, whether they are able to go to sanatoria or not.

That a well conducted sanatorium offers the best chance for recovery from tuberculosis cannot be denied. Much depends, however, on the medical director of these institutions. He must be a man of strong personality, cheerful, and able to impart courage to his patients; interested, and able to make them know it.

The first advantage of sanatorium treatment accrues to the patient. He is taken away from business cares and home surroundings, which are apt to make demands upon his strength, and placed in a position where his sole business is that of getting well. He receives better care, because everything is arranged to meet the needs of such patients. The institutions are constructed with special reference to the disease to be treated. The rooms are large, sunny, and well ventilated. The diet is well selected to suit the demands of nutrition, which is so important a factor in the treatment of tuberculosis. The sputum is destroyed and cleanliness maintained, so that there is little danger of the patients reinfecting themselves or each other.

The second advantage of institutional treatment accrues to the friends of the ones afflicted. Statistics show that each case, on an average, infects about one other. They also show that the danger of infection varies with the carefulness of the patient. The necessity, therefore, of institutional treatment for the poor, is self evident; for they, with their bad surroundings and meagre facilities for caring for the sick, are sure to scatter infection.

The third advantage of institutional treatment lies in its educational nature. Patients who are treated in these institutions for a period of several months, learn habits of care. They profit by the mistakes of others and avoid many things which would injure them. They also learn to be careful of others. They understand the necessity of destroying the sputum and know how to do it. Thus every conscientious inmate of an institution goes forth from it as a missionary, bearing with him a practical knowledge of tuberculosis and of the manner of preventing its spread. This, he teaches to his friends, and in this way these institutions are able to reach a wide circle of people in an indirect manner.

That treatment bears an important relation to the prevention of tuberculosis is proved by the reports of those who are attempting to cure the disease. Statistics at hand from various sources, including those of our American sanatoria, show that of 5,415 cases treated, 1,719 apparent cures were effected. This means that proper treatment has cured 31.7 per cent. of what was considered only a short time ago an incurable disease. Every case cured lessens the danger of infection; and everyone cured before the open stage has been reached is prevented from ever becoming a source of infection. If nearly one third of the cases can be cured when the statistics include those in the advanced stage of the disease, this percentage could certainly be very materially increased if we could diagnosticate our cases earlier; and I do not hesitate to say that any rational treatment would double it, if the cases were treated in the incipient stage. So, in the light of what has been done by those who are endeavoring to cure tuberculosis, the outlook is most promising. With early diagnosis and immediate treatment results can be attained as good as those in typhoid fever and pneumonia; so this disease is no longer to be looked upon as hopeless, but as one that will yield readily to proper treatment.

A SIMPLE AND INEXPENSIVE APPARATUS FOR LIFTING AND MOVING HELPLESS PATIENTS.

By FREDERICK H. SAWERS. M. B.,

ROCHESTER, N. Y.

Mr. H., aged seventy-seven years, had a recurrence of a cerebral hæmorrhage—his first attack dating back ten years and occurring in the right motor tract. In a few hours he became semicomatose, with almost complete bilateral paralysis. His weight of 206 pounds made it very desirable that some means of a mechanical nature be obtained to lift and move him, now little more than a flexible inert mass. He lived one month.

The following simple and inexpensive apparatus I constructed by attaching a six foot track to the ceiling and using an eight wheel carrier, such as is used for overhead carrying track systems; a tackle and wood frame, 27 by 45 inches, as a spreader, fixing the centre bolt with two nuts; a canvas seat, 16 by 20 inches, with opening (5 inches in diameter) and straps of stout webbing, two inches wide and 60 inches long for the upper straps, and 52 inches for the lower ones. I think three inch webbing would be preferable, but I was unable to procure it at the time; also an adjusting buckle might be added if desired (**Figs. 1, 2, and 3**).

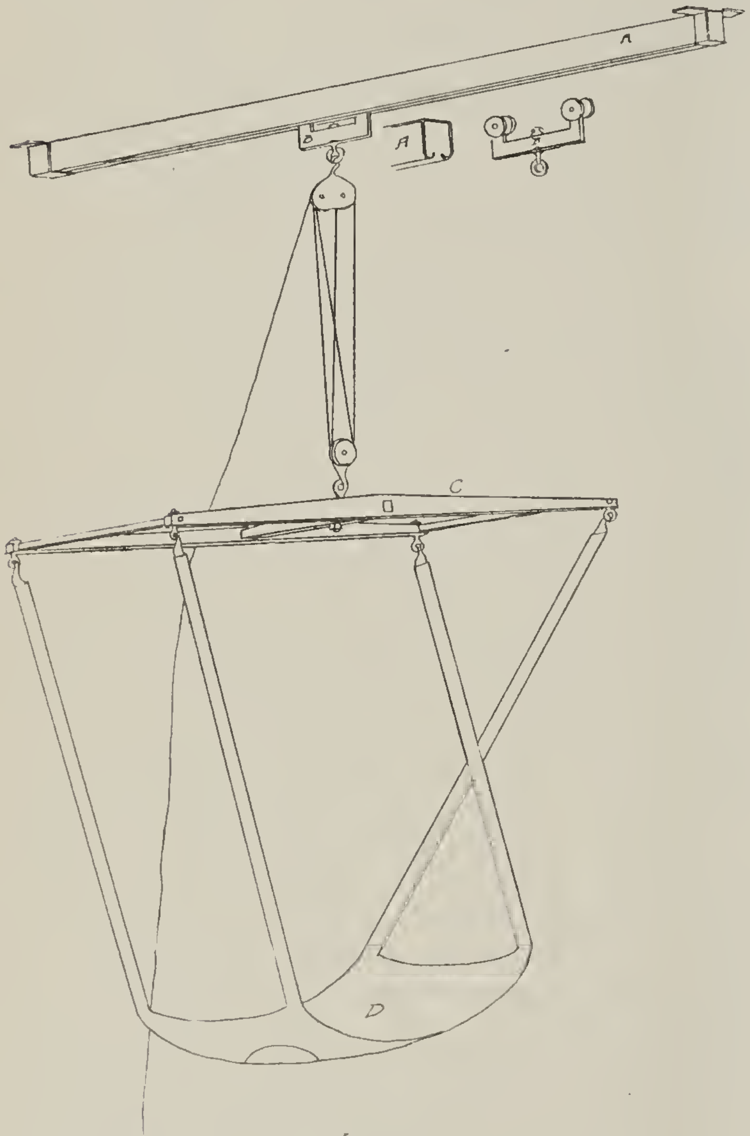

Fig 1.

To use the harness, turn the patient on his side, adjust the canvas seat, putting the centre of the opening in line with the trochanters; the straps of webbing placed crosswise up the back and underneath the thighs. Roll the patient back, fix the snaps in the bolt-eyes of the spreader, and he is ready for lifting; after which he can be turned on the swivel and moved on the track away from the bed, so that it can be re-made; or for a restful change of position; or he may be lowered into a stool-chair, or a change of clothing effected.

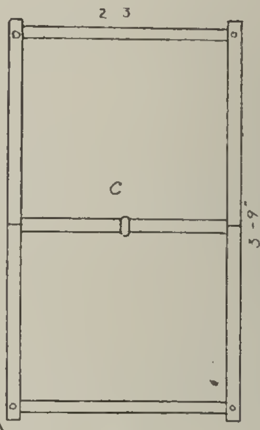

Fig. 2

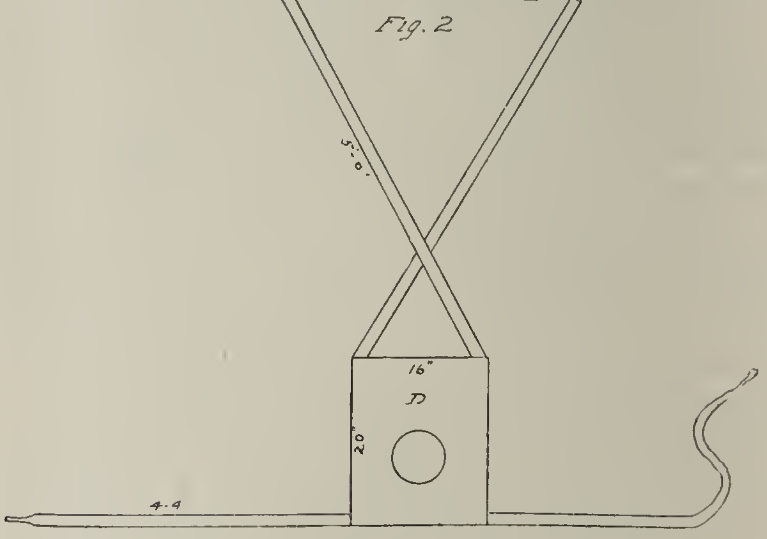

Fig 3

It will also be apparent that it is practicable to detach the tackle with a pole-hook, and place it in a fixed eye-bolt in another room or on a verandah; or to bring the patient out in a wheel-chair and change him to a more comfortable one, a sofa, a hammock, or to put him in a carriage without any discomfort to him, or effort on the part of the attendants. This apparatus costs $12.69, but if one wishes to make a perfectly feasible appliance, the materials can be obtained for about $2.00. Constructing the track of two pieces of thick board, separated so as to allow an eyebolt attached to an iron plate, with four small plate

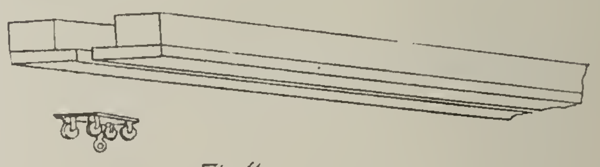

Fig 4.

castors to act as carrier (Fig. 4). The harness can be made out of ticking (doubled), with eyelets in the straps to be attached to hooks in the spreader, the tackle being obtainable at any village or farm.

The wife of my patient having had a severe hip injury some months ago, asked why something of this kind would not have been a great comfort to her. Unquestionably it would have been. As a fracture frame, I would suggest the construction of one from inch gas-pipe, 24 by 66 inches in size, with detachable side and eye-bolts in the elbows for straps from the spreader; the canvas seat and supporting straps being movable (Fig. 5).

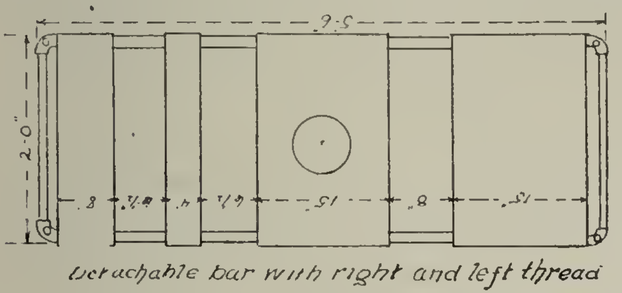

Fig 5.

I am indebted to Mr. William C. Walker for his kindness in making the drawings, which so clearly elucidate this sketch.

CONCERNING THE ACCURACY OF PERCENTAGE MODIFICATION OF MILK FOR INFANTS.*

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(Concluded from page 62.)

In the second series, the home modifications made from market milks and creams, the results are extremely erratic. The proteids vary from the prescribed formulæ as much as 0.8 per cent. downward, and 0.4 per cent. upward; while it is rare for the fats to come within 0.5 per cent. of the amount prescribed, and in a large proportion of instances the error is so large that the actual result scarcely shows any resemblance to the formula aimed at. The error in the fats is certainly due, in large part, to the cream used; and to some extent, to the milk. We analyzed the milks and creams used in the hospital modifications and the figures for the fat in the cream used in Nos. 20 to 33 of this series show 13.75 per cent., instead of the supposed 20 per cent.; and all these figures for fat in the modifications are too low. On the other hand, the fat of the cream used in Nos. 34 to 41 ran at 21.5 per cent. and 22.2 per cent., instead of 16 per cent.; and the fat of the milk, at 6.2 per cent. and 8.8[1] per cent., instead of 4 per cent. In all these modifications, the fat is too high. The results with the proteid are also partly due to the fact that the proteid of the milk and cream was running low; this is particularly true of the second set, in which the milk proteid was at one estimation 2.41 per cent.

The results cannot, however, be attributed entirely to variations in the milk and cream. The dates on which these modifications were made have been given, in order to demonstrate that the modifier was at fault. They show this clearly. On individual days, when exactly the same milk and cream was used in the several modifications made on that day, it may be seen that the different mixtures showed marked errors of very different kinds. On January 20th, for instance, a supposedly 4 per cent. fat-mixture contained 2.7 per cent.; while a supposedly 3 per cent. mixture at the same time contained 2.8 per cent., and another 3 per cent. mixture contained 1.8 per cent. On March 19th, a supposedly 4 per cent. and a supposedly 3 per cent. mixture contained an equal amount of fat—3.8 per cent. There are several similar examples of the same thing. On March 20th, indeed, a mixture of odd proportions (2.6.3), which was ordered purely for testing the accuracy of the modification, showed 6 per cent. fat, instead of 2 per cent. As to the proteids, on January 16th, a supposedly 1.25 per cent. mixture contained 1.75 per cent.; on January 20th, a supposedly 2 per cent. proteid showed 1.67 per cent.; on the same date, a proteid calculated at 1.25 per cent. contained 1.63 per cent., another calculated at 1.25 per cent. was found at 1.03 per cent. The proteid of the milk used in the last mentioned modifications we have repeatedly estimated and found to be regularly between 3.4 per cent. and 4 per cent.

The variations in the mixtures were undoubtedly due to the modifier, and were the result of either carelessness or confusion. Carelessness probably played a part, but we believe that a lack of clearheadedness had more to do with the reresults. The figures that we have referred to in detail are all from modifications made by nurses especially trained in the care of infants, and children. We know the nurses that did this work, and know them to be reasonably conscientious and trustworthy; and yet the results are attributable to them. They can scarcely be considered to be due to anything but lack of clear understanding and to confusion in measuring off the various constituents of the mixtures. This is a matter of importance that will be briefly referred to later.

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* From the William Pepper Laboratory of Clinical Medicine, Phœbe A. Hearst Foundation. Read at the meeting of the American Pædiatric Society, Washington, D. C., May 14, 1903.

[1] It is probable that this "milk" was, in part at least, old cream watered, with perhaps some separated milk added. This is indicated by the very high fat, the low proteid (2.4 per cent.), and the fact that a bacterial count showed enormous numbers of bacteria. It came from a supposedly reliable source, but the milk supplied the public from the same source contained on several examinations about 3.6 per cent. of proteid and 4 per cent. of fat.

As to the third series, the time at our disposal prevented our examining many specimens; and we have, therefore, little right to speak concerning the accuracy of mixtures made from top milk. Dr. Ladd's extremely convenient card, with its formulæ ready made, is, in itself, evidently entirely accurate. When the top milk contained about the amount of fat that it was supposed to contain (Nos. 44 to 50), the mixtures corresponded closely with the calculated formulæ. With the first two mixtures made from certified milk "B," however, (Nos. 42 and 43) the results for fat (1.2 per cent. and 1.6 per cent., instead of 2 per cent.) show decided error; especially the first.

These results, few as they are, show that with one milk, such as certified "A," the results by the top milk method may be excellent over a series of days; while with other milk of fine quality the result may be decidedly erratic. The results that have been obtained by different investigators of the fat content of the top milk are somewhat confusing. Several authors agree that the fat content is reasonably constant, but give somewhat different figures for the same quantity of top milk. Others have no faith in the reliability of the method. Our own small series of figures and—much more than this—the knowledge gained from dairy-chemists of wide experience lead us to believe that the use of top milk is unsatisfactory, unless the fat content of the individual top milks used is controlled to some extent by fat estimations. Milks, in their natural state, certainly differ to some extent in the rapidity and completeness with which the cream rises. It seems probable, though it has not yet been definitely proved, that in most fresh milks this is sufficiently constant to give wholly satisfactory modifications. Other milks, in their natural state, probably yield their cream more slowly or more rapidly than the standard; and probably with varying rapidity at different times. At any rate, it is well known to dairy chemists that heating milk causes the cream to rise very slowly; and it is likewise well known that some milk dealers pasteurize their milk, either covertly or openly; this is nowadays often done at temperatures that cause no change in the taste of the milk, and it is therefore often not known that it has been done. Hence, this source of error in using top milk may be met with at any time in market milk, and is an important argument against the method. On the whole, we believe that it is a method of doubtful value, as our knowledge stands at present. It has, at least, been shown that it is not always reliable; and this means that if it is to be used with any confidence, the fat of the individual top milk in use should certainly be estimated once, and better, several times, in order to see how it is running.

We agree with many others that the most accurate method is to use a cream of known fat percentage from an entirely reliable source. The objection has repeatedly been raised that creams sold as containing a certain percentage of fats have been found, on analysis, to vary widely from this percentage. This is quite true of many market creams; it is, however, not true of creams from all sources. The Philadelphia milk commission now certifies to several creams, and this means that analysis of these creams constantly shows that their fat-content runs within narrow limits. Equally reliable cream may be obtained in any of our large cities and in many smaller towns.

It is also asserted by some writers that in the process of separation the emulsion of the fat is altered, and that a milk modification made from it is less digestible than one made from a gravity cream. There is no good proof of the truth of this statement. If, however, it impresses one as being important, there is in Philadelphia a reliable (certified) gravity cream of constant 16 per cent. fat content; and such creams may be obtained elsewhere.

As to the fourth series, the laboratory modifications, the proteid variations in this series are slight, and are worthy of remark in only three instances: i. e., Nos. 77, 82, and 83. The variation of 0.36 per cent. in No. 77, in a proteid formula of 1.50 per cent., certainly falls within the limit of occasional unavoidable error. The errors of 0.46 per cent. and 0.42 per cent., with a proteid formula of 1.75 per cent., are perhaps a little beyond the range that is permissible; but they are only slightly so. That these errors may be attributed largely to unavoidable variations in the milk and cream is made probable by the constant way in which the other figures run.

The figures for the fat are a little less satisfactory; but all the figures are within the range of unavoidable error, except those for the 4.5 per cent. fats—those numbered 83 to 88. In this set, the fat regularly ran very low; except in No. 84, when it was 4.2 per cent. Some estimations that we made of the fat of the cream from the laboratory company at about the same time showed that it was running about 2 per cent. below its usual figure. This would explain the major portion of the fat error in the modifications, leaving the smaller portion still unexplained. On the whole, the results are excellent, particularly with the low formulæ, which are the more important. It is but fair to say, also, that by subsequent inquiry we learned that the regular modifier had been ill for a portion of the time during which we were making these estimations; and the results would perhaps have been even more accurate, had he not necessarily been replaced by a substitute, who, while trained in the work, was less accustomed to it.

These analyses of laboratory modifications are much more favorable than Wentworth's. The difference in our results may, perhaps, be due to the fact that the modifications examined by us were better prepared than those that Wentworth analyzed; but a more definite and satisfactory explanation may, we think, be found in the differences in the methods used. As already stated, we used various precautions in our Leffmann-Beam fat determinations, and frequently controlled them with ether-extractions. Wentworth, who used the Babcock method, which needs similar precautions, makes no statement of having adopted these precautions; and particularly, did not use control ether extractions. The proteid we determined directly by Kjeldahl nitrogen estimations. Wentworth used the method of difference, which includes in bulk all errors made in the fat, total solid, ash, and sugar determination; and the error in sugar determinations, in particular, is likely to be considerable when the polariscope is used. We cannot emphasize this last statement more strongly than by referring to Stohmann, who, in his excellent article in Muspratt's *Encyclopädie der Technischen Chemie*, states that he cannot recommend polariscopy at all for determining the sugar in milk, as the error associated with it is likely to be even great enough to cover the whole amount of sugar in the milk. This very decided view is not shared by all dairy chemists, and the error in the special polariscopic method used by Wentworth is undoubtedly much less, but even that method is known[2] to be subject to considerable error, and polariscopy is always exceedingly untrustworthy unless one has extensive and continued experience in its use. The effect of a much less marked error in polariscopy than that attributed to it by Stohmann is evident and striking, if the method of difference is used in estimating a proteid of, for example, 1 per cent. Indeed, we are not aware that the difference method is considered reliable by any authorities.

The general conclusions that we believe our work justifies are: (1) Milk modifications, under the best of conditions, will often vary 0.2 per cent., occasionally 0.3 per cent. from the prescribed formulæ, with modifications of medium strength. With low modifications, the error will be correspondingly less; and with high modifications, correspondingly somewhat greater.

(2) Home modifications are, within the limits just mentioned, trustworthy, if they are made by a clear headed and careful person, from milks and creams of a chemical composition that is known to be reliable.

(3) If the composition of the milks and creams used is not known, or if one cannot be sure that the modifier is careful and clear headed, home modifications are likely to vary greatly from the formulæ prescribed.

(4) Laboratory modifications appear from our figures to be satisfactorily accurate; and unless the milks and creams, as well as the person doing the modifying at home, can be fully trusted, laboratory modifications, when available, are much more reliable than home modifications.

Undoubtedly, the most satisfactory method of having milk modifications prepared is to have a thoroughly capable person make them at home, from milk and cream of reliable composition. In this case, the whole process can be kept under direct supervision. This means, however, that milks and creams that are constantly watched, as are the certified milks and creams in Philadelphia, must be used; and that a clear headed mother or trained nurse must do the modifying. To trust the modifying to a readily confused mother, trained nurse, or nursery governess, or to most nursemaids, would make the results very doubtful. We confess that our analyses, while not lessening our faith in the devotion of mothers and nurses, do make us somewhat doubtful of the accuracy of many of them in making milk mixtures. The analyses of their modifications demonstrate how important it is, in having home modifications made, to have all the small details and, above all, the amounts of the different ingredients, carefully written out, or filled out on printed blanks, in order to guard, as far as possible, against confusion. Nothing should be left to the modifier's judgment or memory.

The figures that we have given demonstrate, also, that it is careless practice to order a certain formula for an infant, and to take it for granted that this formula is actually being given to the child. It is, of course, difficult for those in general practice if they have not even the small facilities necessary in doing such work, to determine the fat content of the milk mixtures that are actually being given to the infants under their charge. It would, however, be very easy for many such physicians to have this done by an assistant. Those that are especially interested in pædiatric practice can hardly show proper interest in their work, unless they often do this or have it done. Simple centrifugal estimations of the fat are certainly quite sufficient for clinical purposes, as an indication of the accuracy of the mixtures; though an occasional proteid estimation, if one has facilities for it, will add to the effect. The knowledge that this is likely to be done at any time will necessarily have an excellent moral effect upon any modifier who has a tendency to carelessness; and the somewhat general use of such controls would go far toward eliminating any question as to the accuracy of percentage modifications, whether made at home or in a laboratory. At the same time, it would give one constant knowledge as to their accuracy in any individual case. The apparatus required is cheaper than that used for ordinary examinations of the blood; the method requires less time, and it gives good results. It is already occasionally used by some physicians, but is not often employed by any considerable number of them.

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[2] Richmond, *Dairy Chemistry*.

Finally, it is proper to insist again upon the fact that we have already repeatedly mentioned; *i. e.*, that there is a very great advantage, from the chemical standpoint, as well as from the hygienic, in the use of milks and creams that are under constant professional control, and are certified to by members of the profession as being reliable. Such milks are already available in a number of our cities; those interested in pure and reliable milk in some other cities are preparing to institute their use in those cities; and it may well be urged upon the members of the profession elsewhere that they should offer the same protection to their patients. These certified milks and creams have been received with a curious degree of skepticism by many physicians, but they stand the tests put upon them admirably. There are on sale in Philadelphia six certified milks, and three certified creams. We have made a large series of analyses of these products, and know that, except for occasional slight and inconsequential variations, they do not pass the narrow limits imposed upon them. They are therefore suited, chemically, for milk mixtures, as are few others in this city; and as no others are known by the profession to be. The records of the veterinarian and of the bacteriologist of the Philadelphia milk commission testify as to the care given these milks in their production and sale, and demonstrate their remarkable purity from the hygienic standpoint. The best indication of their condition as they reach the consumer is the number of bacteria that they then contain. The limit placed upon them is 10,000 bacteria to the cubic centimetre. They are not allowed to run above this limit; and are, indeed, usually much below it. Several of them regularly and consistently, at all the examinations made, have shown only a small fraction of that number. It should be remembered that most market milks show hundreds of thousands of bacteria to the cubic centimetre, and that, as delivered in large cities, most of them show millions. One of the latest additions to our knowledge concerning this matter is Wall's statement that Gehrmann recently found the average in fifty specimens of Chicago market milk to be over 2,600,000; and only three were below 100,000. Similar figures have been obtained in other large cities. Such figures demonstrate the wretched and dangerous hygienic conditions that attend the production and sale of most market milks; and, at the same time, they show that the strictest care must be used with milks that are not passed if they contain more than 10,000 bacteria to the cubic centimetre. Certified milks are not examined only once or occasionally, but at least once each month that they are sold. No one can rationally object, therefore, that these milks are not what they are intended to be; *i. e.*, of as constant a chemical composition as is possible, and—most important of all—free from dangerous contamination.

SOME INVESTIGATIONS OF A BACTERIAL TREATMENT OF TUBERCULOSIS.*

By STEPHEN J. MAHER, M. D.,

NEW HAVEN, CONN.

(*Continued from page 65.*)

One of the most efficient charitable institutions in New York city is Seton Hospital, at Spuyten Duyvil, for the care of consumptives. It has over 200 beds, which are always occupied, and usually by patients in advanced stages of the disease. It is conducted by the Sisters of Charity. It is an impressive modern building situated in a park of tall oaks, on the hill that overlooks the junction of the Harlem and Hudson Rivers.

Through the courtesy and interest of the attending physicians, Dr. Mathias Nichol, Jr., Dr. Arthur M. Shrady, and Dr. J. A. Miller, I have now for ten months been continuing at Seton Hospital my investigation of the action of the X bacillus on tuberculous disease. In that time I have injected pure cultures of the germ into sixty-three patients. Of course, the fact that this was a new and unproved treatment was explained to every patient. No constraint whatever was used in securing the patient's consent and no promises of cure were made. I said merely that it would do no other harm than to raise a painful lump in the groin and to cause a febrile reaction during the first day or two, and that many of my patients had improved after the injection. No effort was made to get cases in the first stage of the disease; in fact, such cases are seldom seen at Seton. Four fifths of the injections were given only after the urgent request of the patient himself, made because of the results he had seen follow the exhibition of X to others in his ward.

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* Read before the New Haven Medical Association, December 16, 1903.

On the occasion of my first visit to the hospital with Dr. Nichol, on February 11, 1903, I injected six patients. Naturally Dr. Nichol picked out some of the worst cases in the hospital. Of these six patients, four are dead; the fifth left the hospital in three weeks with cough gone and his temperature normal and an increase in weight of eight pounds, despite the persistence of the cavity in one of his lungs; the sixth patient, who was apparently dying at that time, has had many other administrations of X since, has gained twenty-eight pounds, and seems to be very near to the normal goal.

Of three patients injected on February 14, 1903, one has returned to work improved in every way, but he still has tubercle bacilli in his expectoration. A second grew worse for some time, but lately has been steadily improving. A third left the hospital four weeks later, without perceptible change in her condition.

Two patients were injected on February 21, 1903. One died on April 16th. The other left the hospital on May 25th with a gain of five pounds and a half, and returned to work after an illness of two years.

One new patient, injected on admission, February 28th, with five c. c. of an undiluted liquefied blood-serum culture, lost his cough entirely in two weeks; and at the time of his discharge, June 25th, had gained over twenty pounds in weight, and had no symptoms of sickness.

On May 18, 1903, I injected twelve patients. One of these died in July, another died in September, and a third in October. Two patients were discharged at the end of August, apparently entirely cured. Two left the hospital in a few weeks unimproved. One left the hospital in a few weeks greatly improved. Of the four remaining in the hospital, one continues stationary and three are improving.

I injected four patients on June 15, 1903. One died in October, two remain stationary, and one left the hospital greatly improved.

The rest of the sixty-three patients were treated in August, September, and October, and it is too soon to draw any conclusions from their condition. It is fair to report, however, that an encouragingly large number show evidences of improvement.

I should like to say a few words about the patients who have died since injection. The officers of the hospital and the records of the hospital will confirm my statement that many of the cases were *in extremis* when treated, and in no case is there reason to believe that a patient's condition has been made worse by the reaction from the injection. If the patients were *in extremis*, why were they treated? you may ask. My answer is, that in at least two cases, patients apparently *in extremis* were greatly benefited by the injection. Let me tell you at least about one of them.

CASE XIX.—A truck driver, thirty-seven years old, who was born in Ireland and lived at 344 East Nineteenth Street, with his wife and children. He had had a sharp attack of pneumonia in the summer of 1899. Ten months later he began to have night sweats and cough with occasional fever. He lost thirty-five pounds in six months. He was admitted to the hospital on December 31, 1901. He was flat at the left base and dull at the left apex. He had moist crepitant and subcrepitant râles at the left apex and feeble breathing over this region. There were absence of breath sounds and vocal fremitus at the left base. His weight increased from admission to May 5th, and during this time, he was tapped twice for serous fluid. Now he began to lose in weight. He was tapped three times more, and on the last two occasions pus was taken away. Then, on January 13, 1903, he was operated on and two quarts of rotten pus were drawn off and the cavity drained. He then weighed 141 pounds. Tubercle bacilli were in his sputa on January 3, 1903. Despite the most assiduous attention he grew worse after the operation.

On the afternoon of February 11, 1903, when I first saw him, his death was considered to be only a question of hours. He was propped up in bed in a partial sitting posture, to make his struggle for breath less agonizing. His cheeks burned with a hectic glow. He stared in excited helplessness at the group of doctors and nurses about his bed. Dr. Nichol asked me whether I would dare to inject a man in his condition. I said that the injection would not harm him. When the situation was explained to the patient, he merely nodded his head in acquiescence. It was too much of an effort to talk. The injection did not seem to have much effect on his temperature, which remained about 102° F. in the evening and 97° F. in the morning, but there was an immediate relief in the dyspnœa, a calming of the pulse, and a return of appetite. For many days before, he had retched at the sight of food of any kind, even milk. This improvement continued for ten days, when his pulse and respiration began to grow faster and his fever higher. I suggested another injection, but this time the patient balked. He said he had been cut and stabbed enough. A week later, I learned that the discharge from the tube in his side was becoming very profuse and that the permanganate and creolin solutions were utterly unable to control it. I suggested pouring some of my X culture into the pleural cavity through the tube. The patient consented. Both the patient and the attendants agreed that this procedure lessened the discharge. It was some time before I saw the patient again, and the resident physician, not having any of my mixture on hand, tried pouring enzymol into the cavity several times. His decision was that it was a failure. After that, at intervals of a few weeks, I instilled different quantities, from a drachm to several ounces, of X culture into the hole in the patient's side, and after each instillation there was marked improvement. Some of the cultures used were old and of a very foul odor, but the characteristic improvement followed—as after the use of fresh culture—with perhaps a little more reaction. The pouring of X into the open pleural cavity caused the same systemic reaction as an injection into the groin does.

His recovery has been a marvel to himself and everybody else who knows of his previous condition. He is still in the hospital, and there is still a slight discharge from his side, but it is becoming less every week. His cough has gone. His appetite and strength have returned. He is out of doors all the day, and he has gained thirty pounds since the treatment began.

I have made more than a hundred injections of X into about eighty persons, and in only one case might the question be raised whether the injection had done harm.

CASE XX.—A servant girl, twenty-two years, unmarried, was delivered of a child nine months before the injection. She had caked breasts and sore nipples, and soon developed an obstinate cough. Two months later she had a hæmorrhage from the lungs. Examination at the time showed that there was dulness on percussion at the left apex, to the third rib anteriorly, and to the spine of the scapula posteriorly, and that there also were high pitched and very prolonged expiration, increase of vocal and tactile fremitus, and many fine and medium crackling râles. For two inches below the dull area there were many fine and medium râles and pleuritic rubs. There were tubercle bacilli in her sputa. She then weighed 100½ pounds. She improved under fresh air and feeding treatment, and in four months gained fifteen pounds. Then she began to lose. When injected, she weighed 108 pounds. On the day before the injection she had a chill. I gave her the injection of X in the groin from the same bottle from which I had injected five other patients on that same afternoon. She complained, before the injection, of pain under the left breast. When I saw her three days later she was walking around the ward. She said her chest did not hurt so much. She could breathe more easily. " The catch was gone." Her temperature was then 101° F., but I learned that on the evening of the injection, it had risen to 103° F. after a sharp chill. She said her appetite, which had been poor of late, was rather worse since the injection. I found that she was having frequent doses of heroine for her constant cough, and I suggested omitting them for a day. She found she could not get along without the heroine. She improved somewhat during the next few weeks. A week later, her temperature began to leap from 97° F. in the mornings to 103° in the evenings, and she was obliged now to remain in bed. I gave her a second injection of X. That evening, February 21st, she had another chill, and her thermometer for an hour registered 105° F. Then all the symptoms except the cough and the pain in her side improved. In four days her temperature was nearly normal. It was now discovered that her spleen was greatly enlarged. Her abdomen had not been previously examined, and it was impossible to say how long this enlargement had existed. The patient was not conscious of any unusual condition in her abdomen. But she complained of pain in her left chest. An unsatisfactory blood examination was made. No malarial organisms were recognized. Large doses of quinine were, however, administered. The next day she had another chill and her temperature soon rose again to 104° F. She now had pain in the right lung. Signs of consolidation appeared at the apices of both lungs and she died a month after the first injection. It was impossible to secure an autopsy.

CASE XXI.—One of the picturesque cases at the hospital last winter was a wasting giant, seven feet and eleven inches tall, who in his six years' battle with the tubercle bacillus had lost 100 pounds in weight, and yet, cyanosed and dyspnœic though he was, had remained grimly cheerful through all his sufferings. In January and February, he was attacked with a painful diarrhœa over which neither opiates nor astringents had any control. Twelve hours after the injection of X into his groin, on February 11, 1903, his diarrhœa stopped, and never returned. He gained a few pounds in weight and was able to sit up, but his lung conditions did not change. He died in August.

CASE XXII.—Last winter a clerk, seventeen years old, in one of the big dry goods stores in New York, began to cough and expectorate and after a month to have evening fevers and night sweats. He went to bed for four days and got up feeling somewhat better, but very weak. His physicians sent him to Seton Hospital on April 28, 1903. He then suffered from cough and dyspnœa on exertion. He had lost eleven pounds. He now weighed 86 pounds. The hospital record says of his condition: " Fairly developed and nourished. Flat and narrow, poorly developed chest, and chicken breast; supraclavicular and subclavicular recession on both sides. Slight clubbing of nails. Percussion: Dull on both (sides), supraclavicular and subclavicular and supra spinous regions, more pronounced on the right side. Auscultation: Very diminished vesicular breathing over both apices, and expiration somewhat prolonged and high-pitched. A few coarse creaks and a few subcrepitant râles. Voice sounds on both sides.

Temperature 100° F.; pulse 80; respiration 30; tubercle bacilli."

I gave him an injection of X on May 18, 1903. He had a good reaction. His fever went up a degree and a half the next day, and the range between morning and evening temperature grew rapidly less, and both steadily approached the normal. His appetite and strength improved. His cough cleared up in a few weeks. In July, he weighed more than before his sickness. On September 1st, he was discharged, weighing 111 pounds, and without any symptom or physical sign indicating tuberculosis.

Case XXIII.—F. G., twenty years old, a plumber, born in Russia, was admitted to the hospital, April 27, 1903. Began to cough and spit a year before, and was obliged to give up work. Had night sweats for two months. Had lost fifteen pounds. He had dyspnœa and palpitation. Some pain at the right side at the base. Bloody morning expectoration. Appetite fair; better since coming to the hospital. Constipated. Good chest expansion. No clubbed nails. Slight supraclavicular dulness on both sides. Diminished vesicular breathing over both apices. A few subcrepitant râles above and below left clavicle on cough. Temperature 100° F.; pulse 80; respiration 28; tubercle bacilli. He was injected with X on May 18th. His evening temperature, which had been running from 99.4° F. to 100°, jumped that night to 102°. On May 19th, it was 101°; May 20th, 100.8°; May 21st, 99.6°; May 22nd, 98.4°. It remained less than 99.5° thereafter. He had the usual restless first night, and for several days he complained of a feeling of weight under the sternum. He gained in weight. His cough became less. In a few weeks he had no symptoms of disease. Tubercle bacilli disappeared from his expectoration. He was discharged apparently cured on September 1st. There was then no dulness. Very fair vesicular breathing. A remarkable feature of this case I hope to refer to in another paper.

Many important changes occurred in the condition of patients who were not cured. For instance:

Case XXIV.—Mr. B., at the time of injection, had consolidated areas and cavities in both lungs and a tuberculous pharyngitis. The disease in his lungs was not affected by the injection. After a few weeks his pharyngitis became severe. Ordinary treatment gave him scarcely any relief. I sprayed some X on the sore spot. He said that it helped him more than cocaine, and he continued to beg for it while he lived.

Case XXV.—Mr. C., a hospital orderly, with both lungs thoroughly tuberculous and cavernous, and with old tuberculous scars in the bones at his knees and wrists, had several large discharging sinuses about his right elbow. The filling up of these sinuses with a stinking blood-serum culture of X had the immediate effect of almost stopping the discharge and drying up the sinuses. The reaction frightened him, and he refused further treatment. He died three months later, but it was not until the last month that the sinuses at his elbow discharged as freely as before.

Case XXVI.—Mr. A., tuberculous consolidation at both apices. Had lost twenty pounds and was very dyspnœic when he came to the hospital, on June 10, 1903. He had a purulent discharge from one ear. Tubercle bacilli were found in the pus. This otorrhœa resisted all ordinary treatment and, in fact, was growing worse, when I poured some of an old blood serum culture of X into the ear. Improvement was immediate. I repeated the treatment three times, and every time with benefit. He left the hospital on August 12th. There was then only the faintest moisture in his ear. He still had a slight cough, but he has gained thirteen pounds and a half, and felt well and went home to get married.

Case XXVII.—Mr. B., a laborer, had been in the hospital ten months without improvement. Both lungs were contracted and had areas of consolidation in front. The trouble at the apices was most acute. The injection of X did not help his lung symptoms, but it did stop the stomach distress from which he had suffered for months, and which had made him vomit his meals soon after their ingestion. This beneficial effect continued for two months. When I saw him last, his stomach distress was returning.

Case XXVIII.—Mr. M., hospital orderly, forty-eight years old, with disease in both lungs and a cavity at the left apex, had improved twice by living a few months at the hospital. Last winter on his third admission I injected him with X. At that time he was much worse than on either of the other occasions on which he came to Seton. He improved very fast, and left the hospital in the spring and went to work. In a few weeks, he returned with a recrudescence of all his symptoms. He had lost fifteen pounds. This time, he did not improve. His cough grew worse. He continued to have fevers and to lose weight. He began to clamor for an injection of X. This was withheld until June 15th. His symptoms began to clear up almost immediately after an injection. He soon had no fever. He gained his lost pounds and went to work as a night watchman at the hospital. It is interesting to note that at the second injection of this patient, he experienced no febrile or systemic reaction. Four others who were injected for the first time on this same afternoon with X from the same bottle, had rather violent reactions. The material used was a blood serum culture of X that had been grown at room temperature. I examined this patient on October 8, 1903. There was a dry antrum at the left apex and practically no other abnormal condition. On getting out of bed in the mornings, he raised one small spit. That spit contained numerous tubercle bacilli.

Case XXIX.—Mr. M. B., forty years old, a porter, sick three months, had lost thirty pounds. He had disease in both apices and at the left base; he left the hospital a few weeks after the injection, far from well, but with increased weight and lessened cough. The night sweats, which had been very annoying, stopped after the injection.

Case XXX.—In another case, that of Mr. N. S., a conductor, who had suffered from drenching night sweats for months, they ceased entirely for three weeks after a first injection. Then they returned and were not modified by other injections.

CASE XXXI.—Mr. R., fifty years of age. Several members of his family died of tuberculosis. Five years ago he was under my care, for four months, for a discharging sinus from the lower third of the right femur. Last March the old scar broke down and the sinus again discharged. He remained at work for ten days, when pain, fever, and weakness forced him to quit. I filled the sinus with an agar culture of X. He had no other treatment. The sinus healed up immediately. He returned to work in three days. The sinus has not troubled him since. His work is that of porter in a large furniture house.

CASE XXXII.—Miss P., a school teacher, sick with consumption for a year, gained a few pounds after injection with X, but her general condition was not improved, except in one remarkable particular. For several months, her breath had been developing an offensive odor, which was humiliating to herself and an annoyance to the others of her household, and which very strongly suggested pulmonary gangrene. This odor disappeared entirely twenty-four hours after the first injection. After a month there was a slight return of it and a second injection of X removed it entirely.

CASE XXXIII.—Mr. W. D. K., a consumptive market man, fifty-six years old, had an operation for circumrectal abscess and fistula in ano, in January, 1902, which was not a success. Ten months later he came to Seton with his whole right lung involved, and suffering from his fistula. His lung condition remained unchanged, but his fistula grew worse. The discharge kept him busy applying dressings. On July 6th, I injected X into the tissues about the mouth of the fistula. He had a sharp reaction, and for three days, he did not enjoy sitting, but the fistula dried up almost entirely, and for five weeks there was only the slightest moisture on the dressing. A month ago the discharge seemed to be increasing; still he was living in comparative comfort. His pulmonary trouble was not affected by the injection.

CASE XXXIV.—Mr. B. S. He developed a fistula, in June, 1903. Under ordinary non-operative treatment the fistula grew larger every week. On August 25th, I gave him three small injections of an agar culture of X, mixed with normal salt solution, inserting the needle into the tissue about the fistula. He had a chill with fever on the first and second and seventh nights. The last chill was caused by the development of a gluteal abscess. As soon as that was opened, the fever disappeared, and the long and wide fistulous track closed up and remained absolutely dry for three weeks, when it began to leak again. The general condition of the patient improved rapidly. He now has little or no cough. His temperature is about normal and he has gained ten pounds in weight.

CASE XXXV.—Mr. P. H., a tall, square shouldered gardener, fifty years old, who had lost thirty pounds in his eight months' sickness, had a fistula in ano for five months. A radical operation gave him no relief; neither did repeated dressings. An ulcer, one inch by one inch and a half, developed at the anal opening of the fistula. On August 25th, I injected X in three places about the ulcer. He had a sharp reaction, and his general condition noticeably improved and the discharge lessened, but there was no diminution of the size of the ulcer or the fistula. He left the hospital a couple of weeks later.

CASE XXXVI.—J. K., thirty-four years of age, a driver, with tuberculosis in both apices, had chronic otitis media, for which he had been unsuccessfully treated by New York specialists. I filled his ear up with a mixture of an agar culture of X in normal salt solution, and had him blow air through his Eustachian tube until it bubbled through the mixture in his ear. The discharge dried up quickly. At first I told him to come every day to have his ear treated, but after three treatments, the discharge became so slight that, at his own suggestion, the intervals between the dressings was lengthened to two, then three, and finally to four days. His general condition also improved. He was very enthusiastic about the effect of the treatment on his " running ear."

CASE XXXVII.—Mr. A. O., twenty-six years of age, Irish, a steamfitter, consumptive for one year, had a discharging sinus in his left cheek leading from a carious alveolar process. He had also an obstinate otorrhœa. Neither condition responded to ordinary treatment. Both healed under applications of X cultures. I found that the disease in the cheek was affected most favorably by packing it with gauze soaked in the X culture.

CASE XXXVIII.—M. A., a young Swedish machinist, suffering from pulmonary tuberculosis for a year, had a great tuberculous hole in the cartilaginous sæptum of his nose, which during the last summer had been growing larger. Continual douching with antiseptic solution held it somewhat in check, but plugging the nose for a few hours a day with cotton soaked in X culture, dried it up so fast that he would have no other treatment. It seemed entirely dry when he left the hospital after a couple of weeks of this treatment.

CASE XXXIX.—Mr. W., aged twenty-eight years, tuberculous in both lungs, had a sinus running from a carious alveolar process of his lower jaw through his left cheek, which discharged great quantities of pus and utterly resisted all attempts to stop it with ordinary douching and packing. After a few packings with X soaked absorbent gauze, it healed almost entirely, and it ceased to improve as soon as the X applications were stopped. On my last visit to the hospital he begged for some of the X material, that he might apply it himself and finish up the cure of the sore in his face.

CASE XL.—B. A., an Italian cornetist, twenty-eight years old, sick with consumption for three years, had chronic otorrhœa with partial deafness and very annoying tinnitus. Instillations of X into the ear lessened the discharge, but did not help the other conditions.

A large proportion of the patients testified, the day after the injection, that they felt queer, uneasy sensations at the part of the lung or other organs of the body in which the tuberculous lesion existed. In one case, in which there was a quiescent tuberculous knee, the affected bone became at first creepy, then painful, and it became necessary for the patient to go to bed for a few days. Many patients whose physical condition was not materially improved by the injection, experienced for several days an increased desire for food. Soon after the injection many patients were obliged to pass urine frequently and in large quantities. This desire ceased in twelve or eighteen hours. After the injection, the expectoration of the patients usually became thinner and noticeably frothy, and remained so for days, sometimes for weeks.

(To be concluded.)

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All That Saved Him, according to *Puck: Hawkins:* " I understand that the physicians held a consultation, but I see you are still alive." *Robbins:* " Yes. I have since learned that the vote stood two for me and one against."

Death During Ethyl Chloride Anæsthesia.—Dr. F. Olcott Allen, Jr. (*American Journal of the Medical Sciences*, December, 1903), reports the case of a colored man under operation for incarcerated inguinal hernia. Anæsthesia was started with ethyl chloride and progressed satisfactorily until narcosis was approaching (about three or four minutes), when the change to ether was to be made. About fifteen grammes of ethyl chloride were used. Just as ether was started the patient gagged and vomited an enormous quantity of an almost clear, watery liquid, which, for a time, spouted from his mouth in a continuous stream, without retching or inspiratory effort. The vomiting could not be controlled and must have lasted, with slight intermissions, for two or three minutes. When it finally stopped, respiration was not resumed, cyanosis was present, and no pulse could be felt. Artificial respiration, with traction on the tongue, was continued for some minutes without effect; there seemed to be no air entering or leaving the lungs. No obstruction could be felt in the throat or trachea. There had been no solid matter in the vomitus. Permission for an autopsy was refused by the patient's friends. For the preceding six months, ethyl chloride anæsthesia had been used at the Pennsylvania Hospital indiscriminately, about a hundred times, in minor operations or as an antecedent to ether, with satisfactory results. Struggling had sometimes occurred, and in one case an epileptiform convulsion, but no cardiac or respiratory symptoms. The ethyl was sprayed on a piece of gauze held over the patient's nose and mouth.

Issues and Events.

A PLEA FOR UNIFICATION AND UNIFORM ORGANIZATION.

By J. N. McCORMACK, M. D.,

CHAIRMAN OF THE COMMITTEE ON ORGANIZATION OF THE AMERICAN MEDICAL ASSOCIATION.

To the Medical Profession of the State of New York:

After correspondence on the subject with members of the Joint Conference Committee and others, more especially on the society's side, I have been requested, as chairman of the committee which has had this work in charge from its inception, to prepare for publication an explanation of the plan of organization for State and county societies which has been so generally adopted in the last two or three years. As the plan was prepared and is recommended for universal adoption, is already in satisfactory operation in thirty-two States and in over 1,500 counties, and is likely to be adopted in nearly all of the other States as soon as their annual meetings occur; as the subject is one of interest at this time to every member and well wisher of our profession; and, more especially as the preparation of the plan for general adoption makes my committee as responsible to you for anything wrong in it as though we were members of your county and State societies, it seems entirely proper that the request should be complied with, and an attempt will be made to place beyond question the truth of the following propositions:

1. That existing professional conditions and estrangements are useless and senseless, that they are hurtful almost beyond calculation to both the profession and the public welfare, and that they are remediable.

2. That the plan of organization is based upon our system of civil government, that it was prepared with much care and unselfishness, and that it contains nothing untried, experimental, or impracticable.

3. That the county society is not only the unit of the organization, but the source of all authority and power in both the State and national bodies through a representative delegate system, and it is also the only portal of entry to the entire society system.

4. That coincident membership has been an old and perfectly satisfactory method in many States, is essential to complete organization, and is just and right. It would be as unfair to permit a physician to become a member of his county society and enjoy all the benefits arising from the labors of the State society, as to permit one to become a citizen of Ithaca or Troy, without becoming a

citizen of the State of New York and bearing the burdens and responsibilities of the same.

5. That amendment of any part of the plan is purposely made easy and is controlled by delegates from, and responsible alone to, the county societies.

6. That the time has come for unification, and that, while union under a defective plan, which the joint body could modify and improve for the common good, would be far preferable to a continuation of existing conditions, the one now proposed has been found excellent and practical after full trial in other States, and, having been prepared away from New York contentions and controversies, it offers a basis for compromise honorable alike to both factions and to neutrals.

In order to establish these propositions clearly and satisfactorily, a brief history of this reorganization movement is necessary. From the very outset the magnitude of our task grew upon us. Although in name medical societies—city, district, State, and national—existed without number, and medical machinery and high sounding official titles were provided sufficient for the civilized world, membership in most of them was small and little more than nominal, and, outside of a few States and localities, the profession was so torn with dissensions that it was in chronic disgrace in its own and the public estimation, and in a large measure robbed of its power, by legislation or otherwise, to help either itself or the public, for whose benefit it was supposed to exist. Into a profession already so overcrowded that that there was less room and remuneration for the average man than for clerks and skilled laborers, commercial medical colleges were annually turning loose thousands of new graduates, many poorly equipped for intelligent modern practice, and all of them without an hour's training in professional conduct, business methods, or the importance of society membership, in which all should have been drilled with the care due to subjects to become of so much importance as soon as they should come to serve the public and face the problem of earning an honorable livelihood.

As a result, largely, of such lack of training, we found that of the 120,000 registered physicians in this country, only about 30,000, one in four, had ever been members of any kind of society, local, State, or national. Most cities were little better organized than the country districts, a large submerged element being often found within an easy walk of imposing medical and postgraduate schools, libraries, and hospitals, who had long lost hope of advancement, and looked upon their profession only as a doubtful means of support; while those in the higher ranks wrangled and slandered each other, and brought odium on all, and Christian science and other forms of bald, naked quackery, took the cream of a patronage which a united, self-respecting, and honored profession would have deserved and received.

It was soon found, however, that these conditions, deplorable alike to the profession and the public, were not universal. In Alabama, for instance, under a model plan of organization and its resulting united profession, with over 1,500 of the 1,700 physicians, members of the county and State societies, medical opinion was sought for the guidance of law-makers, executives, and courts, the profession was honored and independent, and quackery was unknown. Kentucky, striving for the same ends under less perfect methods, had had no itinerant or advertising doctor within her borders for ten years, and the profession was aspiring to its rightful place as a directing force in public affairs. In a dozen cities, also, usually of the lesser rank in population, under similar influences, harmony, cooperation, and measurable prosperity prevailed and were increasing.

Inquiry soon demonstrated that the *personnel* of the profession was much the same everywhere, and the difference in the conditions found was apparently entirely due to difference in methods of organization. After all proper allowance for personal equation in rulers, governments are liberal or despotic as determined by their organic laws, and, probably, quite as much as with a nation, the constitution and by-laws of a medical society will set the compass and shape the policy which will largely determine the future for both itself and its individual members.

Influenced by such belief and considerations, my committee began its work four years ago by grouping those provisions for State and local societies which had resulted in the most effective organizations, and with great care made our first draft of a constitution and by-laws for submission to, and discussion by, conferences of leading men in the various medical centres where there was a reasonable degree of harmony. Later, the improved draft was published in the medical press and in pamphlet form and given the widest possible publicity. As we were performing an important, unselfish, and gratuitous public service for the common good, advice and frank criticism were cordially asked from all, and these came freely and helpfully, especially from the better organized States and cities.

With such assistance, and in the light of such criticism, keeping always in mind that the plan should be democratic and conform to our methods of civil government, with local self-government by the county societies as the central idea, a simple but comprehensive system was gradually evolved, almost ideal in its outline and possibilities, which, after full trial under the most diverse professional conditions, has proved entirely practical, being so flexible that it could be as easily adapted to the Cook County Medical Society, at Chicago, with 1,800 members, as to sparsely settled counties in North Carolina or California, with ten members. Under its operations in one year in Michigan the membership increased from 560 to 2,100; in Kentucky from 390 to 1,600; in Tennessee from 300 to over 1,000; in Missouri from 400 to 1,500; in Arkansas from 190 to 703; and in like proportion in every other State adopting it.

It is a thoroughly democratic and American plan, using those much abused terms in their broadest and best sense. As has been said, the county society is made the broad foundation and source of authority for everything, as well as the portal of entry to both the State and national bodies. If a physician stands well enough at home to secure membership in his county society, he is eligible for membership and for any position of honor or trust in the State and national bodies, and, if he loses membership at home, subject to the right of appeal, he loses it everywhere.

The house of delegates, the legislative and business body of the State society, like the general assembly of a State, is composed of representatives from the county and district societies, and such delegates are freed from political influence, so far as possible, by making them ineligible for any of the offices within their gift, and they are responsible alone to the constituencies electing them. As they are in session but two or three days, in order to make the transaction of any business possible, unlike senators and representatives, they sit as one body. This gives a body small enough for deliberative work, and yet gives county societies remote from the place of meeting, and all others, an equal and only an equal voice, in all business affairs, if only the delegates are in attendance.

Carrying out the same principle of local self-government, this house of delegates, made up directly from county and district societies, elects from the general membership the delegates which, in turn, compose the legislative body of the American Medical Association. As in the house of delegates of State societies, this being a small body, with its members carefully selected and made ineligible for any other position, with the terms of half the members expiring each year so as always to have men of experience in it, and which can remain in session, if necessary, after the general meeting adjourns, it was hoped to provide a body in which the interest of the profession and of scientific medicine might be considered and promoted in the broadest way.

The question of coincident membership in county and State societies is one which should require little explanation in New York. It has given satisfaction in the association, and has, of course, been under the observation of the society people. You have also had ample opportunity to observe the results of it for years in the neighboring States of New Jersey and Connecticut, where it has been in operation for years. It has been long the practice in Alabama, with the result that about 90 per cent. of the profession are permanent members, as well as in Massachusetts, Pennsylvania, and Indiana, and recently in a total of thirty-two States. It is only one feature of the work, but it is so important that any complete or systematic organization of the profession is impossible without it. Besides, the justice of it is beyond question. It would be as obviously unfair to permit one to join his county society and enjoy all the benefits of the State society, arising from its legislative, educational, and other expensive and responsible labors, without assisting in its support, as it would be to permit a man, if one could be found so foolish and selfish as to ask it, to become a citizen of Buffalo, Syracuse, or Rochester, and enjoy all the benefits and protection of the State government, without becoming a citizen of New York.

It is true that in nearly every State where this plan of organization has been proposed, as was natural and to be expected, academic and purely theoretical objections have been made to some feature of it, usually to the council, the house of delegates, or to coincident membership. Such objections have always been made in advance of a trial of them, and they have been confined almost entirely to States which have been practically without organization heretofore. Conditions in Iowa illustrate this point well. The county society, at Dubuque, which has reorganized and applied for a charter within the last ten days, raised many such theoretical objections to the plan before they had tried it, while 88 counties in the same State, organized under it and realizing its practical benefits, are loud in praise of the very provisions to which their worthy neighbor at first objected. It is a source of much encouragement that this has been the experience of over 1,500 counties which have reorganized.

It would be pleasant to comment on each provision of the plan in detail if space permitted.

Suffice it to say that it was intended only as the foundation and frame work for a broad and comprehensive system to be recommended for universal adoption; that nothing was included except for what appeared the best of reasons; and that it is susceptible of infinite elaboration and improvement in detail, as the profession of any State or county develops under the catholic and cooperative spirit which it inculcates, and which is so much to be desired.

Attention is called to the fact, also, that much contained in the by-laws, where a wide departure is made from the brevity and compactness of expression adhered to in the constitution, is suggestive and educational in character, much of which would not be necessary if such an organization as is contemplated was already in existence. We thought it as important, under existing conditions of discord and demoralization, to furnish incentives to this work, to give practical and detailed information as to how it was to be done, and to put the reasons for it all within easy reach of those whose duty it would be to discuss the subject and do the work, as to furnish the frame-work of which, as the result of years of devoted labor, they were to make a complete edifice occupied by a united and harmonious, or at least a decently cooperative and self-respecting profession. For many reasons, too, amendment to the plan is purposely made easy. If after trial in any State anything is found obsolete or impracticable, it can be easily eliminated or replaced by something better adapted to existing needs, by the house of delegates, subject to instructions from the county societies, at any regular meeting, after such amendment has lain upon the table for one day.

Unification in New York has been so long the dream and hope of its own profession, as well as of the entire country, that now, when this seems about to be realized, it may be that a majority of you will consider mere methods and details of organization important only in so far as they are likely to hasten or delay the union. In part, this view of the matter is both natural and correct. A cordial union under a defective plan, which could be modified and improved to meet the needs of the joint body, when there would be unity of purpose and interest for the common good, would certainly be far better than to perpetuate the two bodies, even with model organizations for both, with the strife, discord, and loss of public respect inseparable from such conditions anywhere.

Still, if it can be shown, as the writer believes will appear upon the most critical investigation of what is now proposed, that it furnishes ready to your hands a plan of organization to which you may build and add with confidence in the results, and which will, at the same time, hasten unification by furnishing a basis of compromise between factions so long divided that suspicion and jealousy have become so much mental habits that neither will be willing to accept what the other proposes, it should, and I am sure will, receive respectful consideration at your hands.

In the era of good feeling and enthusiasm which must follow unification, under such a broad, liberal, and comprehensive plan, which would give an equal voice and power to the individual doctor in every county, organization should and would make rapid strides, and the possibilities opened up to your profession, and then to your people, would be almost beyond conception. In the face of such possibilities, standing upon the threshold of such accomplishments, petty prejudices and personal interests appear so insignificant that they should find no place in large minds.

Then, as New York would be in perfect alignment with her sister States, with proper education and effort everything desirable would, in time, be brought within reach of the united profession of the entire Union. The complex and difficult problems before the profession of this country incident to our unprecedented advance in population and civilization, which must be solved by it, if they are to be solved, will tax its highest intelligence and energies at its best. Provision can then be made for continuous scientific research, and for systematic collective investigation into the causes and prevention of disease, upon the large, generous lines demanded by the vast interests involved. The vexed problem of medical education can then be taken up with confidence and justly and wisely solved; reciprocity in licensure and membership between States can then be discussed from the standpoint of the common good and settled upon some equitable basis; constructive statesmanship can be substituted for the narrow, time serving, political methods of the present in municipal, State, and national public health affairs; and our great profession, great even now in spite of its divisions, united, elevated, and ennobled, would come to occupy its rightful place as one of the greatest of modern forces for the guidance and protection of our people. It would be an honor, even to New York, to lead in a reform promising such results, and to set an example in complete organization, which less favored and weaker States would imitate with both pride and profit. First of all, leading to all, and above all, in the words of your victorious commander, greater in magnanimity even than in war, " Let us have peace."

THE PLAN PROPOSED FOR UNIFICATION IN NEW YORK.

New York, January 12, 1904.

To the Medical Profession of the State of New York:

The subcommittee of the Joint Committee on Conference presents the following plan of consolidation of the Medical Society of the State of New York and The New York State Medical Association, for the information of the medical profession of this State. . . .

We respectfully urge the members of the profession to promote by all proper means the passage by the Legislature of the proposed act, prepared by counsel for the committee, authorizing the consolidation of the Medical Society of the State of New York and The New York State Medical Association. The proposed act will be introduced in the Assembly or Senate in due course, and, if passed, will authorize the consolidation upon terms to be agreed upon by the two corporations. The consolidated corporations will be known as the Medical Society of the State of New York.

Before the agreement for consolidation under the proposed act will become operative or effective for any purpose, it must be authorized or ratified by the vote of each corporation at an annual meeting, or else at a special meeting of each corporation called to vote upon the agreement, and it must also be approved by the county medical societies in affiliation with the Medical Society of the State of New York.

The agreement to be recommended will contain provisions for the following stipulations.

First. All assets and liabilities of The New York State Medical Association shall be transferred to, and vested in and assumed by, the Medical Society of the State of New York at the time of consolidation.

Second. Expert accountants shall be employed to ascertain the assets and liabilities of each corporation and their reports shall be submitted with the agreement for consolidation.

Third. All members of The New York State Medical Association in good standing at the time of the consolidation shall be admitted to membership in the Medical Society of the State of New York.

Fourth. All members in good standing of the county medical societies now in affiliation with the Medical Society of the State of New York shall be admitted to membership in the Medical Society of the State of New York.

Fifth. All members in good standing of The New York State Medical Association shall be admitted to membership in the county medical societies for the counties in which they respectively reside.

Sixth. All members in good standing of the Medical Society of the State of New York shall be admitted to membership in the county medical societies for the counties in which they respectively reside.

Seventh. The plan of organization, constitution, and by-laws of The New York State Medical Association, with such modifications as have been agreed upon by the committee, shall be adopted as the plan of organization, constitution, and by-laws of the Medical Society of the State of New York.

Eighth. The following proposition shall be submitted by referendum to the vote of the members of the consolidated corporation, namely:

The principles of medical ethics of the American Medical Association, being suggestive and advisory, shall be the guide of members in their relations to one another and to the public.

Ninth. The Medical Society of the State of New York will petition the Legislature for the passage of such further enabling act as may be necessary, if any, to carry the consolidation agreement into effect.

AN ACT

TO AUTHORIZE THE CONSOLIDATION OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK AND THE NEW YORK STATE MEDICAL ASSOCIATION.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The Medical Society of the State of New York, incorporated by or pursuant to chapter one hundred and thirty-eight of the laws of eighteen hundred and six, entitled "An act to incorporate medical societies for the purpose of regulating the practice of physic and surgery in this State," and continued by chapter ninety-four of the revised laws of eighteen hundred and thirteen, passed April tenth, eighteen hundred and thirteen, entitled "An act to incorporate medical societies for the purpose of regulating the practice of physic and surgery in this State," and The New York State Medical Association, incorporated under chapter four hundred and fifty-two of the laws of nineteen hundred, may enter into an agreement for the consolidation of such corporations, setting forth the terms and conditions of the consolidation and the mode of carrying the same into effect.

Each corporation, party to the agreement, may petition the Supreme Court for an order consolidating the corporations, setting forth in such petition the agreement for consolidation and a statement of all its property and liabilities and the amount and sources of its annual income. Before the presentation of the petition to the court, the agreement must be approved by a majority of the vote lawfully cast at an annual meeting of each corporation, separately, or at a meeting of each corporation separately and specially called pursuant to its by-laws for that purpose, and a certificate of such approval, verified by the president and secretary of the meeting shall be annexed to the petition.

On presentation of the petition, the certificate of approval and the consolidation agreement, and on such notice to interested parties as the court may prescribe, and after hearing such interested parties as desire to be heard, the court may make an order for the consolidation of the corporations on such terms and conditions as it may prescribe.

When the order is made and duly entered, the corporations, parties to the agreement, shall be one corporation under the name "Medical Society of the State of New York," which shall not be deemed to be a new corporation, but to be a continuation of the Medical Society of the State of New York, incorporated in eighteen hundred and six. A certified copy of said order shall be filed in the office of the Secretary of State. All the property belonging to the corporations so consolidated shall vest in the said Medical Society of the State of New York, which shall have all the powers, rights, and privileges possessed by either corporation at or immediately prior to the consolidation, and which shall be subject to all of the liabilities of each corporation.

§ 2. This Act shall take effect immediately.

Respectfully submitted,
A. Jacobi,
George Ryerson Fowler,
E. Eliot Harris.

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AND
PHILADELPHIA MEDICAL JOURNAL.
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A LEAGUE FOR THE FINANCIAL PROTECTION OF PHYSICIANS.

Two sensational statements regarding the medical profession have recently appeared in the newspaper press of Indiana, the first to the effect that a protective league had been organized among the physicians of a small town in that State, the members of which pledged themselves to refuse medical assistance to residents notoriously delinquent in paying for the same, unless the honorarium was proffered in advance. The corollary, the publication of which we expected, was a second report, probably less well founded, that in consequence of this unholy professional alliance, a baby had died, its poor parents having vainly prayed one doctor after another to come to its assistance.

We shall require considerable corroborative evidence before we lend ear to report number two. If such a league, as stated, was really organized, it was not to deprive the poor of assistance, but to bring to terms the large number of well to do " beats " who, whether they hold up tradesmen or not, will invariably dodge their indebtedness to the physician. There is no practitioner who does not know a number of such mean and rascally moral ignoramuses, who argue that a mere talk with the doctor and his writing of a prescription do not constitute a *quid pro quo* for his fee.

Two thirds of the time of specialist and general practitioner is spent among the poor without other reward than the acquirement of skill and experience; none other is expected. This professional habit of mind is frequently incomprehensible to those employed in commercial pursuits, accustomed justly to exact payment for goods furnished, inquiring rigidly into the commercial standing of strangers seeking to trade, and pursuing mercilessly the delinquent debtor. These rights and privileges of commercialism are foreign to the medical mind, which understands that the commercial side of the physician's career must ever be subservient to its principal objects—the immediate relief of suffering, and the instruction of the public, to the end that disease and suffering may be ultimately eliminated. More than all others the physician has the poor always with him; to combat their ignorance is his chief task, the ignorance which is the main cause of his existence, and the disappearance of which would be accompanied by his simultaneous exit.

The same quality of mind, however, which leads the practitioner to disregard payment by the poor, often renders him needlessly indifferent to the neglect of many of the well to do to meet their legitimate obligations towards him. To discourage this artificial pauperism physicians should organize: in the union thus formed, misplaced compassion will not find place; and it will war without mercy upon the niggardly beat where the individual might spare him.

FOREIGN VIEWS OF AMERICAN MEDICAL EDUCATION.

It is astonishing to find how widely prevalent on the European Continent are the most curiously distorted notions as to the status of medicine in America, and how, in spite of the fact that American medical journals, American books, and American students are seen everywhere in Europe, America still suffers under the unjust ban of contempt as a land where medical education is at a very low level.

The cause for this continued misapprehension of the state of medicine in this country on the part of many otherwise well informed persons in the Old World is, we think, to be sought largely in the distorted reports often presented by the foreign medical press. A marked instance of this kind came to our notice not long since in the shape of an editorial article in *Riforma medica* (July 15, 1903), one of Italy's leading medical weeklies.

Under the general title: "Medical Education Abroad," and the subtitle: "Medical Education in the United States," this journal lays before its readers what purports to be an abstract of the address of the President of the American Medical Association, delivered at the last annual meeting, in May, 1903, at New Orleans. The third paragraph of this abstract contains the only reference made in the article in question to the actual state of medical education in the United States, the rest being devoted to statistics and to the recommendations of Dr. Billings. This paragraph reads as follows:

"In the American medical schools the subjects taught are anatomy, physiology, chemistry, materia medica, obstetrics, practice of medicine, and surgery. The course in medicine in the colleges consists of two annual sessions, of four or five months each. In the first year the students listen to the lectures offered, and in the second they review what they have learned in the first. Many schools, in order to turn out many graduates, lower the standard of requirements, and so directly prostitute their functions, as Billings himself expresses it. A few colleges maintain the tradition of requiring a high standard of medical education, even at an actual financial loss."

Extended comment is needless. Only, we might say—What a hue and cry would be raised if we, in America, in attempting to describe the facilities for instruction and the standard of requirements for graduation in medicine, as they exist in Italy to-day, had given an accurate picture of these conditions as they were in 1850!

Be this as it may, there is no question that the time is coming when this country will stand universally recognized as in every way equal in its standard of medical education to any other country in the world, but first we must have more accurate accounts of our present existing conditions, in the medical press of the Old World.

CHANGES IN THE SENSIBILITY OF CERTAIN AREAS OF THE SKIN IN TUBERCULOSIS.

In view of the necessity for an early diagnosis in tuberculous affections of the lungs, every advance in the methods of examination of these organs must needs be welcomed. An interesting series of studies that has been published of late, bearing upon this subject, concerns itself with the localization of pain and the mapping out of the areas of deranged sensibility in pulmonary diseases. Of these the communication of Goldmann (*Beiträge zur Klinik der Tuberkulose*, Vol. i, No. 4, p. 361, which we quote from an exhaustive review in the *Journal of Tuberculosis*, Vol. v, No. 5, 1903) deserves attention on account of the completeness with which these phenomena have been studied by this author. The varieties and localizations of chest pain in pulmonary tuberculosis are very numerous, but, according to Head, the reflected pain in this disease is distributed along zones that correspond to the localization of herpes zoster. He does not refer this pain, however, to the peripheral nerves but to the spinal cord. As in tabes, an irritation applied to an area of skin which has a diminished sensibility, is reflected into a neighboring portion with normal or increased sensitiveness; so a stimulus which occurs in an affected organ may be projected into that portion of the skin which is supplied by the segment of the spinal cord controlling that organ. An abnormal intense stimulus from the diseased organ lowers the resistance of the spinal ganglion cells, and so a cutaneous hyperæsthesia to pain and temperature is induced in that area. Tactile sensation is not affected, according to Head. This author finds that affections of the lungs produce sensory changes in certain well defined zones of the neck, corresponding to the distribution of the third and fourth cervical segments, and of the trunk corresponding to the region from the third to the ninth dorsal, i. e., the area which begins behind at the level of the shoulder blade and extends down to the twelfth spinous process, and in front from the third rib to the navel. The region below the ensiform cartilage cannot, however, be used in the diagnosis of lung diseases, as there we find also sensory disturbances in diseases of the stomach and intestines. Certain zones of the scalp, at the forehead, temples, etc., have also been described as characteristic of pulmonary affections.

Basing his work upon these data given by Head, Goldmann has studied a very large number of cases of tuberculosis in all stages with reference to the alteration in cutaneous sensibility which they exhibit. In each case other physicians examined the lungs independently of his tests. Patients with deficient intelligence, those who were too susceptible to suggestion, and those with complications in other organs, were excluded.

Goldmann found the following conditions: In tuberculosis of the upper lobe there is an increased sense of pain in the skin over an area corresponding to the projection of this lobe, with a maximum point of tenderness in the supraspinous fossa. This area also often extends below the margin of the upper lobe, probably because in these cases the lower lobe is beginning to become involved, although it may not show any physical signs. The tendency of reflex pulmonary pain to radiate is the cause of the increased sensitiveness of various neighboring areas, such as neck zones and head zones described by Head. Neuralgias in the areas mentioned are sometimes due to affection of the apex and are then severe in proportion to the severity of the lesions and to the rise of temperature, being worse at night.

In affections of the lower lobes, the zones of sensitiveness are very distinctly outlined, and it is possible that tuberculous patients with affected lower lobes, even without pleurisy, are loath to move their chests in respiration on account of this cutaneous hyperæsthesia.

Goldmann concludes that Head's zones are present usually in all acute affections of the lungs and in all acute, more rarely subacute, exacerbations of chronic conditions of these organs. He has not found the outlines of these zones invariably as Head has described them. The side affected could be recognized invariably by means of these zones of sensitiveness and even in hysterical patients who had increased sensitiveness over one half the body, the diseased pulmonary area made itself known by an increased hyperæsthesia, as compared to the rest. The pain on pressure is superficial, not deep, and the superficial layers of the skin are alone affected. In nervous individuals the hyperæsthesia may increase to a spontaneous symptom, and the spinal reflex then becomes a cerebral phenomenon. The boundaries of the zones are often quite sharp, but at times they are indistinct. The explanation of the presence of head zones in apical affections is that the trigeminus derives some fibres from the cervical region of the spinal cord and so the irritation of an affected apex is transmitted to the upper cervical segments and thus to the head. It is very possible, says Goldmann, that in many cases of so called trigeminal neuralgia we have to deal with a symptom of pulmonary disease.

It is important to distinguish these zones of sensitiveness due to lung affections from intercostal neuralgia. In the latter, pain occurs chiefly on pressure upon the nerve trunks, not so much spontaneously or as the result of cutaneous irritation. In muscular rheumatism, which also may be mistaken for this symptom of lung disease, the sensibility of the skin proper is in no way altered, nor is this the case in joint affections, except when the joints are full of fluid, when the skin is less sensitive than normally. In hysteria, we note the peculiar shapes of the areas of hyperæsthesia, such as shapes corresponding to amputation flaps, etc., and are also guided by the presence of other signs of hysteria.

It will be seen, from this brief analysis of the work of Head and of Goldmann, that the subject is still in the embryonic stage, but that already enough has been given to enable us to regard this line of investigation as promising ultimately the development of a new mode of pulmonary localization, which, if Goldmann's and Head's conclusions are accepted by other investigators after confirmatory studies, will be a useful addition to the modern methods of clinical research in the diagnosis of pulmonary consumption.

THE OPERATIVE DIAGNOSIS OF CARCINOMA OF THE RECTUM.

A single method for the excision of a neoplasm will never be applicable in each and every instance, and it is logical to select the proper technics adapted to a given case. In surgery it should be the aim of the operator to fulfil the given indications above all. In dealing with carcinoma of the rectum the indications are limited simply to the question of deciding whether the intervention should be a palliative or a radical one. Formerly, carcinoma of the rectum was considered by some beyond the resources of surgery and the growth was allowed to continue its development. At this time the treatment, being purely palliative, consisted in either colotomy, proctotomy, or curetting, and each one of these methods had its advocates.

Unquestionably, there are many cases where extirpation of the growth demands careful consideration, but one should not discard all radical intervention on principle, as do some of our English confrères. The indications for operation should have some serious foundation and for this reason they should be based on the seat of the growth, as well as on its extension to neighboring organs.

The seat of the neoplasm may be determined by the anatomical consideration of the region, and it is now generally admitted that the rectum, properly speaking, commences at the level of the third sacral vertebra. From this fact, it follows that any growth situated above this limit no longer belongs to the rectum, but pertains to the sigmoid flexure or to the descending colon. Those methods which are applicable to true carcinoma of the rectum cannot be used when the tumor is located higher up, and it was a great error on the part of the followers of Kraske to endeavor to remove, through the sacral route, carcinomata situated high up. The sigmoid flexure has been drawn through the wound and the mesenteric artery has been ruptured, or without being so brutal the section has been made through the sigmoid flexure and anastomosis of the cut ends of the intestine found impossible. From this lack of anatomical knowledge fistula, abscess, and peritonitis have been of frequent occurrence.

It is most astonishing that Kraske's imitators have not applied the anatomical researches of Treves, relative to the upper limits of the rectum, which date from as far back as 1885, among their indications for operation; these anatomical facts applied to carcinoma of the rectum were in reality not utilized until 1897, when Quénu demonstrated their value.

Carcinoma of the rectum, properly speaking, may be situated anywhere in the rectum from the third sacral vertebra down to the anus, but since the rectum is situated both in the pelvis and in the perinæum, it is only logical to make a distinction between carcinoma situated in either of these portions respectively. The levator ani distinctly separates the pelvic from the perineal rectum and should serve as a landmark in the division of the seat of rectal carcinoma. Every rectal carcinoma which is found between the third sacral vertebra and the levator muscle should be termed a rectopelvic cancer, while a growth situated below this muscle should be termed a rectoperineal carcinoma; and, lastly, carcinoma of the anus and lower end of the perineal rectum should form a third class which may be called anorectal cancer. Carcinomatous growths situated above the third sacral vertebra belong either to the sigmoid flexure or to the descending colon and demand various surgical technics foreign to the question under consideration.

The above considerations regarding the seat of rectal neoplasms are not so much theoretical as practical. By digital examination one may obtain very excellent and precise indications as to the situation of the growth, and in order to carry out the examination properly, one should endeavor to find first the lower limits of the tumor, and then its upper limits. There is nothing easier than to map out the lower limits of a neoplasm when the latter is situated within from four to six centimetres from the anus, but if the growth is higher up, its tendency to prolapse into the rectum may be increased by pressure exercised over the hypogastrium. By this means, the lower circumference of the growth will be made to surround the exploring finger. The upper limits of the growth are more difficult to ascertain, because it is often difficult to insert the finger through the stricture in order to attain its upper limits. The older methods, in which much force was expended, should be discarded, and it is far better to resort to palpation over the hypogastrium, which will allow one to grasp the tumor between the hand placed on the abdomen and the finger inserted in the rectum. This method of exploration is more especially necessitated in cases of carcinoma situated high up, principally involving the sigmoid flexure. In the female, a finger introduced within the vagina may, occasionally, attain the upper limits of these growths.

When dealing with the pelvic or perineal rectum, digital examination may be facilitated if one will bear in mind the line of demarcation between the two portions given by the contraction of the levator ani. It is well known that this muscle is a powerful constrictor and that the sensation of pressure felt by the finger within the rectum is due to the contraction of this muscle. It should also be recalled to mind that this muscle contracts by the will of the patient, and by utilizing this property, the constriction may be felt by the exploring finger either above or below the growth. If the contraction can be felt before the finger reaches the tumor, one may affirm that the growth is located in the pelvic portion of the rectum; and vice versa, if the neoplasm arrests the finger before the latter has become squeezed by the levator, one is certainly dealing with a carcinoma of the perineal portion of the rectum—in other words, with a rectoperineal cancer. This landmark in rectal examination that we here give has been tried by us in cases of carcinoma of the rectum, as well as in healthy individuals, and the contraction, which is both voluntary and quick, can usually be felt at from three to four centimetres above the anus. This sudden contraction should, however, not be mistaken for that of the sphincter, in which case it is a slow contraction due to unstriped muscle fibres.

The limits of the seat of the growth are not sufficient to enable one to decide as to the propriety of a radical operation, and one should endeavor to ascertain whether the neoplasm has invaded the totality of the rectal tissue, whether it is adherent to the surrounding structures, and whether the lymph nodes have become secondarily involved. The amount of mobility of the tumor on the underlying layers of the intestine will demonstrate to what extent they have become invaded. This was formerly a contraindication to the operation, but the Lisfranc's amputation of the rectum has increased the field of operative work in this direction. As to the involvement of neighboring organs, it may be said that they nearly always have become infected by the time when the patient consults the surgeon, and this is so because the progress and typical evolution of the neoplasm is more or less silent.

Charles Greene Cumston.

"ECCE QUAM BONUM."

We wish to call special attention to the two communications in Issues and Events, in this week's *Journal.* The unification of the medical profession in the State of New York has been so long and so earnestly desired that at this eleventh hour, when the consummation devoutly to be wished is at hand, we would express the hope that no misguided opposition be allowed to frustrate it. As is pointed out by Dr. MacCormack, the present plan allows for future adjustment in the case of individual inequalities or disadvantages. Let us have unity, and harmony will follow assuredly.

THE INTERNAL APPLICATION OF RADIOACTIVITY THROUGH FLUORESCENT LIQUIDS.

At a meeting of the Technology Club, composed of graduates of the Massachusetts Institute of Technology, resident in this city, last Wednesday evening, Dr. William James Morton delivered a brief address on what he has termed the artificial fluorescence of living tissue. Solutions of certain substances, such as quinine, æsculin, fluorescein, orcin, and their salts, even when very dilute, are rendered phosphorescent when submitted to the action of Röntgen rays or radium rays, giving off violet and ultra-violet rays, which are credited with the highest actinic power. Dr. Morton proposes to utilize the luminosity of these fluorescent solutions under the influence of x rays or radium rays, to bathe the interior of the entire body with violet light. Five grains of quinine bisulphate, when distributed through the blood of the human body—which weighs, say thirteen pounds—yield a solution equivalent to 1 part in 15,360, or one quarter of a grain in eight ounces. Such a solution shows strong fluorescence under the action of x rays or radium rays, and it is this luminosity which Dr. Morton proposes to apply in therapeutics. The proposal is not wholly new, as it was first made public by Dr. Morton in a note published in the *Electrical World and Engineer* for June 20, 1903. This use of radioactive matter has been experimented with by Dr. Morton for the past six months.

SELF MEDICATION.

The ever present danger of self medication is again exemplified by the death of a woman in Wisconsin, who took two "headache tablets" and, after six hours' unconsciousness, died. Here was a case that might have been diagnosticated as gastric or hepatic, as due to a frontal sinusitis, astigmatism, heterophoria, hyperopia, cerebral syphilis, neuralgia of the scalp, or caries of a tooth. In fact, headache requires the best attention of an experienced diagnostician. This unfortunate woman, however, in common with thousands of similarly ignorant people, considered it safe to treat herself, and as always happens in such cases, took an anodyne to smother the symptom, where a scientific practitioner would have searched out the cause and, if possible, removed it.

News Items.

Society Meetings for the Coming Week:

MONDAY, *January 18th.*—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, *January 19th.*—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y. (Annual); Baltimore Academy of Medicine.

WEDNESDAY, *January 20th.*—Woman's Medical Association (New York Academy of Medicine); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society; New York Society of Dermatology and Genitourinary Surgery (private); New York Academy of Medicine (Section in Genitourinary Diseases).

THURSDAY, *January 21st.*—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, *January 22nd.*—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, *January 23rd.*—New York Medical and Surgical Society (annual) (private); Harvard Medical Society, New York (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending January 9, 1904:

	Week end'g Jan. 2.		Week end'g Jan. 9.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	584	15	789	14
Diphtheria and croup	461	59	460	57
Scarlet fever	345	23	410	34
Smallpox	1	1	..	..
Chickenpox	97	..	122	..
Tuberculosis	229	177	301	158
Typhoid fever	36	10	42	10
Cerebrospinal meningitis	..	3	..	5
Totals	1,753	288	2,124	278

The Postgraduate Hospital has received a bequest of $5,000, by the will of the late Mrs. Samuel Colman, to endow a bed in the babies' ward.

The Hudson River State Hospital.—Dr. Mark L. Fleming has been appointed junior assistant physician of this institution at a salary of $900.00 per annum.

The State Board of Pharmacy, at its annual meeting on January 4th, adopted a resolution indorsing a proposed amendment to the State pharmaceutical law, restricting the sale of morphine and cocaine so as to require the prescription of a physician or dentist each time any one desires to purchase either of these drugs.

Bequests in Syracuse, N. Y.—The will of ex-Congressman James J. Belden, among other items, bequeathes to Syracuse University $100,000, Syracuse College of Medicine, Syracuse Home, Syracuse Women's and Children's Hospital, and St. Joseph's Hospital $50,000 each; Hospital of the Good Shepherd, $10,000, and three orphan asylums, $5,000 each.

The Medical Union, of Buffalo, N. Y., at its regular meeting on December 23rd, elected the following officers: President, Dr. Henry D. Ingraham; vice-president, Dr. Harry Mead; secretary and treasurer, Dr. Vertner Kenerson. The annual banquet will be held in the latter part of January.

The Medical Association of the Greater City of New York.—The annual meeting of this association was held at the New York Academy of Medicine, 17 West Forty-third Street, Manhattan, on Monday, January 11, 1904, at 8.30 p. m. The following was the order of exercises: Reports of the executive council and corresponding and statistical secretary; election of officers; The Bladder in Health and Disease, as Demonstrated by the Cystoscope, by Dr. Henry G. Spooner; Discussion (in which Dr. Cabot will present a Simplified Systoscope), by Dr. Frederic R. Sturgis, Dr. Eugene Fuller, Dr. Ramon Guiteras, Dr. Follen Cabot, and Dr. James Pedersen; Röntgen Rays in the Treatment of Cancerous and Skin Affections; Röntgen Rays in the Treatment of Epilepsy; Röntgen Rays in Diagnosis, by Dr. J. Herman Branth; Discussion by Dr. William J. Morton and Dr. Ludger C. Vincent. P. Brynberg Porter, M. D., Recording Secretary, Address, 150 West Eighty-fourth Street, Manhattan.

The New York Academy of Medicine, 17, 19, and 21 West Forty-third Street.—The section on Ophthalmology will meet on Monday evening, January 18th, at 8.15 o'clock. Order: Election of officers for the ensuing year. Presentation of Cases: 1. Plastic Operation on the Lids, by Dr. John E. Weeks; 2. Extirpation of Lacrymal Sac and Gland, by Dr. H. W. Wootton; 3. Melanosarcoma of the Chorioid, by Dr. J. Guttmann; 4. Lymphangeiectasia of Cornea, by Dr. E. L. Oatman. Demonstration of Specimens: 1. Diffuse Sarcoma of the Chorioid, by Dr. Arnold Knapp; 2. *(a)* Conglomerate Tubercle of Ciliary Body; *(b)* Specimens Showing Method of Cyst Formation in the Iris, by Dr. E. L. Oatman; 3. Metastatic Carcinoma of the Chorioid; Primary Growth in Ovary, by Dr. W. A. Holden and Dr. G. Y. Rusk. A. Duane, M. D., Chairman, 49 East Thirtieth Street; H. H. Tyson, M. D., Secretary, 47 West Fifty-first Street.

Dr. Lederle's New Relation to the Board of Health.—Commissioner Darlington, of the department of health, announced recently that upon his motion the board of health had unanimously voted to appoint former Commissioner Ernst J. Lederle, Ph. D., consulting sanitarian to that body. Dr. Lederle will also sit as a member of the advisory board in his capacity as sanitary adviser to the department of health. The advisory board, which he revived during his term of office, has hitherto been composed entirely of physicians. The new honorary position given to Dr. Lederle is to be held by him jointly with Professor Charles F. Chandler, of Columbia University, who, after long service as commissioner of health, was appointed by succeeding boards in a similar consulting capacity.

In announcing this appointment, Commissioner Darlington said: "I have moved the appointment of Dr. Lederle as consulting sanitarian because I feel the value to be derived by the city through this department from having his expert advice on matters of general sanitation. I understand that Dr. Lederle will give his entire time to consultation in sanitary engineering, and that he will establish laboratories where chemical and bacteriological work will be undertaken in connection with his sanitary work, and also for the examination of milk, water, and food products. Dr. Lederle, I believe, is going abroad next week for a short time to make some investigations for private corporations in this city. I have asked him to keep in mind while on the continent the work of our board of health, and give us the benefit of any suggestions he may have to offer upon his return. I think the city is to be congratulated upon securing his services for the board of health in an advisory capacity, and I trust always to have his cordial support in the work of this department, as he will have ours in his various private activities."

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g Jan. 2.		Week end'g Jan. 9.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	74	11	83	25
Diphtheria	83	23	86	17
Scarlet fever	123	5	130	6
Typhoid fever	150	20	155	22
Consumption	..	62	..	58
Cerebrospinal fever	..	..	..	..

Dr. Charles G. Frowert, a graduate of the University of Pennsylvania in 1874, died suddenly in Philadelphia on January 9th.

To Dr. S. Weir Mitchell was given a dinner last week at the rooms of the Franklin Inn Club, of Philadelphia, at which some of the distinguished members of the profession were present.

Dr. William H. Ireland, one of the old practitioners in Camden, died on January 12th, from pneumonia, at the age of fifty-nine years. He graduated from the University of Pennsylvania in 1867, and was prominent in medical societies.

Death Rate of Philadelphia for 1903.—The death rate in Philadelphia during last year was only 18.82 for every thousand in population. This is, with four exceptions, the lowest death rate in the city's history. The total number of deaths during 1903 was 25,947, and during 1902, 23,847.

College of Physicians.—Dr. Arthur V. Meigs, former vice-president of the College of Physicians, of Philadelphia, was elected to the presidency of that institution on January 6th, succeeding Dr. Horatio C. Wood. The other officers elected for the ensuing year are: Dr. James Tyson, vice-president; Dr. Thomas R. Neilson, secretary; Dr. Richard H. Harte, treasurer, and Dr. Frederick P. Henry, honorary librarian. Several physicians were admitted to fellowship, and the retiring president, Dr. Wood, read the annual address.

New Buildings for Polyclinic Hospital.—The growth of the Polyclinic Hospital, of Philadelphia, was evidenced at the public inspection last week. One of the important improvements was the Kay House, a home for nurses. Various wards have been enlarged. Much money has been expended in this enlargement of the institution.

Board of Health Closes Detention Room.—On account of the unsanitary condition of the room in which juvenile prisoners were kept, pending the disposition of their cases, the Philadelphia board of health has ordered the room closed. Until a permanent building is erected for the purpose, a pavilion on the almshouse grounds has been utilized.

Fined for Violation of Pure Food Laws.—A number of grocers and liquor dealers of Philadelphia, accused by the Dairy and Food Commission of violating the State law governing the sale of adulterated goods, were arraigned before a magistrate last week and fined. The articles comprised adulterated cherry cordial, maraschino cherries, blackberry brandy, and, in one case, oleomargarine.

The Philadelphia Pædiatric Society held a meeting on January 12th, at which the following was the programme: Exhibition of a Patient with Endocarditis, by Dr. D. L. Edsall; Exhibition of a Case Showing Signs Suggesting Aneurysm of the Aortic Arch, by Dr. S. McC. Hamill; paper on Diastasis of the Recti Muscles in Rickets, by Dr. A. P. Francine; annual address of the retiring president; election of officers.

Medico-chirurgical College.—At the meeting of the Alumni Association of the Medico-chirurgical College, of Philadelphia, held last week, the following officers were elected: President, Dr. W. Blair Stewart; secretary, Dr. Stillwell C. Burns; treasurer, Dr. Emanuel S. Gans. Executive committee, Dr. Ashton, Dr. Blackburn, Dr. Buckley, Dr. Bowman, Dr. Cramp, Dr. Crueger, Dr. Croskey, Dr. Dickeson, Dr. Egan, Dr. Fox, Dr. Godfrey, Dr. Gubbins, Dr. Gans, Dr. Hammer, Dr. Haehnlen, Dr. Levy, Dr. Lowenburg, Dr. McGlinn, Dr. McKenna, Dr. O'Neill, Dr. Pfromm, Dr. Smith, Dr. Shoemaker, Dr. Warmuth, Dr. Wilkins.

Philadelphia Obstetrical Society.—A stated meeting of the society was held on January 7th. Two papers were on the programme, entitled as follows: A Report of Four Cases of Hysterectomy, by Dr. George Erety Shoemaker; Artificial Dilatation of the Cervix, by Dr. Stricker Coles. The following officers were elected: President, Dr. Richard C. Norris; first vice-president, Dr. Wilmer Krusen; second vice-president, Dr. F. Hurst Maier; secretary, Dr. J. W. West; treasurer, Dr. F. H. Hammond; curator, Dr. A. J. Downes.

The American Society of Tropical Medicine.—The first public meeting was held at Houston Hall of the University of Pennsylvania, Philadelphia, on January 9, 1904. Dr. James M. Anders, a vice-president of the society, was in the chair. A brief statement of the scope and workings of the society was made by the secretary, Dr. Joseph McFarland, after which the speaker of the evening, Dr. James Carroll, of the United States Army, and a former member of the commission appointed by the surgeon general of the army to investigate yellow fever at Havana, Cuba, made an address upon The Ætiology of Yellow Fever.

Dr. Carroll reviewed in an interesting manner the early researches upon the ætiology of the disease, giving special consideration to the work of Freire, Sanarelli, and Finlay, then reviewed the work of the commission whose researches have now become world-wide, and resulted in the proof that we have no reason to believe that yellow fever is propagated by any other means than the bites of the mosquito, known as *Stegomyia fasciata*. It is only the female mosquito that bites, therefore, only the female mosquito that becomes infected. The mosquito is able to impart the disease only after twelve days have elapsed, since its own infection, and may retain the ability to infect after many months, providing it does not meet with destruction in the meantime. A description of the experiments made to show the infectiousness of fomites, seemed to exclude all possibility of yellow fever being transmitted directly.

It was with pleasure that the speaker reported that confirmation of all the work of the United States commission had been given by the more recently-appointed French commission.

Information regarding the society, its objects, and its workings can be had by applying to the secretary, Dr. Joseph McFarland, Medicochirurgical College, Philadelphia.

GENERAL

Board of Health, of Melrose, Mass.—Dr. Paul H. Provandle, Dr. John T. Timlin, and Dr. J. H. Robinson, members of this body, have tendered their resignations.

Surgeon to the Big Four Railway.—Dr. W. O. C. Harding, of Elmwood Place, Cincinnati, O., has been appointed surgeon of the Millcreek Valley district of this road.

Death from Headache Tablets.—The death of a woman in Duluth, Minn., is reported from a dose of two headache tablets; six hours' unconsciousness preceded the fatal result.

The City Hospital Medical Board, of Cincinnati, O., at its reorganization on January 4th, elected as officers: President, Dr. A. B. Isham; vice-president, Dr. Louis Schwab; secretary, Dr. Byron Stanton.

The St. Joseph's County, Ind., Medical Society has elected officers for the current year, as follows: President, Dr. R. B. Dugdale; vice-president, Dr. Dudley Fulton; treasurer, Dr. C. M. Butterworth; secretary, Dr. H. F. Mitchell.

The Provident Hospital, Chicago, at Thirty-sixth and Dearborn Streets, has established a children's department of which colored nurses, which that institution is training, will be in charge. An outdoor clinic, under the supervision of Dr. William Carver Williams, will be open Tuesdays and Fridays at 4 p. m.

Statement of Mortality in Chicago, Ill., for the Week Ending January 9, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on estimated mid-year populations of 1,950,000 for 1904, and of 1,885,000 for 1903:

	Jan. 9, 1904.	Jan. 2, 1904.	Jan. 10, 1903.
Total deaths, all causes	516	604	625
Important causes of death:			
Acute intestinal diseases	17	15	22
Apoplexy	16	18	12
Bright's disease	38	52	28
Bronchitis	20	28	30
Consumption	44	56	59
Cancer	22	16	24
Convulsions	20	15	8
Diphtheria	10	11	11
Heart diseases	33	42	45
Influenza	3	5	4
Measles	1	0	3
Nervous diseases	20	23	31
Pneumonia	114	146	135
Scarlet fever	2	3	16
Suicide	9	8	5
Typhoid fever	7	8	29
Violence (other than suicide)	30	29	33
Whooping cough	0	1	10

The Hopkins County, Ky., Medical Association, at its meeting in Madisonville on December 18th, elected: President, Dr. T. W. Gardiner; vice-president, Dr. Benjamin P. Earle; secretary, Dr. R. W. Long.

The Medical Profession of Kentucky intend to petition the legislature to create a State board of medical examiners to inquire into the qualifications of those desiring to practise in that State in the future.

Grand Jury Condemns Cold Trolley Cars.—In emphatic terms the grand jury of the January session of the Lackawanna County Court condemned the overcrowded and unheated trolley cars operated in Scranton, Pa.

The North Kentucky Medical Association met at Petersburg, Ky., on December 17th at Walton, electing the following officers: President, Dr. Menifee, of Walton; secretary, Dr. Zinn, of Williamstown.

The South Baltimore, Md., Eye, Ear, and Throat Hospital has elected the following officers for the current year: President, Olin Bryan; vice-president, Edward H. Fowler; treasurer, George Frame; secretary, Dr. H. E. Peterman.

The Jefferson County, Ala., Medical Society has elected the following officers for 1904: President, Dr. L. G. Woodson; vice-president, Dr. R. H. Hardwick, of Pratt City; censor, Dr. E. H. Sholl, of Birmingham.

Boston City Hospital.—Dr. Frank H. Holt has become assistant superintendent of this institution, succeeding Dr. E. S. Abbott, who becomes assistant superintendent of the McLean Hospital at Waverley.

The Western Surgical and Gynæcological Association has selected Milwaukee, Wis., as their next meeting place on December 28 and 29, 1904. The following officers will serve meanwhile: President, Dr. C. H. Mayo, of Rochester, Minn.; first vice-president, Dr. H. D. Miles, of Salt Lake, Utah; second vice-president, Dr. L. L. McArthur, of Chicago, Ill.; secretary-treasurer, Dr. B. B. Davis, of Omaha, Neb.

The Woman's Charity Club Hospital, of Boston, Mass., has received the sum of $2,000 by the will of the late Mrs. Mary D. Converse, of Malden. The Malden hospital has received $2,500.

Children's Free Hospital, of Milwaukee, Wis.—There was a public inspection of this institution on New Year's Day, and, on the 4th and 5th instants, the little patients were moved from the Farwell Avenue building to the new edifice.

The Louisville, Ky., National Medical College Company has recently substituted new articles of incorporation for those under which it has operated since 1886. The company conducts a college for negro students.

The Spencer County, Ky., Medical Society, on January 4th, elected the following officers: President, Dr. H. C. Mathis; vice-president, Dr. Edward Williams; secretary and treasurer, Dr. Wiley Rogers.

The House Surgeons of St. Vincent's Hospital, Cleveland, O., held their annual banquet on December 16th, and of the sixty-four physicians who have held that position since 1865, thirty-one were present.

The Montreal, Can., Board of Health has accepted an offer from a local architect to build a new city morgue for the sum of $15,000. The building will be open to the students of the three medical schools of the town.

State Board of Health of Wisconsin.—Dr. Haso Meilike, of Clintonville, has been appointed a member of this board till February, 1910, to succeed Dr. J. W. Harrison, of Ashland, whose term has expired.

The Directors of Longview Hospital, Cincinnati, O., are negotiating for thirty-one acres of land adjoining the present institution, which, if secured, will allow them 130 additional acres of land, much needed for a garden and other outdoor facilities.

Queen's University, Kingston, Can., has asked the Canadian government to establish a pathological laboratory in their medical school in connection with the provincial board of health. Such an institution would save doctors in the neighborhood from the necessity of sending their specimens to Toronto for free examination.

The University of Maryland has received a valuable gift to its medical department of 1,000 volumes, composing the medical library of the late Dr. Wardlove Miles. Most of these works pertain to physiology and diseases of the nervous system, and there are besides a number of journals and translations of articles on the same subjects.

The Medical and Chirurgical Faculty, of Maryland, has decided to ask the State legislature for an appropriation of $50,000 to provide a suitable hall and library building for the faculty, the present quarters at 847 North Eutaw Street, being greatly overcrowded by the 15,000 volumes in the faculty's library, so that only some 175 members of the total 800 can be accommodated.

The Emergency Hospital, of Washington, D. C., has severed its connection with the training school for nurses, maintained in connection with the Washington Asylum Hospital.

Atlanta, Ga., Hospital for Incurables.—The cornerstone of this institution, to be situated at the corner of Woodward Avenue and Boulevard, was laid with impressive exercises on Sunday, January 3rd, at 2 p. m.

The Brigham Hospital of Boston.—Justice Le Baron B. Colt, of the United States Circuit Court, has handed down a decision whereby the $5,000,000 willed to found this institution by the late Peter B. Brigham, will be used for that purpose. The heirs at law had contested the will.

New and Dangerous Swindle.—In Denver, Col., a man, representing himself as a health inspector, has been going about where contagious disease signs are displayed and offering to remove them at prices varying from five dollars up. It is regrettable to learn that he has received large sums of money from those willing to connive at the breaking of the law and the imperiling of the lives of their neighbors.

Academy of Medicine of Toledo and Lucas County, O.—At a regular meeting of this organization, held January 8th, the following officers were elected: President, Dr. John A. Wright; vice-president, Dr. Charles Betts; recording secretary, Dr. Charles P. Wagar; financial secretary, Dr. P. G. Tait; treasurer, Dr. W. W. Grube; members of board of censors, Dr. H. E. Smead, Dr. W. J. Gillette; member of library board, Dr. A. L. Steinfeld.

Radium in an Italian River.—Dr. Francolini, of Rome, Italy, has published a statement to the effect that the source of the Clitumnus, a small Umbrian River sacred to the Romans, may contain radium, basing his opinion on a description by Pliny and on passages in the works of many writers and poets from Virgil to Byron. The waters at the source of the river are the color of violet. The matter is being investigated by scientists.

The First French Congress of Climatotherapy and Hygiene of Towns will be held at Nice from April 4 to 9, 1904. President, Dr. A. Chantemesse; vice-presidents, Dr. Renaut, of Lyons; Dr. Grasset, of Montpellier; Dr. Calmette, of Lille, and Dr. Balestre, of Nice. Discussions will be held on five questions: The Climate of the French Mediterranean Coast; Adaptation of the Individual to Climate; Influence of the French Mediterranean Coast Climate on Tuberculosis and Tuberculous Patients; Influence of the Climate of the French Mediterranean Coast on Rheumatism and Rheumatics; Disinfection of Towns.

Travelling facilities in France and abroad will be increased, and hotel rates at Nice will be reduced to members of the congress and their families. Further particulars may be obtained of Dr. Hérard de Bessé, secretary general of the congress, Beaulieu-sur-Mer, France. Applications for membership should be addressed to Dr. Bonnal, treasurer, 19 Boulevard Victor-Hugo, Nice, Alpes Maritimes.

Pith of Current Literature.

ZEITSCHRIFT FUER GEBURTSHILFE UND GYNAEKOLOGIE.

Volume 50, Book 2.

1. Contributions to the Pathology of the New Born, By HAMMER.
2. Endothelioma Ovarii Lymphaticum Cysticum, By E. SCHUERMANN.
3. Combination of Cancer and Tuberculosis of the Uterus, By J. WALLART.
4. Lipoma Fibro-myomatosum Uteri, By OTTO SEYDEL.
5. Histological Diagnosis of Abortion (A polemic), By L. SEITZ.
6. Curability of Cancer, By R. LOMER.

1. **Pathology of the New Born.**—Hammer reports five cases of interest. Three were cases of sudden death of the child during or immediately after birth; two of these were due to diminished vitality (*Lebensschwäche*) and are minutely described. Another case was described in which no assignable cause for death could be found after most profound examination. Another case was that of a child which died seven days after birth with the signs of a deep jaundice. Autopsy disclosed a large angeioma of the liver. An additional case was that of a cyclops.

3. **Cancer and Tuberculosis of the Uterus.**—Wallart reports three such cases. In one case a curetting disclosed an adenocarcinoma and masses of tubercle tissue. In the second case, a secondary genital tuberculosis, primary in the lungs, complicated a cancer of the cervix. In the third case, circumscribed cheesy tubercle tissue in the endometrium was found together with an advanced cervical cancer.

6. **Curability of Cancer.**—Lomer contributes a very important original paper on the subject. He shows, in the first part, that many cases of cancer are cured by the actual cautery and by the electric snare, even when it is certain that all carcinomatous tissue has not been removed. Many cases recover to the great surprise of the operator who has applied the cautery only for the purpose of doing something. These instances show that under some circumstances cancerous tissues are taken care of by the body. In the second part, Lomer points out the occasional curative action of fever upon cancer, the growth undergoing retrograde metamorphosis during the course of an accidental infectious disease. The action of erysipelas, the injection of streptococci and infection by malaria could be classed among the febrile disorders which were apparently of benefit to cancerous patients, while severe burns and great loss of blood seemed also to inhibit the growth of cancer. It is a striking thing how well persons with carcinoma endure severe loss of blood and how, on the other hand, strong and vigorous individuals rapidly suffer from recurrence. Cancer is easily influenced in its cell structure, apparently, by deep changes in the blood like those mentioned. These considerations have led the author to experiment with a hæmolytic serum on which he is, however, not yet ready to report. The treatment of the future will be that which will place the organism in a position to destroy cancer tissue left after an operation. The third part of the paper is casuistic. [The whole article is exceedingly suggestive and full of new ideas. It should be read in the original.—ED.]

VIRCHOW'S ARCHIV.

November 4, 1903.

1. Chorioepithelioma Originating Away from the Placental Site, By O. BUSSE.
2. Embryonal Tumors of the Genital Glands, By H. STEINERT.
3. Adenoma and Carcinoma in Gærtner's Duct, By R. MEYER.
4. Origin of the Blood Plates, By P. SCHNEIDER.
5. Case of Acute Leucæmia, By F. PARKES WEBER.
6. Experimental Fat Synthesis, By F. FISCHLER.
7. Action of the Purin Bodies, By J. WALKER HALL.
8. Cryoscopy of Animal Organs, By BLANCK.
9. Sugar Excretion after Adrenalin Injections, By E. ARONSOHN.

1. **Chorioepithelioma.**—Busse reports two cases in which the growth developed at a site different from the placental insertion. The first was of a woman who, six months after abortion, suffered from intense headaches and who died two weeks later in unconsciousness. At the autopsy, the entire left ventricle of the heart was found to be the seat of a tumor, with deposits in the brain, liver, lungs, spleen, kidneys, and intestines. No primary growth was found in the uterus. The second case was that of a young woman who had aborted a short time before her death. A growth was found in the parametrium, the vagina and the lungs, but the uterus was free, except for its general resemblance to a uterus in a case of extra-uterine pregnancy. The first case showed syncitium cells in abundance on microscopic examination, the second a predominance of Langerhans's cells.

2. **Embryonal Tumors of the Genital Glands.**—Steinert records a case in which the remarkable features lay in the metastases. In the primary growth, a tumor of the testicle, the size of an egg, pavement and cylindrical epithelium and smooth muscle fibres were found, as well as tissue resembling chorioepithelioma with syncytium and Langerhans's cells. In a retroperitoneal gland, osseous tissue was found resembling embryonal bone with distinct marrow spaces. In a deposit in the liver, an ependymal structure was noted.

4. **Origin of Blood Platelets.**—Schneider's investigations lead him to the conclusion that the blood platelets must be regarded as cell derivatives and not as independent cells. They are derived from the red blood cells and occasionally from the white. Most of the platelets possess nuclei which can be stained.

9. **Sugar Excretion and Adrenalin.**—Aronsohn says that adrenalin injected into rabbits, intravenously or subcutaneously, evokes an excretion of sugar. This mellituria disappears if fever intervenes. If the mellituria is associated, however, with severe organic disease, the inhibitory action of the fever upon the sugar excretion may disappear.

PRESSE MEDICALE.

December 5, 1903.

1. Metatraumatic Osteoarthropathies, By H. ROGER, and M. GARNIER.
2. New Method of Discovering Tubercle Bacilli in Pathological Liquids, By NATTAN-LARRIER.

1. **"Metagmic" Osteoarthropathies.**—Roger and Garnier propose this name for a class of peculiar trophic symptoms they have observed after fracture of the lower ends of the radius and ulna; the patient cited left the hospital on the nineteenth day, but did not recover full use of the arm for six months. Gradually the hand became deformed, the fingers hypertrophied as well as the ends of the radius and ulna. The lesion attacked especially the metacarpophalangeal joints of the second and third fingers. The authors attribute the condition to alteration of nutrition in all the supplying nerves, radial, median, and ulnar, caused by the callus following the fracture.

2. **Research of Tubercle Bacilli.**—Nattan-Larrier's method is based on the rapidity with which the bacilli multiply in the mammary gland; inoculation is made from the suspected fluid into the mammary gland of a cow in full lactation, about 45 drops being used. From the fifth to the fifteenth day later on, a small nodule will develop in the gland, and the milk may be drawn off for examination by the usual bacteriological methods. If bacilli were present in the suspected fluid, they will reappear in the milk.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

October 18, 1903.

1. Observations on Relapses of Lobar Pneumonia, By B. LOVERA.
2. Subconjunctival Injections of Corrosive Sublimate in Corneal Ulcers, By Dr. A. DE BLASI.
3. Closing Lecture of the Academic Year 1902-1903, By E. MARAGLIANO.

1. **Relapses from Pneumonia.**—Lovera reports three cases of pneumonia in which relapses occurred within a few days after the resolution had taken place. The patients were a woman aged sixty-one years, a youth of nineteen, and a man aged thirty-eight, and their histories prove that relapses of pneumonia may occur at any age and in both sexes. The second attack of pneumonia manifested itself from four to seven days after the complete apyrexia of the crisis of the first attack. In all three cases the relapse was more benign than the first attack, and in all the lobe that had been involved in the first attack was affected in the second. This excludes the possibility of a migrating or erysipelatous pneumonia reappearing in another lobe, in these cases.

2. **Subconjunctival Injections of Sublimate in Corneal Ulcers.**—De Blasi states that he has had splendid results with the use of injections of solutions of mercuric bichloride in corneal ulcers, the injections being made into the subconjunctival tissues. The treatment is not difficult of execution, and is adapted for use in general practice. The author reports four cases of extensive corneal ulcerations in which great benefits were derived from this simple operation. The solution used consisted of mercuric bichloride, 5 centigrammes; mercuric chloride, 10 centigrammes; boiled distilled water, 100 grammes. The ordinary hypodermic syringe with a very fine needle sterilized in the flame was used. The eye having been cocainized the patient was placed in the horizontal position and the speculum was inserted. A fold of the bulbar conjunctiva was next taken up with a forceps and the needle of the syringe was introduced beneath this fold. Or, more simply, the needle was introduced under the conjunctiva and its course was followed with the eye. The solution was then gently injected. The site of the injection does not matter, provided it corresponds to the situation of the ulcer. The amount of liquid to be injected varies from one half to three quarters of a cubic centimetre, and care must be taken, not to inject too much fluid, as otherwise the conjunctiva becomes distended and may undergo necrosis. In most cases a single injection is sufficient, but if not the treatment may be repeated in a few days.

October 25, 1903.

1. Congenital Hernia in the Law as to Incapacity to Work, By CARLO MOMO.
2. An Extensive Wound of the Laryngotracheal Region, By S. CERAULO.
3. Epicystotomy in Grave Retentions of Urine Due to Urethral Stricture, By G. DE FRANCHIS.
4. The Pathology of Anthrax and Sclavo's Serum, By N. NATALE.
5. Myiasis Due to Cephalomyia Ovis, By S. SAITA.

2. **Wound of the Throat.**—Ceraulo treated a wound of the throat inflicted with a knife with suicidal intent, extending from the angle of the jaw almost across the whole neck. The hyoid bone, the thyreoid membrane, and the internal jugular vein, among other important structures, were found wounded, but as the respiration continued free, the damage was repaired without having recourse to tracheotomy, and the patient completely recovered without any of the ordinary consequences of such wounds, such as stenoses, fistulæ, etc.

3. **Cystotomy in Retention of Urine.**—De Franchis emphasizes the importance of suprapubic cystotomy in the treatment of retention of urine due to stricture. This operation is much simpler and safer than external urethrotomy. It is to be preferred to puncture, which is a blind and uncertain procedure. A case cited by De Franchis in illustration, shows the rapid improvement following the performance of suprapubic cystotomy in cases of retention of urine from an impassable stricture. The author strongly recommends the suprapubic route as the safest and best in such cases.

BOSTON MEDICAL AND SURGICAL JOURNAL.

January 7, 1904.

1. Obstetrical Nursing, By A. WORCESTER.
2. On Some Questions Relative to Extrauterine Pregnancy, with Especial Reference to Tubal Abortion, By MALCOLM STORER.
3. Typhoid Fever in Children, By ADOLF BAGINSKY.
4. The Finsen Light Cure, By H. JOHN STEWART.

2. **Extrauterine Pregnancy.**—Storer reports a number of cases in order to illustrate the extreme difficulty which may at times arise in trying to make a positive diagnosis in cases having some of the symptoms of extrauterine pregnancy. The author considers that the question of diagnosis is "in rather an unsatisfactory condition." When it comes to treatment there are five points that deserve special attention. Should a case seen immediately after rupture—in collapse and acute and profound anæmia—be operated upon at once? Yes. (2) With a diagnosis of probable unruptured extrauterine pregnancy, is it better to operate at once or wait until the diagnosis is certain? A reasonable probability implies an immediate operation. (3) Given a tubal abortion, say a month or so before the patient is seen, is it better to operate, supposing one can feel a mass, or to allow Nature to take care of it? It is more surgical and certain to clear out the pelvis. (4) Shall the operation be done below or above? By the suprapubic route. (5) What shall be done with the placenta in cases of extrauterine pregnancy at full term? The author has had no experience with this condition. In certain cases it may be better to attempt to remove the placenta at once, in other cases it may be best to let it come away by itself.

MEDICAL NEWS.

January 9, 1904.

1. The Mortality of Appendicitis, By Frederic S. Dennis.
2. The Relation of Proteids to Œdema in Marantic Children; with Uranalyses in Infantile Diarrhœa, By Palmer A. Potter.
3. Diagnosis of Gall Bladder Diseases, By J. Thompson Schell.
4. The Diagnostic Value of the Röntgen Rays, By Charles Lester Leonard.
5. The Value of Climate in Genitourinary Tuberculosis, By W. H. Prioleau.
6. Seasickness, By William F. Waugh.

1. **The Mortality of Appendicitis.**—Dennis asserts that the limit of perfection in the surgical treatment of appendicitis has probably almost been reached. If, therefore, there is to be a reduction in the mortality rate from this disease it must come as a result of earlier diagnosis and more prompt surgical intervention. The author gives the following general rules: "If the case is not pursuing a favorable course after thirty-six hours of recognized medical treatment, it should be relegated to the domain of surgery. If the case is doing well within the limit of time mentioned, delay is possible as far as immediate operative interference is concerned; but still the case should be referred to a surgeon with a view to an interval operation. It would be a sad calamity for a patient to succumb to a fatal recurrent attack for want of having had an opportunity offered him to prevent his or her death. If the opportunity has been offered and the patient declined the operation, the responsibility rests with him, or with her, and the family physician is relieved of that responsibility."

2. **The Relations of Proteids to Œdema in Marantic Children.**—Potter has investigated the condition of the kidneys in children suffering from diarrhœal diseases. The object of the study was to determine, if possible, the indications or counterindications for the use of alcohol. The author reaches the following conclusions: (1) Acute diarrhœas—not protracted cases—are not accompanied by kidney involvement; (2) alcohol is not, therefore, injurious in this condition, if necessary for use as a stimulant; (3) œdema during a diarrhœa in marantic infants is a bad sign, it is not necessarily ante mortem, it is not due to the heart or kidneys, and (4) the bad general condition is best treated by disregarding the diarrhœa and increasing the strength of the proteids.

4. **The Diagnostic Value of the Röntgen Rays.**—Leonard distinguishes between positive and negative results. It is of as much value, for instance, to demonstrate, by means of the x ray, that a stone in the kidney is absent, as it is to be able to prove its presence.

5. **The Value of Climate in Genitourinary Tuberculosis.**—Prioleau asserts that there are three important points to be attended to in the treatment of genitourinary tuberculosis: (1) Proper climate; (2) proper food; and (3) urinary antiseptics and sedatives—both by the mouth. Local treatment is rarely of service: it may do harm. The kind of climate best adapted to such cases is the kind usually recommended for pulmonary tuberculosis. A moderate altitude and dryness seem the chief requisites. Possibly genitourinary cases might do well at the seaside or in pine wood at almost sea level.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 9, 1904.

1. Typhoid Fever. Some Unconsidered Hindrances in Its Prophylaxis, By John S. Fulton.
2. Shall We Operate on Deformed Sæpta in Cases of Atrophic Rhinitis, By Kate W. Baldwin.
3. The Distribution of Blood Vessels in the Labyrinth of the Ear, By George E. Schamburgh.
4. Professional Responsibilities, By A. E. Baldwin.
5. Tolerance of the Tissues to Foreign Bodies, with Special Reference to the Pulp and Gums, By M. H. Fletcher.
6. Arthritis Deformans. The Report of a Series of One Hundred and Ten Cases from the Johns Hopkins Hospital (from the Clinic of Professor Osler) (*Continued*), By Thomas McCrae.
7. Urethrotomy by the Combined Use of An Anterior and Posterior Sound Used as Guides, the Latter by Means of Prevesical Puncture with a Curved Trocar Cannula Designed for the Purpose, By G. W. Penn.

1. **Typhoid Fever.**—Fulton's article should be read in its entirely. It exposes, in a most satisfactory manner, various medical fallacies, chief among which are the "malarial" and "typhomalarial" fallacies. We can give only some of the author's chief deductions. Of all the cases of typhoid that come under professional care, fully one-half are not recognized as typhoid. Typhoid is a disease of rural districts, and the propagation of the disease is in general from the country to the town. It is the wide diffusion of the disease, as well as its too infrequent recognition, that renders its prophylaxis so generally faulty. The prophylaxis of typhoid fever consists essentially

in defense against excremental contamination, and precisely as the barriers are more or less remote from the sources of infection is the defense less or more effective. In this view of the prevention of typhoid fever it must appear that, nothwithstanding the very great value of the defenses on which cities most rely, these defenses do not, and by their widest conceivable extension can not, satisfy the requirements of a rational prophylaxis of typhoid fever. In town and country alike, the appointed time and place for intervention against the spread of typhoid fever is whenever and wherever a case of typhoid fever is recognized. Those outbreaks of typhoid which from time to time scandalize great cities and bring down wrath on the authorities are, as a rule, less important than, and may be part of, unremarked, unopposed, or perhaps lie-coddled epidemics covering the countryside for miles around. To set up at the city gates expensive works for the purification of the public water supply as a main defense against water-borne disease is literally a preposterous arrangement. It waives the choice of time, place, and weapons, conceding all these advantages to the enemy. It assumes that the vices of rural insanitation are invincible, but they are not. If there is one direction in which, more than another, the political influence of great cities should be exerted, it is to bring rural districts and small communities under legal obligation to render strict account of deaths and the causes of death, and to take and give good heed to the preventable diseases at the time and place of their occurrence.

2. **Shall We Operate on Deformed Sæpta in Cases of Atrophic Rhinitis?**—Baldwin's advice is: "After a careful study of the cases and a few thorough cleansings, operate. Operate first on the sinuses of the roomy side if they are involved. As completely as possible correct the sæptal deflections, removing only the thickenings necessary to bring the sæptum into the median line. Later smooth up the sæptum as the individual case may demand. The tissues have not the recuperative power of normal nasal tissues, and much care must be used in the operation, not only to remove as little tissue as possible to gain the desired correction, but to make no undue or unequal pressure, especially on the cartilages. Change the splint frequently and continue its use the shortest time possible. Never use a pin in an atrophic sæptum.

7. **Urethrotomy.**—Penn recommends the following method of performing urethrotomy in cases of impermeable stricture. An ordinary sound is passed into the anterior urethra as far as it will go. A special curved trocar and cannula are then introduced into the bladder by suprapubic puncture, and the urine is removed. The bladder is then fully filled with sterile salt solution. Through the cannula, the trocar being removed, a curved sound is passed into the bladder and is made to enter the urethra. This part of the operation is not so difficult as the passing of a Eustachian catheter. The points of the two sounds are now felt for in the perinæum and are easily located. An external urethrotomy is performed, using the ends of the two sounds as guides. The author has employed this method twice with the greatest satisfaction.

MEDICAL RECORD.

January 9, 1904.

1. Ætiology of Rheumatism: Obscurity, Insidiousness, Prevention, and Management in Childhood, By Joseph E. Winters.
2. Remarks on the Management of Fractures Involving the Joints, By Virgil P. Gibney.
3. The Principles of Diagnosis of Medical Malingering, By John Punton.
4. Congenital Orbital Sarcoma of Endothelial Origin in An Infant. Operation and Preservation of Globe, By Mortimer Frank.
5. Mixed Anæsthesia, with Special Reference to the Administration of Hyoscine Hydrobromate before Ether, By E. A. Robertson.
6. The Early Diagnosis of Pulmonary Tuberculosis, By Floyd S. Clarke.
7. A Simple and Accurate Method of Examining the Stools for Gallstones and Other Solid Bodies, By Howard Lilienthal.

1. **Ætiology of Rheumatism.**—Winters confines his remarks, almost exclusively, to rheumatism as it occurs in childhood. The article abounds in passages printed in italics, which represent what the author believes to be the fundamental facts on which a correct understanding of the subject must be based. We cannot go into details. Dogmatically stated, the author's theory is this: Rheumatism is caused by non-neutralized acid products of proteid metabolism. It is cured by the basic constituents of food. Vital processes of tissue cells are dependent upon alkaline tissue fluids. In the normal state, acids of metabolism are immediately neutralized by bases held in organic combination with the proteid, and by alkaline carbonates derived from the oxidation of vegetable acids. When the foods ingested by a child are poor in substances which are capable of maintaining the alkaline condition of the body juices, the acid products of metabolism are neutralized at the expense of the alkalies in the blood. This is the first step in the rheumatic process, and the severity of the resulting condition is directly in proportion to the extent to which the body juices have been robbed of their normal alkaline constituents, in order to neutralize the excessive acid products of metabolism. So much for the theory of the ætiology of rheumatism. The treatment, omitting details, can be summed up as follows: "Unerring chemical laws plainly order and prescribe rich potassium-containing foods, and fruits charged with the vegetable acids. . . ." Acute attacks, in addition to this, will call for the usual antirheumatic remedies.

2. **Fractures Involving the Joints.**—Gibney's paper is essentially a plea for plaster of Paris as a dressing for fractures involving the joints. The author's experience as an orthopœdic surgeon leads him to the belief that if plaster dressings were generally used by general surgeons, their results, in the class of injuries under discussion, would be very more much favorable than they have been up to the present time. The author devotes special attention to hip-joint and elbow-joint fractures. With regard to the latter, he favors setting the arm in the position of full extension for at least the first ten days or two weeks. In cases of elbow-joint or knee-

joint fractures in which there is much effusion, aspirating the joint will materially help in getting good results. If displaced fragments have produced mechanical obstruction to restoration of function "it is not a dangerous procedure to open the joint and restore the normal relationship of the surfaces, one to the other."

3. **The Diagnosis of Medical Malingering.**—Punton reports one case at length, in order to illustrate the difficulties of reaching a diagnosis in cases of medical malingering. It will be of service, in reaching a correct conclusion, to bear in mind that all cases of feigned disease can be reduced to three classes. (1) The first consists of cases in which the patient under some morbid impulse or fear *involuntarily feigns* disease, as seen in some forms of hysteria or neurasthenia. (2) The second class includes cases of *voluntary exaggeration of real morbid symptoms*, or manifestations superadded to genuine ones, including deficient powers of subjective analysis. (3) The third class embraces cases of deliberate and *distinctly planned deceit of factitious disease*, or purely voluntary morbid creations, thus constituting unadulterated intentional fraud or medical malingering of the worst type. It is to the third class of cases that the author gives the most attention.

5. **Mixed Anæsthesia.**—Robertson reports the results he has obtained by giving one one-hundreth of a grain of hyoscine hydrobromide half an hour before the beginning of the ether inhalations. He has tried the method, so far, fifty-seven times, and believes it to be of great value. Whether the injections of hyoscine hydrobromide are without danger time alone will show. Among the advantages claimed for the innovation suggested, the following may be enumerated: The period of excitement is shortened and the excitement itself is reduced in intensity; complete anæsthesia can be obtained in a shorter time—the average time required by the author in fifty-seven cases was five and one-half minutes; the quantity of mucus produced by the ether irritation is greatly reduced; vomiting after anæsthesia is less frequent and less severe.

7. **Examining Stools for Gallstones.**—Lilienthal advises that the stools be passed into a double gauze bag. The bag can then be allowed to hang in the hopper of the water-closet and be flushed as often as necessary, that is, until all the soluble matter has been washed away. This method of looking for gall stones is accurate and less unpleasant than others.

AMERICAN MEDICINE.

January 9, 1904.

1. Amputation at the Hip Joint for Sarcoma, with a Report of Seven Cases, without Mortality; Subsequent History of Patients, By William B. Coley.
2. Can Our Procedures for the Judicial Determination of the Cause of Death Be Bettered? By Solomon Solis Cohen.
3. Observations on Uncinariasis, By Louis M. Warfield.
4. Results of an Experimental Treatment of Epileptic Insanity, By J. W. Wherry.
5. Care of Sputum of Tuberculous Patients, By J. W. Kime.
6. Ithaca Epidemic of 1903 (*Illustrated*), By Luzerne Coville.

1. **Amputation at the Hip Joint for Sarcoma.**—Coley, in the past fourteen years, has performed hip joint amputation for sarcoma seven times, and has amputated just below the trochanter four times. He reports all these cases in his present paper. His results were as follows: Of the seven patients treated by hip joint amputation two died within one year, two within two years, one lived four years, one case could not be traced, and one case was operated on recently. Of the four patients with sarcoma, treated by high amputation just below the trochanter, one with sarcoma of the femur, died four months afterward of lung metastases; the second, with sarcoma of the femur, had a local recurrence at the end of a year and a half; disarticulation was then performed, and the patient lived for two years longer, when he died of generalization of the disease; the third case in which amputation below the trochanter was performed, was a multiple melanotic sarcoma of the skin of the thigh—the patient died four months later of generalization and internal metastases; the fourth case was a recurrent sarcoma of the thigh, primary in the tarsus; there was a local return in the gluteal region, which disappeared under the use of the mixed toxines. The patient is alive and well at present, six years after amputation. The author discusses the suggestion of Mikulicz, that resection of the femur, rather than hip joint amputation, should be resorted to, and concludes that such a procedure would be certainly unwise in periosteal sarcoma of the femur. The x ray has apparently at times done good. The same can be said for the mixed toxines. The author concludes his article with the following summary: (1) Sarcoma of the femur is a malady so dangerous to life, so prone to early metastasis, that only the most radical operation should be performed, and that at the earliest possible moment. (2) Hip joint amputation is to be preferred to resection or to amputation through the shaft. (3) Recurrence being the almost invariable rule after all methods of operation, a thorough course of mixed toxine treatment after operation, as a prophylactic, offers the best hope of permanent cure.

3. **Uncinariasis.**—Warfield asserts that the southern "cracker" is the result of uncinariasis infection. He hints at what may be expected from certain southern districts when this disease has once been stamped out. The author believes that uncinariasis is one of the most common diseases of the south; that to it are due most of the cases of anæmia, especially in childhood; and that many cases of so-called chronic malaria are not malaria at all, but are really the disease under consideration. The author's view of the subject is this:

"That ground itch and uncinariasis are related, in that one predisposes to the other is, in my opinion, beyond doubt. The mode of infection I believe is as follows: Children are not any too cleanly about their person. Nails are long, full of dirt, and the hands are carried to the mouth constantly. Ground itch well deserves its name, as there is probably no skin disease in which the patient feels more like tearing his flesh out than this. The itching is constant but worse at night. Children literally do tear their flesh, breaking the vesicles, and scratching the raw flesh. I believe that the embryos get on the fingers, beneath the nails, and in that way are carried to the mouth. The habit, too, of drinking water in the hollows of the hands is an easily conceivable mode of infection. The children in such cases infect the water with their hands. Finally, some certainly are infected by drinking water containing embryos that have been washed in from the soil, as is shown by the three patients, who, although having eggs in the stools, yet never had ground itch."

Warfield, does not believe it probable that the parasite can reach the intestine by any other route than by the mouth. He does not accept the theory of Loos, that infection occurs through the skin.

4. **The Treatment of Epileptic Insanity.**—Wherry reports the results obtained, at the Clarinda State Hospital, by treating epileptic insanity on the theory that the epileptic condition is due to vasomotor spasm brought about by autointoxication. The treatment consisted in "a combination of vasodilating drugs with a saline cathartic and an alterative . . . ;" the particular drugs are not mentioned. The results are, as far as possible, tabulated, and can only be adequately appreciated by reading the paper. Before the treatment was begun, seven patients had a total of about 260 convulsions a month. At the end of one year the total number of convulsions per month was reduced to about 80; at the end of the second year the number of convulsions were only about 20 a month. Apart from the convulsions, the general condition of the patients was so improved that furniture, plants, bric-a-brac, etc., could be placed in the ward and the number of nurses necessary, to maintain order, was reduced by one half. The author does not assert that the problem of epilepsy has been solved. He believes, however, that something of real value has been added to our knowledge of the disease.

BRITISH MEDICAL JOURNAL.

December 26, 1903.

1. Observations on Diabetic Coma; with Special Reference to Betaoxybutyric Acid as an Ætiological Factor, By C. Douglas.
2. Some Observations on the Temperature of Coma, By J. E. H. Sawyer.
3. The Stage of Invasion in Measles, By R. W. Marsden.
4. Some Remarks on a Case of Chloroma, By P. S. Hichens.
5. On the Relation of the Argyll Robertson Phenomenon to Syphilis, By J. M. Clarke.
6. On Sudden Heart Failure in Toxæmic Conditions, with a Special Reference to Diphtheria and Beri-beri, By A. Stanley.
7. A Case of Complete Ophthalmoplegia Occurring During Whooping Cough, By B. W. Gowring.
8. Acute Rheumatism: Five Cases of Apparently Direct Infection, By E. S. Hawthorne.

1. **Diabetic Coma.**—Douglas says that there are three types of diabetic coma: 1. The common and typical form which begins suddenly with vomiting, pain, and drowsiness. 2. A form met with after fatigue, the symptoms of which are those of profound collapse. 3. A form in which the gait becomes atoxic and the speech confused. Acetone is nearly always present in the urine in severe cases: it is also met with in cancer, fever, and digestive disturbances, and is supposed to be due to an excessive destruction of albuminous tissue or fat. It is readily recognized by Lieben's test, where it produces iodoform. Diacetic, or acetoacetic, acid also occurs in the urine in severe cases of diabetes; it is acetone plus a molecule of CO_2, and acetone always occurs along with it in the urine. The third and most important substance found in diabetic urine is betaoxybutyric acid; it is closely related to acetone and diacetic acid. To it is due the high acid content of diabetic urine; from twenty to thirty grammes may be excreted in a single day. Such urine is always remarkably rich in ammonia, it being required for neutralization of the acid. Diabetic coma is an acid intoxication, or acidosis. The betaoxybutyric acid requires a base, and the ammonia is given up by metabolism of the tissues to protect the alkali of the blood. If, from any reason, the supply of ammonia from this source is cut off, the acid utilizes the alkali of the blood as a base, reduces its alkalescence, and stupor supervenes. The introduction into animals of large quantities of dilute mineral acid causes the onset of coma and dyspnœa. The nearer the coma, the greater the amount of acid, and relief has been obtained in cases actually in stupor by injection of saline alkaline fluids. The coma is not a specific toxic effect of betaoxybutyric acid; indeed, the acid is not, in itself, a noxious substance. It acts as any other acid by diminishing the alkalescence of the blood, and so preventing the normal elimination of carbonic acid by the lungs. This gives rise to the "air-hunger" of Kussmaul. The only rational line of treatment is the introduction into the system of an alkali, either by giving very large doses of sodium bicarbonate by mouth, or better by rectum or intravenously. Schwarz has used gluconic acid with the soda with excellent results.

2. **Temperature in Coma.**—Sawyer, from an examination of fifty-eight cases of coma, concludes that while knowledge of the body temperature is only occasionally of assistance in diagnosis, yet it has a distinct bearing upon prognosis. In diabetic coma the temperature is nearly always subnormal, which is difficult to explain, because of the great increase in metabolism. In uræmic coma the temperature is most commonly normal, but there is often a rise of temperature in fatal cases, beginning a few hours before death. This may be directly due to the injurious effect on the thermolytic centre of poisonous substances circulating in the blood. In coma due to intracerebral hæmorrhage, the temperature at first falls suddenly below normal, after which it rises, either slowly or rapidly, often many degrees above normal. When the subnormal stage is long the prognosis is much better than if the temperature rises soon and suddenly. When the hæmorrhage is in the pons varolii or is very large, the temperature rises suddenly and to an extreme height. In coma from alcoholic poisoning the temperature is nearly always considerably below normal. In general, then, a temperature above normal soon after the onset of coma is nearly always unfavorable, as is likewise a very low temperature of 95° or 96° F.

3. **Measles.**—Marsden calls attention to the

fact that the stage of invasion in measles may vary very widely—from a few hours to nine or ten days. In cases of scarlet fever or measles, if the rash does not appear within one day or three days, respectively, from the beginning of the illness, physicians are too prone to doubt their diagnosis. The instances in which the prodromal stage is unduly prolonged are more common than those where it is abnormally short or absent. From a study of the epidemic of measles in the Faroe Islands, Panum disregards the so-called stage of invasion, and states that the exanthem appears on the fourteenth day after the reception of the contagium.

4. **Chloroma.**—Hichens reports a case of this rare affection occurring in a boy aged four years. The illness began with a sudden left-sided facial paralysis, and a puffy swelling over the right temporal bone, with pain in the mastoid regions. He grew gradually worse, a symmetrical swelling appeared on the opposite temple, petechiæ were observed on the skin, and death took place twenty-three days after the beginning of the illness. At the autopsy the liver, kidneys, and temporal swellings were infiltrated with greenish new growth—chloroma. The orbital cavities and dura mater also showed patches of the growth. No blood examination was made. In typical cases of chloroma Bramwell states that the characteristic features are as follows: 1. The presence of lymphoid deposits in the orbits, temporal fossæ, and periosteum of the bones of the skull, and the symptoms and signs arising therefrom. 2. The green color of the lesions. 3. A profound blood change, of which the characteristic feature seems to be an enormous excess of lymphocytes. 4. The bone marrow, spleen, lymphatic glands, and organs throughout the body are affected (infiltrated with lymphoid deposits) as in lymphatic leucæmia. The author suggests that lymphatic leucæmia is, as it were, a fluid sarcoma of the hæmopoietic system, and that chloroma is only another manifestation of the same disease characterized by solid deposits.

5. **Argyll Robertson Pupil.**—Clarke concludes as follows: That a previous syphilitic affection is not sufficient, without some further change, to lead to the presence of the Argyll Robertson phenomenon, and in thirty-seven cases of cerebral and spinal syphilis, where the mischief was confined to the ordinary visceral lesions (gummata, gummatous meningitis, endarteritis) the sign was not typically present. That in similar cases where it may be present, and in other cases with a history of past syphilis; in which it occurs as an isolated sign of disease, it is evidence of a further degenerative process at work within the nervous system. That this degenerative process is to be regarded in the large majority of cases as a parasyphilitic one, although in a certain proportion proof of this is wanting, and there is possibly some other cause at present obscure. That this degeneration may remain stationary at an early stage for long periods. If these observations are correct, the Argyll Robertson phenomenon is an even more important sign of disease than it has been previously considered to be.

6. **Heart Failure in Diphtheria.**—Stanley's conclusions are as follows: 1. Beri-beri and diphtheria have a marked degenerative action on the heart muscle, which frequently causes fatal circulatory failure. 2. In this respect beri-beri and diphtheria resemble other toxæmias, such as influenza, and alcohol and arsenic poisoning, which often cause peripheral neuritis, and also other toxæmic diseases, such as typhoid fever, plague, and acute rheumatism, which do not, or only rarely, give rise to peripheral neuritis. 3. Beri-beri and diphtheria are the diseases *par excellence*, in which sudden heart failure occurs. 4. The heart muscle degeneration is not a secondary result of neuritis of the vagus. 5. The heart muscle degeneration takes place, as a rule, before skeletal-muscle degeneration, and is the result, probably, of direct action of the toxine, and not a secondary result of nerve change. 6. Sudden heart failure does not indicate a sudden lesion, but rather is the result of a gradually increasing heart weakness from cardiac-muscle degeneration, which may be precipitated by any sudden exertion, but more frequently is the result of the principle of "all or nothing," the transition from "all" to "nothing" being necessarily rapid. 7. The cardiac physical signs in beri-beri closely resemble those found in diphtheria and are of paramount importance in prognosis and treatment.

7. **Ophthalmoplegia.**—Gowring reports a case of complete ophthalmoplegia, occurring in a boy aged four years, for which no other cause could be assigned than whooping cough from which the boy was suffering at the time. Recovery was rapid and complete.

LANCET.

December 26, 1903.

1. The Diagnosis and Management of Doubtful Cases of Diphtheria, By F. F. Caiger.
2. How to Treat a Case of Insanity, By R. Jones.
3. On the Use of Pure Carbolic Acid in the Treatment of Smallpox, By J. T. Neech, and J. F. Hodgson.
4. The Ætiology of Yellow Fever, By J. B. Tombleson.

1. **Diphtheria.**—Caiger tells us that a well-developed attack of diphtheria, with definite membranous exudation on the fauces, is not likely to escape recognition. Not so with those sore throats with no exudation, or at most a little cheesy deposit in the crypts, or small necrotic-looking areas on the surface of the tonsils. This is also true of purely nasal cases, which often escape recognition altogether, and yet a single such case in a school, for instance, may cause havoc. While clinical appearances often assist the diagnosis of doubtful cases of diphtheria, yet, at present, the nature of a doubtful attack is practically determined by the result of bacteriological examination. It has long been known that in diphtheritic, as in doubtful, and even healthy throats, bacilli are not infrequently found, more or less closely resembling the diphtheria bacillus, but innocuous when injected into animals. Such organisms have been termed "pseudodiphtheria" bacilli, an unfortunate term tending to cause confusion. The Hofmann bacillus is the one usually referred to; it is not virulent, and with few and not very trustworthy exceptions, all efforts to develop it into a virulent organism have failed. It is readily distinguishable from the Klebs-Löffler

bacillus by its morphological and cultural features, but this is not the case with certain other organisms frequently present in the throats of persons who have been in contact with cases of diphtheria, and which correspond to the diphtheria bacillus in all points, except virulence. Lack of virulence alone is not enough to justify the classing of an organism as "pseudodiphtheritic;" it should be considered to be a diphtheria bacillus, and, if the mucous surfaces from which it has been derived present the slightest inflammation, the case should be diagnosticated as diphtheria and treated accordingly. Very little value should be attached to a negative bacteriological result; it simply means that the observer has failed to find the bacillus, not necessarily that the bacillus is absent. Failure to detect the bacillus may result from an error at one of three stages of the experiment: *(a)* The bacilli may be very few in number in comparison with other organisms present; *(b)* they may fail to grow, through defective insemination, or by reason of their reproductive capacity being lowered or annulled from previous antiseptic applications to the throat; or *(c)* they may escape attachment to the swab, because they are but sparsely distributed on the mucous membrane. It will thus be seen how important it is to take the swab properly. Positive results may often be obtained directly from the examination of a smear from the swab, especially if Neisser's staining method is used. In the author's experience, this method has proved more trustworthy than any other—even than Löffler's methylene blue method.

For the above mentioned reasons the bacteriological test should be regarded as of subsidiary value in cases where the clinical indications are at all distinctive. In follicular amygdalitis exudation usually occurs in spots, cheesy or friable, and limited to the openings of the crypts. The spots rarely coalesce into a definite pellicle. Actual extension of membrane to the palate or uvula is almost distinctive of diphtheria. In follicular amygdalitis both sides are equally involved, as a rule, whereas a diphtheritic affection is often more marked on one side than on the other. The degree of pyrexia is likely to be greater in amygdalitis, and the constitutional symptoms more severe than they would be in a mild case of diphtheria. Rhinorrhœa and albuminuria are relatively rare in amygdalitis, and frequent in diphtheria. The occurrence of hoarseness, stridor, or cough is suggestive, and the advent of paralysis or cardiac disturbance at a later date is, of course, confirmatory of diphtheria. Careful inspection of the anterior nasal fossæ through the external nares may reveal membrane. Redness and impetiginous excoriation of the skin immediately within the nostrils are strongly suggestive of diphtheria.

On locating a case of diphtheria in a community, such as a school, the following precautions should be immediately adopted: 1. Isolate the patient. 2. Disinfect everything he is likely to have worn, touched, or handled, and also the room in which he has been sleeping. 3. Examine the throats and noses of all persons with whom he has associated ("contacts") and also make cultures. 4. Isolate, or at least exclude, all "contacts" who harbor even doubtful bacilli on their mucous membranes and all presenting any suspicious appearance of the throat or nose. 5. Search for any other possible source of infection besides a previous attack of diphtheria, so as to exclude fresh cases (milk, drinking utensils, cats, trumpets, etc.). 6. Do everything possible to lessen the infectivity of the patient.

The throats and noses of the "contacts" should be kept in as good condition as possible, for inflammation has a marked power of awakening the activity of the diphtheria bacillus. It is probably impossible to lower the virulence of diphtheria bacilli present in the throat, but their number may be reduced and their reproductive powers lessened by antiseptic irrigations. Their effect is shown by the fact that a fall of temperature almost immediately follows such irrigation in faucial diphtheria, quite apart from the use of antitoxine. The best solution is one of chlorine—an acid solution of potassium chlorate containing free chlorine. Five minims of strong hydrochloric acid are poured on nine grains of the powdered salt, and shaken up with an ounce of water. This is used every two or four hours mixed with an equal quantity of hot or iced water. On theoretical grounds all persons should be kept apart, from the community as long as they harbor diphtheria bacilli, whether from an attack or simply from exposure. The average length of time during which the bacilli persist is from eight to twenty-four days. The longest time on record is 363 days. Adenoids are often responsible for undue persistence of the bacilli, but great care should be taken that the bacilli have disappeared before any operative measures are undertaken for their removal. Efficient flushing out of the fauces of infected "contacts" with the chlorine solution by means of an india rubber ball syringe is the best means of curtailing the period of potential infectivity. Gargling, spraying, and swabbing are much less effectual. Injection with antitoxine is quite without effect in hastening the disappearance of the bacilli, but it should always be given where an infected "contact" presents any indication, however slight, of either faucial, nasal, or laryngeal inflammation.

3. **Carbolic Acid in Smallpox.**—Neech and Hodgson report the results of the further use of their method of treatment of smallpox by applications of pure carbolic acid. The pure liquid acid is applied with a small camel's hair brush each day to the vesicle over a certain area of the body, commencing with the face. The applications are continued until the vesicles dry up. One hundred and thirty-six cases were treated. Of these, 35 were unvaccinated and 4 died—a mortality of 11.4 per cent.; 101 were vaccinated, of whom 1 died; a mortality of 0.99 per cent. Carboluria was noted in only two cases. The acid caused no pain and completely relieved the itching. Ulceration in the pustular stage was prevented, and the tendency to scar formation was greatly lessened. The offensive odor was done away with, the fever range was lowered, and the risk of infection by aerial connection greatly lessened. Complications were entirely absent and the patients were discharged with safety a week or two weeks before the usual time.

Letter to the Editor.

FURTHER REMARKS ON MECHANOTHERAPY, MASSAGE, BONE SETTING, AND OSTEOPATHY.

To the Editor, PHILADELPHIA.

Sir: I beg you will give space to a communication which must serve to answer the astonishingly large number of letters elicited by an article of mine in your issue of December 19, 1903, entitled Remarks on Mechanotherapy, Massage, Bone Setting, and Osteopathy. Therein I suggested that whosoever might feel interested in the subject would do well to read some portion of the literature before forming opinions pro or con. Most of the letters asked me to name a few books. I hesitate to do so, except to recommend those which are ordinarily accessible on massage, the Ling System of manual treatment, treatment by physical methods, etc. There are many such, old and new; also special journals are published bearing on the subject, the articles in which, while in my opinion over enthusiastic in one line or another, are no more so than many in the leading medical journals. The older books are perhaps better than the newer one, because they are expressed in more cautious terms, are based on more simple principles, and exhibit less of bombast and conjecture than the new. Later, I may feel emboldened to speak my mind more fully if evidence shall be forthcoming that the profession are prepared to give this important matter a frank and fair investigation. It is enough reward for my efforts, so far, to note that much general interest is awakened. As I said, it is a constant suprise and disappointment to me, having given much attention to manual treatment, to note how pitifully ignorant are "the leaders of medical thought," not only of the whole subject, but of its gravity, its resources, and its enormous possibilities. It is doubtful whether if a hundred of the accepted "leaders" in any community (in America), were called upon to express opinions on the subject it would be possible to find above two or three who could formulate such based upon either knowledge, experience, or appreciation of fundamental principles. Yet, any man with an M. D. to his name will give you offhand a definition of osteopathy, and it is usually far from flattering. Still these "osteopaths" have forced themselves upon the attention of the public, and thence upon that of the profession, more upon the sheer merit of their methods than by the boldness of their assumptions.

It cannot be denied, it can certainly not be disproved, that these methods are not highly efficacious, and in those conditions which the profession (ignoring certain elemental principles) fail to appreciate and apply. Permit me to repeat what I said in the article referred to, that my own appreciation has come by a close study of those very facts from which the osteopath gains his recognition, and which are plainly set forth in the literature of medicine, and I began long before there was such a thing as an "osteopath."

This leads me to remark that books and articles by physicians on massage, manual treatment, etc., leave much to be desired: so much that I am compelled to sound a note of warning to readers that they will find more of loosely constructed empiricism than of logical scientific data; more of tradition and opinion than of formulated principles of action. The greatest source of knowledge is the standard textbooks on physiology, much of which is tedious reading, encumbered by an immensity of technical details and observations by no means even claimed to be in shape for final conclusions. The whole subject must be threshed out from the standpoint of a sane, critical review of the nervous mechanism, vasomotor tonus, cellular action and reactions, etc., always in connection with the natural history of disease; in short, a careful estimate of stimuli and reactions, especially mechanical stimulation and vasomotor reactions, omitting, however, nothing practical in the whole realm of advanced, and advancing, medical thought.

Finally, not only can treatment be thus accomplished for a large variety of disorders, but clear, physiological principles of diagnosis can be outlined, each ably supplementing what has already become established.

JOHN MADISON TAYLOR.

Proceedings of Societies.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

Sixteenth Annual Meeting, held in Chicago, September 22, 23, and 24, 1903.

(*Continued from page 1064.*)

The Rational Treatment of Post-Partum Infections of the Uterus.—Dr. D. TOD GILLIAM, of Columbus, Ohio, said the rational treatment of post partum infections of the uterus presupposed a knowledge of the infecting agencies, their nature, and tendencies, and of the conditions which favored or retarded their entrance into the general system. The bacteria of puerperal infection were the same that took part in other pathological processes of the genital tract, chief among which were the streptococcus, gonococcus, colon bacillus, and the saprophytes. Saprophytic or putrid infection occurred when fœtal detritus—fragments of placenta or membranes—had been left in the uterine cavity. It was pernicious only through its products, the toxines, and would cease to do harm so soon as the fœtal débris was expelled from the uterine cavity. Both the colon bacillus and the gonococcus were surface germs showing little tendency to penetrate into the depth of tissues or to disseminate through the general system.

The streptococcus was the most deadly of germs connected with puerperal infection. It might and did proliferate in living tissues. While all the germs were capable of producing invalidism, there was only one, namely, the streptococcus, that jeopardized life. This assertion was to be taken in a general sense, as other bacteria had on occasions been the cause of severe, or even fatal, infection. It became, then, important to distinguish between streptococcus infection and that of other germs. Unfortunately, there was no sure method, even the microscope at times being inefficient or misleading. Clinically, putrid infection was usually characterized by high temperature, slow pulse, and foul odor.

whereas in streptococcus infection, there was no odor in the earlier stages, and the pulse was markedly accelerated. There might be suppression of lochia. The normal death rate for puerperal infection was about one per cent. This was increased in epidemics, which were usually due to streptococcus infection. The death rate from streptococcus infection was about five per cent., and these constituted about one fourth of all cases of puerperal infection. Hence, about 98 or 99 cases out of a hundred should recover, if let alone.

A recently delivered uterus was a hotbed for infection, being filled with the juices of disintegration and spilled blood. The mortality would be appalling were it not for the safeguards. These were: (1) Autosterilization of the genital tract; (2) the protective epithelium; (3) the protective leucocytes under the epithelium. The germ of Döderlein was the principal agent in sterilizing the genital tract; hence, irrigation before or after labor was harmful, because it washed this germ away and did not entirely rid the tract of pathogenic germs. It was impracticable to clear the uterine cavity of pathogenic germs by curetting or flushing, as many of the germs were ensconced in the depths of the utricular glands, and could not be reached, hence curetting or flushing by opening avenues of infection without getting rid of the pathogenic germs, was harmful and dangerous. The epithelium was usually an efficient preventive of germ invasion. The protective leucocytes under the epithelium gave battle to the germs, and unless overwhelmed would prevent their entrance into the general circulation. The normal death rate of puerperal infection was about one per cent., but after curetting it amounted to twenty per cent. The sharp curette was especially dangerous, as it not only failed to remove the germs, but destroyed the protective barriers. As it was impossible to say that streptococcus infection was not present in any case, the only safe way was to eschew the sharp curette entirely in puerperal infection. Curetting was only permissible where there was known to be fœtal débris in the uterine cavity, and where there was reason to believe no streptococci were present. For this the finger or dull curette with stiff handle should be used. Flushing, if done at all, should be done with every precaution against infection. The patient should be on a table, under a good light, the vulva and vagina cleansed, the latter with five per cent. creolin in liquid green soap, mopped, dried, and retractor introduced; the cervix grasped, drawn down and steadied with forceps; the cervical canal wiped out with gauze and bits of membrane picked off with forceps. An irrigation should be gently introduced and the canal flushed. If pulse and temperature dropped, this should be repeated daily or oftener, otherwise discontinued. Alcohol might be instilled according to Ill's modification of Carosso's method.

Penetrating and Perforating Gunshot and Stab Wounds of the Abdomen.—This was the title of a paper presented by Dr. JOHN YOUNG BROWN, of St. Louis, Mo. The author went fully into the literature of this subject. An analysis showed nine cases of perforating wounds of intestines, with six recoveries and three deaths. Of the deaths, one was due to shock, the injury being so extensive that the patient never reacted. In the author's second case the patient entered the hospital with general peritonitis, and while a perforation was overlooked, it was probable that the result would have been the same if this injury had been repaired. The third case, he thought, could have been saved.

Of the wounds of the liver, five cases in all, four patients recovered and one died. This patient died three hours after operation from shock, the result of hæmorrhage. In a case of wound of the pancreas recovery took place. To these cases he added eight where laparotomy was done and no injury to viscera was found, making a total of 23 cases, with 19 recoveries and 4 deaths.

The Use of the Stem Pessary for Infantile Uteri, Scanty Menstruation, Amenorrhœa, and Dysmenorrhœa.—Dr. HENRY J. CARSTENS, of Detroit, cited a number of intractable cases of this kind, which were promptly relieved by the stem pessary. The theory was that weak or poorly developed muscles could only be strengthened by constant exercise. The only way to exercise the uterine muscles was to introduce something into the uterus, and the constant tendency to expel the contents would enlarge the muscles and develop the uterus. It was absolutely essential that no pelvic trouble, either chronic or latent, existed. The diagnosis must be perfect. The use of the stem pessary was valuable in infantile uteri and in atrophy of the uterus. In amenorrhœa, including scanty and irregular menstruation, especially as found in fleshy women, it was also of great value. It might be used with great advantage in simple cases of retroversion in young girls, and cases of stenosis or tortuous uterine canals. He used the Chapman hard rubber pessary, and left it in from six months to two years.

Tuberculosis of the Female Genitalia and Peritonæum.—This was the title of a very exhaustive paper contributed by Dr. JOHN B. MURPHY, of Chicago. The author considered at great length tuberculosis of the vulva, vagina, portio vaginalis externa, cervical canal, fundus uteri, tubes, ovary, pelvic peritonæum, and general peritonæum.

Movable Kidney with Secondary Cyst Formation, Resembling Ovarian Cyst.—In a paper on this subject, Dr. RUFUS B. HALL, of Cincinnati, Ohio, said that until recent years the consensus of opinion of the profession was that a movable kidney was not dangerous to the life of the patient, and that this condition did not call for operative treatment until the patient suffered extreme pain or developed serious structural changes. Almost the universal practice at this time was not to interfere until compelled to do so, either on account of torsion of the pedicle or of some serious pathological lesion. While only a small percentage of patients suffering from movable kidney had obstruction of the ureter, necessitating an operation for relief, a very large per cent. were more or less invalids. In all patients suffering from hydronephrosis, with periodical attacks of pain, the urine contained pus for three or four days after the attacks.

He contended that if the cases of movable kidney were operated on early for fixation of that organ, it would save structural changes, give great relief, and he advised operation early. He also believed that the movable kidney, if neglected, might undergo cyst formation or develop hydronephrosis or pyonephrosis, and in rare instances develop into large tumors holding several gallons, as in the cases reported.

Surgery of the Ileocæcal Valve for Malignant Disease.—Dr. N. Stone Scott, of Cleveland, Ohio, said that the fact was well established that the pylorus and rectal valves were peculiarly liable to inflammatory diseases, with consequent hypertrophy or contraction of the tissues and attendant partial obstruction of the tract. It would be most natural to suspect the other one of the three, the ileocæcal valve, of similar tendencies. Three or four typical cases were quoted.

The rarity of recorded cases was not so strange when one considered the virginal character of the territory under discussion. Medical literature gave, not only a scarcity of cases, but no adequate description of the disease or its diagnosis, its cause or its cure. Most of the author's own patients had either been the subject of stenosis in other parts of the alimentary tract, showing a decided tendency to hypertrophic inflammation in certain portions of the tract, or had had typhoid fever. There was a reasonably clear history of this in all but one of the seven cases reported by the author.

The Choice of Methods for Closing the Parietal Abdominal Incision.—Dr. Edwin Ricketts, of Cincinanti, Ohio, discussed this subject. In referring to the various suture materials used for closing incisions, he said that to his mind the through and through suture of silkworm gut with the midway closure of the peritonæum with interrupted sutures of fine silk would permit surgeons more nearly to attain the ideal method than any other. Silkworm gut was actually impervious to any attacks of infection. While it was a foreign body, it was to be removed between the fifth and tenth day. One great advantage of silkworm gut was that, keep it as one may, there was no germ to gain a foothold within its body substance. It was easily rendered aseptic from an immersion in hot water, to be dipped in alcohol just previous to placing the same.

Possibly the oldest suture material for through and through work was silk—pure silk. Some prominent operators of to-day made use of it. With thorough asepsis in the care of this silk, it was a question in his mind if this material could not be used successfully, as the silkworm gut, for through and through suture, provided it was removed within five days.

Supravaginal Amputation for Fibroid Tumors.—Dr. Herman E. Hayd, of Buffalo, N. Y., read a paper on this subject. Supravaginal amputation had such a small mortality, not more than five or six per cent., with all kinds of cases, complicated as they so often were with hydrosalpinx, hæmatosalpinx, or pyosalpinx, that one could in good faith recommend it when once one was satisfied that the tumor was progressing in size and its symptoms were demanding active treatment. He was of the opinion that over-conservatism was even more dangerous than extreme radical surgery, as every day patients were depleted from frequent floodings, and died of some simple intercurrent disease, because self-resistance was reduced to a minimum or pressure symptoms were left unrelieved until dangerous complications were excited in the bladder, ureters or kidneys.

The only other operation he had employed for the removal of the uterus for fibroid tumors was complete hysterectomy, or panhysterectomy, abdominal and vaginal. The operation of total hysterectomy offered very few advantages. It was more difficult to perform; had a higher mortality; took more time, and had increased danger from hæmorrhage, and it robbed the vault of the vagina of the support which the cervix gave it. However, in certain cases it should be the operation of election when the cervix was the seat of marked cystic degeneration or had a bad tear, and particularly if associated with considerable vaginal prolapse, or where, for any reason, drainage would be desirable.

The author was content to place himself on record as believing that the supravaginal amputation for necessarily operable fibroids met nearly every indication demanded of the abdominal surgeon, and could be applied, and had been applied, to every conceivable kind of tumor, with short or long pedicle, tumors growing deep into the pelvis, or cut into the broad ligaments, and with results which made it a clean and ideal piece of surgery. It was the operation of choice, excepting in those cases where drainage must be provided for, or where the cervix, for various other reasons, should be removed.

The author presented a table giving a list of his supravaginal amputations, fourteen in number, with one death. The operation by preference which he performed was that by Baer, and modified occasionally after the suggestions of Kelly and other more recent operators, when some special indication existed for its employment.

(To be continued.)

COLLEGE OF PHYSICIANS OF PHILADELPHIA; SECTION ON OPHTHALMOLOGY.

December 15, 1903.

Dr. L. D. Risley, Chairman, presiding.

A Case Illustrating the Inadequacies of the Present Methods for the Recognition of Distant Color Signals, was read by Dr. Charles A. Oliver, with a series of brief plans for the remedying the same. Dr. Oliver stated briefly the best preventives for the admission of such cases to active duty in position of such unusual delicate color differentiation. He arranged his thoughts in regard to the best plans for the discovery and removal of such subjects as follows: (1) The methods of color testing at present pursued in railway, army, navy, and marine service were inefficient for the detection of many cases of low degrees of subnormal color perception; a type which necessarily constituted the most dangerous and the least suspected class of subjects. (2) Every candidate for color testing, no matter in what capacity he might be employed, should be medically proved to be free from injurious habits, systemic disturbance, and ocular disease, before any such tests were applied. (3) Accurate notes of the character and degree of color sense, which might be obtained in duplicate by any authorized management, should be kept and added to at regular intervals. (4) All testing for color should be conducted in the very situations which were occupied by the subjects during work. (5) The test colors should be placed at the distances which were employed during signalling. (6) The testing should be performed during the various stresses of weather to which the candidates were subjected while on duty. (7) The tests should be made during the times of day and with the illuminating exposures that were used by the candidates in their daily employment. (8) All testing should be done with adaptations of the materials that were to be gazed at by the candidates in their regular work. (9) All the test colors should be kept at uniform standards of relative distinctness, saturation, and brightness for the distances ordinarily used; for example, there should be series of 300 metre colors, 500 metre colors, 1,000 metre colors, etc., for both daylight and artificial illumination.

Simple Glaucoma in the Young.—Dr. C. A. Veasey and Dr. E. A. Shumway read this paper with a report of two cases, one of which was exhibited. The first case was in a young woman in whom the glaucoma began in one eye in the sixteenth year of her age, progressing to total blindness of the eye in the nineteenth year and followed by severe pains, requiring enucleation of the eyeball. Microscopically the lens was very large, and accumulations of pigment cells were found in the neighborhood of Schlemm's canal. No sign of the disease has appeared in the other eye 13½ years later. The second case was in a boy with a family history of myopia, including himself, in whom it was progressive. The glaucoma began in one eye in the sixteenth year of his age, and in the other about two years later. Vision had been lost in one eye, and the field was rapidly contracting in the other, ciliary staphyloma forming and tension being + 2, when iridectomies checked the further progress.

Plugging of the Lower Temporal Artery.—Dr. James Thorington described such a case in a young married woman who showed no evidence of systemic disease to account for the ocular condition. Rest in bed, pilocarpine sweating, and internal administration of the iodides resulted in a gradual lessening of the scotoma and ultimate disappearance of the thrombus and complete recovery of vision in the affected area.

Temporal Hemianopsia with Skiagraphic Examination Indicating the Position of the Supposed Lesion.—Dr. G. E. de Schweinitz detailed a history of a man, aged thirty-four years, who, seven years prior to his examination, noted failure of vision in the form of loss of the temporal field of each eye. The history was largely negative except that his head had been injured by a fall from a horse, this fall, however, having taken place at least twelve years before his visual defects became apparent. Specific history was lacking. At the examination atrophy of both optic nerves was evident, and on the left side there was complete blindness; on the right side typical temporal hemianopsia with full extent of the preserved form field and marked contraction of the color fields. The light sense, however, was preserved except in so far as the upper and outer temporal quadrant of the field was concerned. Skiagraphic examination by Dr. Henry Pancoast revealed a shadow just in the region of the chiasm, which was interpreted by the skiagrapher as indicating a growth or possibly an exostosis. The hemiopic pupillary inaction could not be demonstrated. Dr. Sweet, in referring to the skiagraph of the case, said that the shadow in the region of the chiasm was not to be found in negatives made of normal brain tissue, and it was therefore probable that the dark area of the picture indicated some neoplasm in this situation. He did not believe that much reliance could be placed upon the x rays in the diagnosis of brain tumors, and cited several cases of negative results in which large growths were found at necropsy. In a few instances, however, skiagraphic examination has shown the presence of a tumor of the brain, which diagnosis was subsequently verified at death.

Book Notices.

Surgical Diseases of the Abdomen, with Special Reference to Diagnosis. By Richard Douglas, M. D., Formerly Professor of Gynæcology and Abdominal Surgery, Medical Department, Vanderbilt University, Nashville; etc. Illustrated by 20 Full Page Plates. Philadelphia: P. Blakiston's Son & Co. 1903.

In this large volume the author has limited himself, we think, at once too much and not enough. Written mainly for the purpose of establishing a firmer basis for the diagnosis of intraabdominal lesions and diseases, he has included much in the way of history and superfluous clinical data—interesting in their way—which might better have been replaced by detailed descriptions of the technics of operative procedure. This is probably a mere matter of opinion, for included within the covers of the book, are given a vast array of clinical and pathological facts which, so far as we are aware, have never before been assembled in one volume. In this respect, the author has done remarkably well. There is no lesion and no disease of importance which has escaped attention.

Beginning with peritonitis, the author takes up, in turn, the surgical diseases of the stomach and intestines, the herniæ, the liver and its appendages, the pancreas, the spleen, the kidney and genitourinary tract, the injuries of these various organs, and finally the fistulæ and neoplasms.

The best chapters, we think, are those on peritonitis and gunshot wounds of the abdomen, while those on intraabdominal tumors are also very carefully prepared. Each chapter terminates with a very full bibliography.

Beyond what we have said in the first paragraph, we have but one criticism to make: The author is not sufficiently authoritative in his statements. When a student or practitioner wishes to know the differential points of diagnosis of any given condition, he does not care what Smith, Jones, or Brown have said or thought, but he does desire the opinion of the author whose book he is reading. It adds much to the literary value of a production to quote authors from Dan to Bersheeba, but it does not help out the practitioner who is trying to decide whether he is dealing with an echinococcus cyst of the liver or a subdiaphragmatic abscess.

This book represents an immense amount of toil. It is accurate, it is scientific and it is modern. As a reference book for medical and surgical practitioners it will prove extremely useful and practical.

The illustrations are few in number, but are suggestive and well executed. The size of the volume might with advantage be reduced.

Practical Gynæcology. A Comprehensive Textbook for Students and Physicians. By E. E. MONTGOMERY, M. D., LL. D., Professor of Gynæcology, Jefferson Medical College; Gynæcologist to the Jefferson Medical College and St. Joseph's Hospitals. Second Revised Edition. With 539 Illustrations. Philadelphia: P. Blakiston's Son & Company, 1012 Walnut Street. 1903. Pp. xxxiii-900. (Price, $5.00 net).

The second edition of this practical work is marked by all the excellencies of the first, and, without a great increase in size, much new material has been introduced. Many new illustrations of gross and microscopical sections have been added, and new operative measures have been pictorically presented.

A few of the faults of the first edition still remain. There is scarcely enough said of bladder and ureteral methods of examinations, which are daily being more and more widely practised. Nor do we see the utility of retailing the ancient methods of treating ectopic pregnancy by the injection of poisons and by the electrical current. These have a place only in works on historical medicine, and have no legitimate room in a textbook, even though they are faintly condensed.

As in the previous edition, great stress is laid upon diagnosis, on the choice of operative technics, on precise methods of examination, and on the pathological changes involved in diseases of the female genital organs. The work is essentially practical, well-balanced, and sane, and is a fit companion for the student and practitioner. The new edition is superior to the older one in its make up, in the clearness of its illustrations, and in the quality of paper used.

Vademecum der Geburtshilfe fur Studierende und Aerzte, von Professor Dr. M. LANGE, Konigsberg LPR. Mit 118 Abbildungen. Dritte, vermehrte und umgearbeitete Auflage. Wurzburg: A. Stubers Verlag (C. Kabitzsch). 1904. Pp. viii-303.

This little pocket manual is so complete in its exposition of the art of obstetrics, that it may well be ranked with some of the larger textbooks. By means of thin paper and small type, an immense amount of material is contained between its covers. The style is lucid, though the text is considerably condensed.

As in previous editions, the strictest asepsis is urged upon the accoucheur, and the number of internal examinations is limited, in normal cases, to two, one before, one after the rupture of the membranes. The directions for the use of the forceps are especially clear and the minute illustrations which accompany the text, are of excellent didactic value. Symphysiotomy, the author believes, can never replace perforation in the hands of the general practitioner, on account of its technical difficulties.

In the treatment of eclampsia, narcotization with morphine and immediate delivery is urged. For occiput posterior, Professor Lange believes in the use of the forceps, but no mention is made of artificial rotation of the head on the perinæum. The errors involving an inefficient use of Credé's method of expression of the placenta, are lucidly pointed out. In every chapter, the needs of the beginner are considered in the same way, and in this respect, the manual is especially useful.

The book represents, in a characteristic way, the methods of obstetrical teaching and technics as practised in Germany to-day.

Manual of the Diseases of the Eye, for Students and General Practitioners. By CHARLES H. MAY, M. D., Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York—1890-1903—Ophthalmic Surgeon to the French Hospital, New York; etc. Third Edition, Revised. With 275 original Illustrations, Including 16 Plates, with 36 Colored Figures. New York: William Wood & Company. MDCCCCIII. Pp. xiii-408. Cloth. (Price $2.00 net.)

The publication, within little more than a year, of a third edition of this work is proof, not only of its continued popularity with the large class of physicians and undergraduates in medicine for which it is primarily intended, but of a desire, also, on the part of the author, to keep fully abreast of the times. Not a few alterations and additions have been made, in spite of which the size of the volume has been but slightly increased. Some new illustrations are also noted, including three large plates from photographs, of which one gives a very good idea of the application of roller forceps in expression of the lids for trachoma, while the others represent, in four pictures, the steps of that simplest of oculistic procedures, eversion of the lids, the necessity for which is so common while its correct performance is as uncommon as—common sense.

If any fault were to be found it would be in the author's use of illustrations and cuts which he has borrowed from other works without giving the usual credit. Instances in point are the schematic representation of the visual (St. Bernheimer), and pupillary reflex paths (v. Monakow), the method of examining the eyes of infants and small children (Fridenberg), types of ocular injection (Nettleship), and various drawings of microscopical sections.

BOOKS, PAMPHLETS, ETC., RECEIVED.

Woman's Unfitness for Higher Coeducation. By ELY VAN DE WARKER, M. D., Commissioner of Schools, Syracuse, N. Y. The Grafton Press, New York. Pp. xi-225. [Price $1.25 net].

Anatomy Applied to Medicine and Surgery. By D. E. MUNDELL, B. A., M. D., Professor of Applied Anatomy, Faculty of Medicine, Queen's University, etc. Kingston: Printed at the British Whig. 1903. Pp. 499.

Disinfection and the Preservation of Food. Together with an Account of the Chemical Substances Used as Antiseptics and Preservatives. By SAMUEL RIDEAL, D. Sc. (Lond.), Fellow of University College, London; Fellow of the Institute of Chemistry, of the Chemical Society, etc. London: The Sanitary Publishing Co., Ltd. New York: John Wiley & Son. 1903. Pr. 494. [Price $4 net].

Miscellany.

The Treatment of Cancer by Physiotherapical Measures.—Dr. J. A. Rivière, in a communication to the National Academy of Medicine, France, on December 8, 1903, formulated the following conclusions: 1. The practice of physiotherapy, which dates from our communication to the International Congress of Medical Electrology and Radiography (The Physiotherapical Treatment of Malignant Tumors) for the cure of neoplasms, should be recognized by modern medicine as a most useful method of producing the diminution of tumors, the relief of pain, and the dispersal of ganglionic enlargements. 2. Physiotherapy is the only method that should be used in certain inoperable neoplasms, or in those in which recurrence is inevitable; in acute and vegetating ulcerous forms of epithelioma; and in recurrent and rapidly increasing sarcomata and carcinomata, subsequently to surgical intervention. 3. Preference is given to radiotherapy, static discharges, and currents of high frequency, without, however, neglecting general physiotherapeutic measures (static baths, D'Arsonvalisation, etc.), as well as calomel and quinine internally, so as to stimulate elimination and to neutralize the neoplastic elements set loose by local treatment and returned to the circulation. 4. The most noteworthy effects of our treatment are: The disappearance of œdemas, engorgements, and indurations; the cessation of lancinating and other pains, the rapid and complete cicatrization of rodent ulcers; the subsidence and shrivelling of vegetating growths; and, in short, the complete disappearance of the cachexia and wasting, and the restoration toward integrity of the general condition. 5. While success is frequently attained in the case of postoperative returns, it is much better that growths should be treated by these measures from the outset. Radiotherapy should always be employed at the commencement of the lesion; for histological observations show that the neoplasm is always of greater extent than the apparent lesion. 6. In spite of notable and rapid ameliorations (subsidence of the pain, disappearance of the foci, and arrest of the adenopathic proliferation), perseverance is indispensable in treatment by physiotherapical measures; and especially the continuance of general methods directed to the improvement of the diathesis. 7. We think we can safely assert that the treatment of malignant growths has entered on a new phase, thanks to the application of physiotherapeutical methods. The facility, simplicity, ease, and promptitude of the treatment, the æsthetic regularity of the results obtained, the return to normal of the implicated functions, all confer on physiotherapy an incontestable value, in regard to both the number and the completeness of the cures in cases, whether primary or recurent, such as have hitherto seemed beyond the resources of our art.

Multiple Angeiomata of the Spleen.—Dr. W. C. Pumpelly, pathologist of the Georgia State Sanitarium, reports to us the case of a negro female who died of pulmonary tuberculosis; the spleen was enlarged and, on section, presented a number of circumscribed hæmorrhagic areas, which were about 3 cm. in diameter, and were found to be composed of blood vessels supported by a delicate connective framework. They were not distinctly incapsulated, but were circumscribed, and quite separate from the spleen structure; there were possibly twenty in all.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending January 8, 1904:

Place.	Date.	Cases.	Deaths.
Smallpox—United States.			
California—San Francisco	Dec. 21-27	7	
Illinois—Chicago	Dec. 26-Jan. 2	3	
Iowa—Dubuque	Dec. 26-Jan. 2	1	
Louisiana—New Orleans	Dec. 26-Jan. 2	1	
Maine—Athens	Dec. 31	Present.	
Maine—Brighton	Dec. 31	Present.	
Maine—Madawaska County	Dec. 1-31	39	
Maryland—Baltimore	Dec. 26-Jan. 2	1	
Michigan—Flint	Dec. 26-Jan. 2	1	
Michigan—Port Huron	Dec. 26-Jan. 2	2	
Missouri—St. Louis	Dec. 19-26	1	
Missouri—St. Louis	Dec. 26-Jan. 2	5	
New Hampshire—Manchester	Dec. 26-Jan. 2	1	
New Jersey—Camden	Dec. 26-Jan. 2	5	
New Jersey—Trenton	Dec. 26-Jan. 2	2	
New York—Buffalo	Dec. 21-28	11	
New York—Buffalo	Jan. 2	1	
New York—New York	Dec. 26-Jan. 2	1	1
Ohio—Dayton	Dec. 26-Jan. 2	2	
Pennsylvania—Altoona	Dec. 26-Jan. 2		1 death at Co. Hospital.
Pennsylvania—Erie	Dec. 26-Jan. 2	2	
Pennsylvania—Johnstown	Dec. 19-Jan. 2	4	1
Pennsylvania—McKeesport	Dec. 26-Jan. 2	3	
Pennsylvania—Philadelphia	Dec. 26-Jan. 2	74	11
Pennsylvania—Pittsburgh	Dec. 26-Jan. 2	17	4
Pennsylvania—Reading	Dec. 25-Dec. 31	1	
Tennessee—Memphis	Dec. 26-Jan. 2	8	2
Tennessee—Nashville	Dec. 26-Jan. 2	1	
Utah—Salt Lake City	Dec. 26-Jan. 2	3 All imported.	
Wisconsin—Milwaukee	Dec. 26-Jan. 2	2	
Smallpox—Foreign.			
Austria—Prague	Dec. 5-12	21	
Brazil—Pernambuco	Nov. 1-15	20	
Brazil—Rio de Janeiro	Nov. 29-Dec. 6	58	50
Great Britain—Birmingham	Dec. 12-19	1	
Great Britain—Liverpool	Dec. 12-19	1	
Great Britain—London	Dec. 12-19	6	
Great Britain—Manchester	Dec. 12-19	4	
Great Britain—Newcastle	Dec. 12-19	5	
Italy—Catania	Dec. 10-17		3
Russia—Odessa	Dec. 5-12	2	
Russia—Warsaw	Nov. 7-14		10
Turkey—Smyrna	Nov. 29-Dec. 13		13
Yellow Fever—United States.			
Texas—Laredo	Dec. 30-Jan. 2	2	
Yellow Fever—Foreign.			
Brazil—Rio de Janeiro	Nov. 22-Dec. 6	1	
Ecuador—Gyauaquil	Dec. 6-12		1
Mexico—Ciudad Victoria	Dec. 12-19	2	2
Mexico—Merida	Dec. 13-19	6	
Mexico—Tehuantepec	Dec. 13-19	1	1
Plague.			
Brazil—Rio de Janeiro	Nov. 29-Dec. 6	27	22
China—Hongkong	Nov. 21-27		3
Egypt	Nov. 28-Dec. 4	3	3
India—Bombay	Dec. 1-8		51
India—Calcutta	Nov. 28 Dec. 5		14
India—Karachi	Nov. 29-Dec. 6	6	6
India—Madras	Nov. 28-Dec. 4		1
Japan—Yokohama	Nov. 21-28	1	1
Cholera.			
Indla—Calcutta	Nov. 28-Dec. 5	42	
India—Madras	Nov. 20-Dec. 4		3
Turkey in Asia	Nov. 30	89	

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the twenty-one days ending January 7, 1904:

ALLEN, G. C., Pharmacist. To proceed to Louisville, Ky., for temporary duty. December 19, 1903.

AMESSE, J. W.. Assistant Surgeon. Granted leave of absence, on account of sickness, for seven days. January 4, 1904.

Ashford, F. A., Assistant Surgeon. Relieved from duty at Chicago, Ill., and directed to proceed to Milwaukee, Wis., and assume temporary command of the service at that port. January 4, 1904.

Bierman, C. H., Pharmacist. Granted leave of absence for eight days from December 22nd.

Brock, G. H., Pharmacist. Upon being relieved from duty at Detroit, Mich., directed to proceed to Delaware Breakwater quarantine station and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist L. C. Spangler. December 22, 1903.

Foster, M. H., Passed Assistant Surgeon. Granted leave of absence for four days from January 5, 1904.

Fox, Carroll, Assistant Surgeon. Granted leave of absence for five days from October 31, 1903, under paragraph 191 of the regulations.

Francis, Edward, Assistant Surgeon. To report to the Director of the Hygienic Laboratory for duty. December 17, 1903.

Geddings, H. D., Assistant Surgeon-General. To report to Chairman of examining board at Washington, D. C., January 18, 1904, for examination to determine his fitness for promotion to the grade of surgeon.

Gibson, L. P., Acting Assistant Surgeon. Granted extension of leave of absence, on account of sickness, from November 20th to December 10th.

Goodman, F. S., Pharmacist. Relieved from temporary duty at Laredo, Texas, and directed to rejoin station at Norfolk, Va. December 21, 1903.

Hume, Lea, Acting Assistant Surgeon. Granted leave of absence for twelve days from December 19th.

Iltis, G. W., Pharmacist. Relieved from duty at San Francisco, Cal., and directed to proceed to Detroit, Mich., and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist G. H. Brock. December 22, 1903.

Irwin, Fairfax, Surgeon. Detailed as member of Revenue Cutter Service retiring board to be convened at Philadelphia, Pa. January 5, 1904.

Korn, W. A., Assistant Surgeon. Detailed as member of Revenue Cutter Service retiring board to be convened at Philadelphia, Pa. January 5, 1904.

Magruder, G. M., Surgeon. Granted leave of absence for two days from December 30th.

Maguire, E. S., Pharmacist. Granted leave of absence for seven days from January 1st.

McClintic, T. B., Assistant Surgeon. Granted leave of absence for seven days from December 26, 1903, under paragraph 191 of the regulations.

Mead, F. W., Surgeon. Granted leave of absence for one day, December 26th.

Perry, J. C., Passed Assistant Surgeon. To report to Chairman of examining board at Washington, D. C., January 18, 1904, for examination to determine his fitness for promotion to the grade of surgeon.

Richardson, T. F., Assistant Surgeon. Granted leave of absence for one month from January 1, 1904.

Rosenau, M. J., Passed Assistant Surgeon. Granted four days' leave of absence from January 1, 1904, under paragraph 189 of the regulations.

Smith, F. C., Assistant Surgeon. Relieved from duty at Immigration Depot, New York, and directed to proceed to Detroit, Mich., and report to medical officer in command for duty and assignment to quarters. December 18, 1903.

Spangler, L. C., Pharmacist. Upon being relieved from duty at Delaware Breakwater quarantine station, to proceed to Boston, Mass., and report to medical officer in command for duty and assignment to quarters. December 23, 1903.

Steger, E. M., Assistant Surgeon. To proceed to Clarksburg, W. Va., for special temporary duty. December 24, 1903.

Stimson, A. M., Assistant Surgeon. Granted extension of leave of absence for two days from December 15th.

Tuttle, Jay, Acting Assistant Surgeon. Granted leave of absence for ten days from December 21st.

von Ezdorf, R. H., Passed Assistant Surgeon. To report to Director of Hygienic Laboratory for temporary duty. December 21, 1903. To proceed to the City of Mexico for special temporary duty. December 31, 1903.

Ward, W. K., Assistant Surgeon. Granted leave of absence for one day, December 17, 1903, under paragraph 191 of the regulations.

Wertenbaker, C. P., Passed Assistant Surgeon. To report to Chairman of examining board at Washington, D. C., January 18, 1904, for examination to determine his fitness for promotion to the grade of surgeon.

White, J. H., Surgeon. Bureau letter granting Surgeon White leave of absence for five days from December 17th, amended to read five days from December 19th.

Wickes, H. W., Passed Assistant Surgeon. Granted leave of absence for fifteen days from December 24th.

Boards Convened.

Board convened to meet at the marine hospital, Stapleton, N. Y., January 4, 1904, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Surgeon Preston H. Bailhache, chairman. Passed Assistant Surgeon A. C. Smith, recorder.

Board convened to meet at the marine hospital, Chelsea, Mass., January 11, 1904, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Surgeon R. M. Woodward, chairman. Assistant Surgeon W. C. Rucker, recorder.

Board convened to meet at Washington, D. C., for the purpose of considering revision of medical books on contract, and preparation of list of professional books, etc. Detail for the board—Assistant Surgeon General L. L. Williams, chairman. Assistant Surgeon General H. D. Geddings. Assistant Surgeon A. J. McLaughlin, recorder.

Board convened to meet at Washington, D. C., January 18, 1904, for the purpose of examining certain officers to determine their fitness for promotion to the grade of surgeon. Detail for the board—Assistant Surgeon-General A. H. Glennan, chairman. Assistant Surgeon-General L. L. Williams. Assistant Surgeon-General G. T. Vaughan, recorder.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending January 9, 1904:

Beyer, H. G., Surgeon. Upon completion of board duty in connection with barracks, ordered to Boston, Mass., for special temporary duty, and thence to the Naval Museum of Hygiene and Medical School, Washington, D. C.

Elmer, M. K., Assistant Surgeon. Detached from the *Pensacola* and ordered to the *Hancock*.

Peck, S. E., Assistant Surgeon. Ordered to the *Pensacola.*

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending January 9, 1904:

Allen, John H., First Lieutenant and Assistant Surgeon. Granted one month's leave of absence.

Fuller, Leigh A., Captain and Assistant Surgeon. Ordered to proceed to Fort Bayard, New Mexico, for duty, to relieve George M. Wells, Major and Surgeon, who will proceed to San Francisco for transportation to the Philippines.

Greenleaf, H. S., First Lieutenant and Assistant Surgeon. Promoted to the rank of captain and assistant surgeon.

Hess, Louis T., First Lieutenant and Assistant Surgeon. Ordered to report for examination for promotion.

Ives, F. J., Major and Surgeon. Granted seven days' leave of absence from December 30, 1903.

Johnson, R. W., Major and Surgeon. In addition to present duties in connection with the Louisiana Purchase Exposition, St. Louis, Mo., will supervise the sanitary conditions on the grounds until April 1, 1904.

KIEFFER, CHARLES F., First Lieutenant and Assistant Surgeon. Relieved from duty as attending surgeon and examiner of recruits, and ordered to proceed to Fort D. A. Russell, Wyoming, for duty.

McCULLOCH, CHAMPE C., JR., Captain and Assistant Surgeon. In addition to his present duties in New York city, will report for duty pertaining to the inspection of medical supplies being received at the medical supply depot in that city.

POLHEMUS, A. S., Major and Surgeon. Leave of absence extended two months.

PORTER, RALPH S., First Lieutenant and Assistant Surgeon. Ordered to Fort Leavenworth, Kan., for duty.

RAND, I. W., First Lieutenant and Assistant Surgeon. Left Fort Wright, Wash., *en route* to take station at Ord Barracks, Cal.

RICHARDSON, GEORGE H., First Lieutenant and Assistant Surgeon. Resignation took effect on January 1, 1904.

SNODDY, CARY A., First Lieutenant and Assistant Surgeon. Returned to the U. S. Army transport *Sherman* from detached duty.

STILES, H. R., First Lieutenant and Asssitant Surgeon. Order directing him to proceed to San Francisco Cal., revoked.

Births, Marriages, and Deaths.

Married.

CERRI—RITTMAN.—In Washington, D. C., on Wednesday, December 30th, Dr. Cavalier Nicola Cerri and Miss Josephine Grace Rittman.

CHAMBERLAIN—FITCH.—In Rome, Italy, on Thursday, January 7th, Dr. A. E. Chamberlain and Miss Jessie Fitch.

CLEMENTS—JAMES.—In Pelham, Georgia, on Thursday, December 24th, Dr. James Richard Clements and Miss Sabrella James.

DE SILVER—ESLER.—In Philadelphia, Pennsylvania, on Wednesday, January 6th, Dr. Francis Joseph de Silver and Miss Elizabeth Morgan Esler.

FRYER—TYLER.—In Denver, Colorado, on Monday, December 28th, Dr. Harry M. Fryer and Miss Mable Tyler.

DILLON—LINTNER.—In Albany, N. Y., on Tuesday, January 5th, Dr. John Randolph Marmaduke Dillon and Miss Laura B. Lintner.

JOHNSON—TRACEY.—In Ashland, Maryland, on Thursday, December 31st, Dr. Joseph Hartley Johnson and Miss Lucy Virginia Tracey.

KUGELER—COORS.—In Goldon, Colorado, on Saturday, December 26th, Dr. Harry B. A. Kugeler and Miss Louise M. Coors.

McNAMARA—BRADLEY.—In Ypsilanti, Michigan, on Friday, January 1st, Dr. William E. McNamara and Miss Alta Dora Bradley.

MEANY—CUNNINGHAM.—In Ithaca, N. Y., on Wednesday, January 6th, Dr. Edward Meany and Miss Margaret Cunningham.

NALLEY—QUEEN.—In Waldorf, Maryland, on Saturday, December 26th, Dr. Harry Nalley and Miss Ella M. Queen.

OTIS—BECKNER.—In Battle Creek, Michigan, on Thursday, December 31st, Dr. Elmer F. Otis and Dr. Clara Beckner.

ROSS—GARDNER.—In San Francisco, California, on Thursday, Dr. Ronald Harvey Ross and Miss Bertha Gardner.

WILLIAMS—JONES.—In Wilmington, Delaware, on Saturday, January 2nd, Dr. Dudley Williams and Miss Mary Isabel Jones.

Died.

ANDERSON.—In San Francisco, California, on Friday, December 25th, Dr. Jerome A. Anderson, in the fifty-seventh year of his age.

BILLINGTON.—In New York, N. Y., on Friday, January 8th, Dr. Cornelius E. Billington, in the sixty-first year of his age.

BIRCHETT.—In Vicksburg, Mississippi, on Saturday, January 2nd, Dr. T. G. Birchett, in the sixty-ninth year of his age.

BROWN.—In Detroit, Michigan, on Tuesday, December 29th, Dr. Owen C. Brown, in the fifty-first year of his age.

BUCKMAN.—In Trenton, New Jersey, on Thursday, January 7th, Dr. Margaret Preston Buckman.

CHORS.—In Brooklyn, N. Y., on Saturday, January 9th, Dr. Henry A. Chors, in the thirty-eighth year of his age.

CUNNINGHAM.—In Coldwater, Michigan, on Monday, January 4th, Dr. D. D. Cunningham, in the forty-second year of his age.

DAMON.—In Bridgeport, Connecticut, on Friday, January 1st, Dr. Silas J. Damon, in the fifty-ninth year of his age.

EIDENBENZ.—In New York, N. Y., on Thursday, December 31st, Dr. Anton Eidenbenz, in the eighty-seventh year of his age.

FERGUSON.—In Central Valley, N. Y., on Wednesday, January 6th, Dr. James F. Ferguson, in the sixty-fifth year of his age.

FRANTZ.—In Reading, Pennsylvania, on Wednesday, December 30th, Dr. Elias H. Frantz, in the fifty-seventh year of his age.

FREEMAN.—In Cincinnati, Ohio, on Tuesday, January 5th, Dr. Edwin Freeman, in the sixty-first year of his age.

FROWERT.—In Philadelphia, Pennsylvania, on Saturday, January 9th, Dr. Charles G. Frowert, in the fifty-fourth year of his age.

GRIER.—In Trenton, New Jersey, on Sunday, January 3rd, Dr. Philip H. Grier, in the seventy-fourth year of his age.

GRIGGS.—In Waterbury, Connecticut, on Wednesday, January 6th, Dr. Edward L. Griggs.

HAEFNER.—In Hurlock, Maryland, on Sunday, January 3rd, Dr. Gustavus A. Haefner, in the sixtieth year of his age.

HARDCASTLE.—In Easton, Maryland, on Sunday, December 27th, Dr. Edward M. Hardcastle, in the eighty-fifth year of his age.

HATTON.—In Grovetown, Georgia, on Wednesday, December 30th, Dr. Joseph Hatton.

JACKSON.—In Dunkirk, N. Y., on Friday, January 1st, Dr. Frank S. Jackson, in the fifty-third year of his age.

KENNEY.—In Paris, Kentucky, on Monday, December 28th, Dr. William Kenney, in the eighty-sixth year of his age.

KOST.—In Adrian, Michigan, on Sunday, January 10th, Dr. John Kost, in the eighty-seventh year of his age.

KURTZ.—In Philadelphia, Pennsylvania, on Friday, December 25th, Dr. Alfred J. Kurtz, in the fortieth year of his age.

McADOO.—In Butler, Pennsylvania, on Wednesday, December 23rd, Dr. George K. McAdoo, in the thirty-eighth year of his age.

POWERS.—In Racine, Wisconsin, on Wednesday, December 30th, Dr. Frank Beckham Powers, in the thirty-fourth year of his age.

REED.—In Madison, New Jersey, on Wednesday, January 6th, Dr. Stuart H. Reed, in the fiftieth year of his age.

SANDERS.—In Richmond, Virginia, on Saturday, January 2nd, Dr. Thomas Sanders, in the seventy-second year of his age.

SCRUGGS.—In Sweetwater, Tennessee, on Monday, December 28th, Dr. R. F. Scruggs.

SHAW.—In Brooklyn, N. Y., on Friday, January 8th, Dr. Frank W. Shaw, in the thirty-ninth year of his age.

SMITH.—In Portland, Michigan, on Saturday January 2nd, Dr. Chester Smith, in the seventy-first year of his age.

SPENCER.—In Cincinnati, Ohio, on Saturday, December 19th, Dr. S. H. Spencer, in the forty-fourth year of his age.

URANN.—In Cleveland, Ohio, on Friday, January 1st, Dr. Frederick W. Urann, in the eighty-second year of his age.

VASTINE.—In Catawissa, Pennsylvania, on Sunday, January, 3rd, Dr. J. H. Vastine, in the sixty-ninth year of his age.

WELCH.—In Overbrook, Pennsylvania, on Tuesday, December 29th, Dr. Thomas B. Welch, in the seventy-ninth year of his age.

WEST.—In New York, N. Y., on Wednesday, December 30th, Dr. Hamilton A. West, in the forty-fifth year of his age.

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Lectures and Addresses.

THE DIETETIC VALUE OF PATENTED FOODS.*

By W. D. HALLIBURTON, M. D., F. R. C. P., F. R. S.,
LONDON, ENG.,
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One of the most noteworthy signs of the times in the scientific world is the ever increasing importance that chemistry has assumed in relation to the biological sciences generally. Chemical physiology and chemical pathology, though infant sciences in the matter of years, are rapidly becoming giants in stature.

At the time I began to be interested in the subject, about twenty years ago, the number of devotees of these branches of science might almost have been numbered on the fingers of one hand, but a glance through our journals to-day will convince you of the change that has occurred in the interval. It is now difficult to find any paper in our current literature, relating to the biological sciences, which has not some chemical aspect. As a result there has been a growing *rapprochement* between chemists and biologists.

Twenty years ago the chemists looked with scarcely veiled contempt on what was then called physiological chemistry. They considered that very little real knowledge could be the outcome of a study in which the investigators dealt, not with definite substances capable of being crystallized, but with "messes." Now the younger physiologists have, what I myself so feel the lack of, a thorough training in chemistry, and they can apply the methods of that exact science to the elucidation of physiological and pathological problems.

Physiologists generally have come to appreciate the importance of chemistry, and have carried their studies to a point which has enabled them to contribute not a little from their side to various subjects of biological importance. Indeed, pure chemistry is indebted to a physiologist for a marked advance in bringing about the crystallization of albumin, a substance which had heretofore been considered as uncrystallizable.

On the other hand, many pure chemists have come to see the importance of an adequate study of substances of physiological interest. This is a field which the chemist will find is profitable from the scientific standpoint, although it may not be so from the commercial point of view. A fine example of this is shown in the work of Emil Fischer in his admirable contributions to science in the synthetic preparation of uric acid and of several of the carbohydrates.

An accurate knowledge of the composition and constitution of the proteid molecule will aid in the solution of many difficult problems presented to the physiologist. This subject has been fought shy of in the past, but the synthesis of the albuminous molecule, one of the final conquests of organic chemistry, cannot be much longer deferred, and it seems to me the day is not far distant—for we can already see the glimmering of its dawn—when the constitution of the proteid molecule will be unraveled; this will be the first step toward such a knowledge of protoplasm as will enable us to gain some definite information regarding vital processes.

Within the last few years we have seen the birth of a new branch of chemistry called physical chemistry; this, also, is important from the biological point of view, as has been well shown in the important work carried on in the laboratories of the University of Chicago under Professor Loeb.

But I do not wish to take up too much time on general questions, but will hasten to speak of the special subject selected and endeavor to place some practical suggestions before you in relation to the dietetic value of certain classes of food stuffs. Here, chemistry and medicine meet on common ground.

In these days of advertising the public is easily gulled, and it is desirable to know what truth underlies the statements of advertisers regarding patented foods. In the first place, mere chemical analysis is no criterion of food value, for the digestibility of the food is the all-important question. Investigations into the value of food stuffs must be conducted and controlled both *in vivo* and *in vitro*—both in the body and in the test-tube. The results of test-tube experiments are of value, but the final test of food stuffs must be made on animals, and preferably on man. It is tedious and difficult to carry out these experiments, but there is a growing appreciation of their value and an increasing resort to their use.

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* An address delivered before the American Chemical Society at New York on January 8, 1904.

A familiar instance of the untrustworthiness of mere chemical analysis as a test of food values is furnished by pork. I do not know how it is here, as I have had no opportunity to study the American digestion, but with us in England pork is looked upon as an emblem of all that is indigestible. Mere analysis shows that pork is the most highly nitrogenous of our meats, but the muscular fibres in this food are so completely enveloped in fat that a great portion of the food passes through the body without having been acted upon at all by the digestive fluids.

Another instance is furnished by whole wheat bread, which by analysis shows higher proteid content than does bread made out of the inner, white portion of the grain. Experience, however, demonstrates that it usually is less nutritious, a very large proportion of the proteid matter passing out undigested. This is due to the fact that the material which is of food value is so closely invested with cellulose as to prevent its being acted upon by the digestive fluids, and the presence of this undigested cellulose in the intestinal tract excites peristaltic action and causes rapid evacuation, so that the food is retained in the intestine but a short time, and there is, therefore, but a limited opportunity for intestinal digestion and absorption to take place.

A common error which it has seemed impossible to dislodge from the medical mind is that " nutritive " and " nitrogenous " are synonymous terms. The nitrogenous foods are, of course, indispensable and also the most expensive, and therefore receive more attention, but it does not follow that the non-nitrogenous foods are not also essential and of nutritive value. Milk is generally looked upon, with more or less basis of reason, as a perfect food, because the nitrogenous constituents are mixed with definite proportions of fats, carbohydrates, and inorganic compounds, so as to form an exact valence. Is it reasonable to suppose that the nitrogenous portion alone, sometimes hardened and rendered indigestible by treatment with the reagents used to separate it out, will be of the same dietetic value as the milk itself? As a matter of fact, it has in some of these preparations almost no dietetic value at all.

This is neither the time nor the place to enter into the wide question of infant feeding, but I cannot refrain from a passing allusion to the various widely advertised farinaceous foods, which are even more harmful to the child than altered milk. Chemists can join with medical men in their attempt to educate the public to realize that the natural form of food for the infant is milk, and that the child's alimentary canal is not capable of grappling with starch, still less with cellulose. The wide prevalence of intestinal disturbances and of rickets is largely due to the non-recognition of this elementary fact.

Another class of foods concerning which the chemist should help to educate the physician and the public is that of meat extracts. The average head of the family will tell his medical man that the patient, having tired of milk, has been given beef tea, and will state this as though the two substances were of equal nutritive value. This, as you well know, is a wholly erroneous impression, for beef tea or " beef extract," as it is generally termed in the United States, is in no sense a food, but merely a palatable and stimulating drink, ordinarily harmless, though possibly harmful in gouty conditions.

I have looked in vain among your advertisements for one which is familiar to us in England, representing an ox in a teacup. Another advertisement on a similar line shows an ox looking at a bottle of meat extract and saying " Alas! my poor brother," the inference being that all that is of nutritive value in the ox was contained in the little bottle he is contemplating. The absurdity of these advertisements must be apparent to all who have any knowledge of the chemistry of foods, and it is the province of the physiologist and the chemist to teach the public and the medical profession how erroneous such views are. Instead of an ox in a teacup, the ox's urine in a teacup would be much nearer the fact, for the meat extract consists largely of products on the way to urea, which much more nearly resemble in constitution the urine than they do the flesh of the ox. The manner in which meat extracts have been pushed in the market will, I fear, stand for a long time in the way of the recognition of the simple truth, that the best way of getting all the available benefit from a mutton chop is just to eat it.

Some of the manufacturers of meat extracts have lately awakened to the fact that the general public is learning something of the real value, or lack of value, of their wares, and, with a view to meeting the criticisms which have been raised, they have added greater or less quantities of powdered meat fibres. Even if it is granted that the powdered fibres are digestible, and that the meat extracts are composed wholly of them, which they are not, how much nutriment would the patient receive from teaspoonful doses given through the twenty-four hours? Certainly not an appreciable amount.

A somewhat analogous popular fallacy is that regarding cocoa. We drink tea or coffee because within certain limits they are useful as stimulants; with cocoa, however, we are told it is a different matter. This, we are informed, contains proteids and fat and is not merely a stimulant; but, as a matter of fact, how much proteid and how much fat could there possibly be in a decoction of a teaspoonful of the solid cocoa to a cup? The absurdity of this contention, therefore, becomes evident.

The class of food products whose claim for recognition is based upon their contents of the results of proteolysis and in which the foods are presented in the form of albumoses and peptones, have a real nutritive value proportionate to the amount of albumoses and peptones they contain. In many cases where the digestive system is at fault these preparations are of undoubted value.

The proteid molecule is an enormous one, and this is simplified and reduced in the process of digestion into albumoses and peptones, and then in part to simple crystalline materials, of which tyrosine and leucine may be taken as types. These substances are readily assimilated by the intestinal epithelium. Our modern ideas regarding proteid absorption show that the old differentiation between animal and vegetable life is not wholly correct. We have been taught that the function of the vegetable is synthesis, and that of the animal organism analysis, but we find that the intestinal epithelium is endowed with a wonderful faculty for synthesis, which enables it to produce fat when supplied with the fatty acids and glycerin; or, even where only the fatty acid is supplied, the epithelial cells have the faculty of providing through their own metabolic processes the glycerin necessary to synthesize fat, thus in effect making bricks without straw. Much the same is true for proteids; the small molecules of albumose and peptone are not found in the blood and lymph, but are once more built up with large proteid molecules by the intestinal cells. Recent research indicates that even the simple crystalline cleavage products (leucine, tyrosine, etc.) may also be utilized for the synthetic production of proteids.

There is thus a rational scientific basis for the use of peptonized foods. But how often a perfectly reasonable and legitimate idea is reduced to absurdity through ignorance and exaggeration! We, for instance, see advertised or hear recommended, peptonized beef tea. The uselessness of such a preparation must be manifest when we bear in mind the constitution of beef tea or meat extract. As we have already seen, it contains nothing capable of peptonization. Shortly before leaving England I heard that certain manufacturers proposed to add yeast to meat extracts. I am loth to believe that such a palpable absurdity is seriously contemplated. The addition can certainly not add anything to the value of the meat extract, but no doubt good advertising will benefit the manufacturer who sells it, though it will not help the public who buys it.

Here, again, chemists may join with medical men in instructing the public as to the real value of food stuffs and the real meaning of the term nutrition.

It is difficult to carry your knowledge along with you. The physiologist is apt to leave behind him his chemistry, and at the bedside the medical man forgets his physiology. A proper appreciation of the value and of the relation of chemistry and physiology to each other will broaden the sphere of the work and increase the usefulness of the labors of the physiological chemist, and will tend to bring into closer and more intimate relations the chemist and the medical man, with mutual benefit.

Original Communications.

HEPATIC DRAINAGE IN INFECTION OF THE BILIARY TRACTS.*

By JOHN B. DEAVER, M. D.,

PHILADELPHIA, PA.

The treatment of acute infection of the biliary system is of live importance at the present time. Such cases were formerly relegated entirely to the internist, unless a clear history of gallstones was elicited; and even then the services of the surgeon were not required until impaction of the stone had taken place or an empyema or gangrene of the gall bladder was suspected.

In every portion of the human body where infectious microorganisms induce suppuration, drainage is indicated. In infections of the hand, arm, foot, etc., conservative surgery requires a free incision and the establishment of drainage, even before a localized abscess has taken place, in order to avoid the risk of absorption and general infection. If we would so treat our patients in external portions of their anatomy, easily accessible, easily watched, the same indication holds true in the deeper recesses beneath the liver. It has long been recognized that empyema of the gall bladder, abscess of the liver, or a collection of pus, the result of rupture of the biliary tracts, is within the province of surgical treatment. But all cases do not have such terminations, many progressing to infection of the liver and to general septicæmia. We are beginning to realize that surgery, by means of drainage, offers the hope of saving many lives hitherto lost, in instances where an infection of the liver results from ascending suppurative cholangeitis.

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* Read before the semi-annual meeting of the Medical Society of the State of New York, October 13, 1903.

The greatest difficulty will be encountered in so interpreting the symptoms, both objective and subjective, as to determine the probable course of the infection in question. Acute cholecystitis, *per se*, does not necessarily require surgical interference, and in the majority of cases will subside under appropriate medical treatment; but the greatest scrutiny must be exercised to eliminate the question as to whether the infection has ascended into the hepatic ducts. It should be remembered that the onward, cleansing flow of bile, excreted under low pressure, can easily be checked, perhaps for a few hours only, by the catarrhal swelling of the infected and inflamed common duct. This suffices for entrance of bacteria into the liver, and is marked clinically by the transient appearance of jaundice. The presence of icterus is inconstant in the absence of obstruction, and in a case exhibiting marked yellowing of the skin there will be found, as a rule, obstruction of the common duct by a stone, an enlarged indurated pancreas, or perhaps enlargement of the lymphatic gland situated at the junction of the cystic and common hepatic ducts, inflicting sufficient pressure upon the common hepatic duct to arrest the flow of bile. I have frequently observed enlargement of this gland in infection of the gall bladder. The history of the following case illustrates the more acute type of suppurative cholangeitis:

CASE I.—A young married woman, twenty-six years old, whose mother died of carcinoma of the liver, and who had suffered from scarlet fever, articular rheumatism, malarial fever, influenza, and pneumonia, was admitted to the German Hospital suffering from cholangeitis.

Five weeks before admission she became jaundiced without apparent cause, accompanied by vomiting and diarrhœa. In one week the icterus began to fade and the bowels became constipated. Eight days before admission she had a chill followed by fever and profuse sweating. The chill recurred daily. There was no headache at any time, and until one week before I saw her, no pain, but from that time pain was experienced slightly below and to the right of the umbilicus.

Upon admission to the hospital she was found to have fever, hectic in type, and ranging from 100° to 104.6° F. The pulse ranged from 88 to 116. There was no jaundice, no liver enlargement, no tenderness or rigidity of the abdomen, and no splenic tumor. Bile was absent from the urine, and the blood count showed 8,450 leucocytes. A vein in the arm was opened and the blood distributed in bouillon flasks, serum tubes, and agar plates, with the failure to obtain any growths.

A diagnosis of cholangeitis, with probable gallstones, was made. Operation under ether anæsthesia. Dense adhesions were encountered, causing adherence of the gall bladder, duodenum, pylorus, and gastrohepatic omentum. The gall bladder was filled with stones, markedly ulcerated at its neck, and on the point of perforation. On opening the common duct, close to the cystic, a number of stones were removed, and then, by probing, the hepatic ducts were examined, but were found clear and unobstructed. The pancreas was not enlarged. The gall bladder was removed, the cystic duct tied off close to the common duct, the latter opened and a rubber drainage tube introduced into the duct; gauze drainage was placed above and below the drainage tube and at the site of dissection of the gall bladder from the liver.

Following the operation the temperature remained hectic in type for twenty-eight days, with profuse sweating at times, but no chills. There was considerable pain over the liver, which did not cease until the thirtieth day. The gauze was removed on the eleventh day, the drainage tube coming away with the gauze drains; the fistula remained open for thirty-eight days, at which time it spontaneously closed. On the forty-fourth day the patient was discharged, perfectly well, though weak. The material in the gall bladder was found to contain the *Staphylococcus pyogenes aureus* in pure culture.

In this case there was never any positive indication, from the symptoms, that gallstones were present; the leucocytes on admission were within the normal limit, yet, you will all quite agree, I think, that the drainage of the liver ducts saved the life of the patient.

A number of observers have noted the very frequent infection of the gall bladder by the bacillus of typhoid fever during the course of this disease, which in many instances progresses to suppurative inflammation. The latter condition may not develop until the stage of convalescence, or even for some time after the recovery of the patient.

In view of the frequency with which the typhoid bacillus is found in the bile in enteric fever, we might expect to find suppurative cholangeitis of the liver ducts more often than is observed. In the typhoid records of the German Hospital, for

1901, a tender or enlarged gall bladder was noted in the majority of the cases, of which only one developed acute cholecystitis. This patient recovered without operation. It is evident that the typhoid bacillus, like its relative, the *Bacillus coli communis,* requires some weakened resistance of the tissues in order to attain the required virulence to produce suppuration. But while suppuration is infrequent as a sequela, gallstones are constantly formed around clumps of bacilli.

A mechanical factor to be considered is that of the normal backflow of bile into the gall bladder, and the retention therein of bacteria through torpidity of the musculature of the gall bladder; whereas, the flow from the hepatic duct is probably constant.

During the past summer, in three cases operated upon for gallstones, a history of typhoid fever was obtained, and the typhoid bacillus was found in the bile. One of these cases was suppurative in type.

Case II.—A woman, aged fifty-six years, was attacked, nine weeks before admission to the hospital, with chills and fever, severe frontal headache, and vomiting. The attack was diagnosticated as typhoid fever and was so treated. Four weeks later quite a painful mass was detected in the upper right quadrant of the abdomen. No jaundice was observed, nor was it present upon admission. The temperature at this time was 102° F.; pulse 108; leucocytes 8,600. In the upper right quadrant of the abdomen a mass could be palpated, the size of the fist, and made more prominent by pressure from behind. This mass, to percussion, was apparently continuous with the dulness of the right lobe of the liver.

Operation revealed a mass of adhesions and matted omentum enveloping a comparatively small gall bladder. The cystic duct was obstructed by a stone and the gall bladder was soft, friable, deeply congested, and contained a stone, 2 cm. in diameter, floating in purulent bile. Cholecystectomy was performed, the cystic duct was split into the common duct and the liver drained by a rubber tube introduced into the common duct. The common and hepatic ducts were clear. Gauze packing was placed above and below the drainage tube and in contact with the oozing surface beneath the liver.

In thirty-two days the patient was discharged with a very small sinus. The typhoid bacillus in pure culture was found in the pus of the gall bladder.

The relation of gallstones to suppurative disease of the liver ducts is an intimate one, the gallstones being frequently the contributing cause. The calculi are but rarely found in the hepatic ducts themselves, but are driven from the gall bladder into the common duct, effect a lodgment therein, and by creating an obstruction favor the retention of septic products within the liver. I have met with cases with stones in the hepatic ducts which could only be removed by flushing the ducts. It is important to remember that the infection, not the gallstones, plays havoc with the patient, though the calculi, by their irritating nature, aid in the production of ulceration and cause liver sepsis by obstruction. Suppuration of the bile passages may extend into the liver, causing a purulent pericholangeitis, infection of the interlobular tissues, and the subsequent formation of multiple liver abscesses.

Gallstones in the common duct are almost invariably present and no doubt directly predispose to the condition by their obstructive action. The two following cases, in one of which gallstones were not present, are of interest in this connection.

Case III.—During the early part of the present year there came under my care a man, forty-eight years old, who had been taken sick one week before I saw him, with a feeling of general malaise, some general abdominal pain, nausea, and diarrhœa. When I first saw the patient there was slight yellowness of the whites of the eyes, general tenderness over the liver, temperature 100° F.; pulse 96; diarrhœa and nausea had ceased. He was placed on expectant treatment. Three days after my first visit the patient had a severe chill followed by temperature of 105° F. and profuse sweating. Blood examination, high leucocytosis, no malarial organisms. Urine loaded with casts, albumin, etc., and diminished in quantity to twenty ounces in the twenty-four hours.

The patient was now jaundiced; liver tenderness was more pronounced and particularly over the gall bladder region. Chills, high fever, and sweating recurred daily. Diagnosis, cholangeitis, streptococcus infection, and probably gallstones.

Operation. Drainage of the gall bladder, which was small and contained no stones, but about one drachm of pus, in which pure streptococcus was found.

The patient recovered after a long illness, three months, with bile fistula. There was no attempt of fistula to heal. At a second operation, a small stone found in sinus of Vater. The stone was removed, the gall bladder removed, and the common duct drained. Recovery.

Case IV.—A young Italian male, twenty-six years old, with a negative family history and personal history, was the subject, seven weeks before admission to the hospital, of an attack of abdominal pain, vomiting, jaundice, severe headache, and constipation. He was confined to bed, and typhoid fever was suspected, but examination of the blood gave a negative Widal reaction three times. During the second week, chills made their appearance. No malarial organisms were present. Ten days before admission a tender mass, believed to be the gall bladder, was noted.

He was admitted to the German Hospital, with a diagnosis of suppurative cholangeitis. The only symptoms of note were the previous history, slight jaundice, enlarged liver, and the physical appearance of one suffering from sepsis. The leucocytes numbered 25,000 multinuclear 87 per cent., hæmoglobin 50 per cent., red blood cells 4,180,000. Following operation the leucocytes fell to 11,000. A blood culture failed to give any growth.

Operation under ether anæsthesia. Upon opening the peritonæum some clear serum escaped, and the intestines were somewhat œdematous, probably from the portal obstruction. The liver was streaked and mottled in appearance, the gall bladder was distended, œdematous, and connected by adhesions to the colon, duodenum, and pylorus. On opening the gall bladder its contents were found to be thick yellow bile, free from stones. Cholecystostomy was performed with great difficulty, as the tissues were soft and friable, and the separation of adherent structures gave rise to profuse bleeding necessitating the leaving of several hæmostats in the wound and gauze packing to check the oozing; the patient improved for two weeks after the operation, as was instanced by a much lower temperature and pulse rate, better appetite. This, however, was but temporary. He died one month later with the evidence of general sepsis. Cultures from the bile on bouillon only failed to show a growth.

At autopsy multiple liver abscesses were found, fairly riddling the liver. They varied in size from a millet seed to that of a walnut. Cultures from the pus revealed the *Staphylococcus pyogeneus aureus*, the colon bacillus, and an unidentified bacillus giving a red pigment. The ducts were clear of stone obstruction.

In Biliary Abscesses of the Liver, by Captain Leonard Rogers, M. D., M. R. C. P., I. M. S. (*British Medical Journal*, No. 2230, 1903, page 760), the author means by biliary abscess of the liver, pus in the liver within the bile ducts, sometimes called suppurative cholangeitis. Captain Rogers believes it amenable to surgical treatment, if diagnosticated in time, and pronounces it invariably fatal if treated by purely medical means.

His attention was first directed to this subject in 1889, when, as demonstrator of pathology at St. Mary's Hospital, he met with no less than three cases in the post mortem room in six months. Search of the available literature enabled him to collect twenty cases, analysis of which yielded the following points of importance: In not a single case had the condition been diagnosticated. In eighteen of them gallstones were present in the hepatic or common duct and were the cause of suppuration; in one, a hydatid cyst of the liver opened into the hepatic duct; the remaining case was caused by primary cancer of the common duct. The duration of the disease after the symptoms of suppuration had appeared, as shown by fever, rigors, profuse sweating, etc., was only three weeks, on the average, in cases where there was no escape for the pus, many ending fatally shortly after definite symptoms of pus formation appeared. There were three cases, however, in which the patients lived a considerable time after the occurrence of pus. The most remarkable of the three was one in St. Mary's Hospital, in which the patient lived for eighteen months. This patient was admitted for empyema, which was successfully drained, the pus being bile stained. The wound healed and the patient left the hospital, only to return shortly afterward coughing up bile-stained pus. This continued in varying degree for upward of a year, the case being thought to be suppurating hydatid cyst of the liver opening into the lung. Finally, a perinephric abscess was evacuated, the pus being again bile-stained. The patient died from exhaustion a few weeks later. The post mortem revealed a liver riddled with suppuration; the bile ducts were very greatly dilated above some small gallstones, and full of pus. A long probe was readily pushed from the common hepatic duct through the liver to the diaphragm and into an abscess in the base of the right lung and lower right bronchus. A direct communication could be traced between the dilated hepatic duct and the circumrenal abscess, while the scar of the empyema wound also led through the diaphragm to another dilated pus containing hepatic duct.

Captain Rogers remarks that the case was one of multiple abscess in the hepatic duct, opening in various directions, and the very long duration of the case was evidently due to the partial drainage of the pus through the right pleura and lung, and around the right kidney respectively. The second of the three cases of long duration lasted six months. A communication between the enormously dilated bile ducts and the hepatic flexure of the colon had become established. In the third case, suppuration had loosened a gallstone which was situated at the lower end of the common duct, with escape of some pus around the stone into the bowel. The patient died four months after symptoms of suppuration had appeared.

The autopsy findings in these collected twenty cases demonstrated enormously dilated hepatic ducts, the gall bladder in nearly half the cases being contracted and deeply placed. In some, a history of the passage of gallstones and attacks of biliary colic at some earlier period, together with rigors, high irregular temperature, and general hectic condition was illustrated, while in others a history pointing to gallstones was absent.

This report upon so large a number of cases, with the single case I report, not including others which have occurred in my experience, all of which had been treated medically, demonstrates beyond a doubt that surgical treatment in the shape of removal of the obstruction with drainage cannot be practised too early.

If, then, the streptococcus, the staphylococcus, the typhoid fever bacillus, or other organisms may invade the biliary ducts and cause their infection, what should constitute the proper mode of action to cure the patient? The medical treatment of these cases, I regret to say, is too often of no avail in warding off the serious and too often fatal sequelæ, as is shown in the rôle this infection is capable of playing. In this, as in the appendicular field of surgery, I feel that by early operation many lives, otherwise sacrificed, can be saved. It is incumbent upon the medical man to bring himself in closer touch with the surgeon in the operating room, and, with the surgeon, to study the living pathology which tells more, and in a more impressive and practical way, than does deadhouse pathology. When confronted at the operating table by the varying lesions produced by infection, the method of procedure is not always clear, nor are the indications easily framed in writing. I quite agree with Richardson, that even with the increasing experience of the operator, the removal of the gall bladder is an operation which has distinct limitations.

It would seem that the simplest solution of the surgery of these cases would be in the cutting of the cystic duct, excising of the gall bladder, and the establishment of adequate drainage. But the removal of the gall bladder is totally unnecessary in many cases and dangerous in others. I have regretted in a few instances the performing of cholecystectomy when it was seemingly indicated; and, on the other hand, I have never had cause to repent draining the bile by a cholecystostomy alone, or in connection with tubage of the common or hepatic duct.[1]

Murphy has described the gall bladder as a tension bulb, causing a steady flow of bile, and with him and others I believe that closure of the cystic duct in cholangeitis and cholecystitis increases the tension in the liver, infects its ducts, and may be conducive to a fatal termination. Cholecystostomy is, therefore, indicated in all operable cases where the lesion is acute, the cystic duct open, and the gall bladder capable of recovering its normal function. If the common duct is patulous a fistula does not usually persist, and the return of the bile to its physiological condition can be noted in the drainage. The adhesions caused by the suture of the gall bladder to the abdominal wall are never a source of much inconvenience; not in comparison at least to pericholecystic adhesions.

Chronic calculous cholecystitis injures the walls of the gall bladder to such an extent that the distensibility of the organ is hindered and its function impaired, either entirely, or to a great extent. It is found to contain stones, inspissated bile; perhaps pus; to be shrunken, and often contracted. When cholangeitis occurs in these patients nothing is risked by removing the gall bladder, together with the cystic duct, providing hepatic drainage is established and the cystic duct is tied off flush at its junction with the hepatic duct, while carcinoma is a future possibility should the organ be retained. I have rarely been able to use the cystic duct in which to attach tube drainage owing to the acute angle that it makes with the common duct, and prefer to cut it across close to, or flush with, the same, or to split it into the common duct.

If there is any infection of the liver, or even suspicion of infection, bile drainage is necessary and must be free. The physical appearance of the liver furnishes a guide to many of these cases, after some experience, as an indication for the extent of drainage.

Bile is always to be regarded as a septic fluid capable of causing peritonitis, therefore the disposition of the gauze at operation must be carefully performed. Even in a case of choledochotomy without clinical evidence of infection and when I am sure the suture will not constrict the lumen of the duct, gauze is so disposed as to drain the site of opening in the event of leakage of bile.

I am not in accord with the usual teaching of the treatment of acute calculous choledochus obstruction to the extent that these cases should never be operated early. The exception I make is that in the event of cholangeitis with general liver tenderness, high fever, prostration, etc., it is safer to drain the gall bladder, either alone or in connection with removal of the stone and tubage of the common duct. Whether the latter should be opened must depend upon the ease with which it can be done, the extent of the pathological changes in the upper abdomen, the absence of other organic disease, etc.

Hepatotomy is sometimes practised for suppurative cholangeitis where the gall bladder or common duct can only be opened with great difficulty. The late Dr. W. E. B. Davis[2] recommended this operation, but I have never been convinced of its utility, except in cases of circumscribed abscess. I have upon two occasions torn the liver, the rents being so extensive as to necessitate packing; this has allowed me to observe that bile drainage takes place to a comparatively slight degree only. I may say that both of these patients recovered. To practise this operation in general infection of the liver, as instanced in some severe cases of cholangeitis, I should consider dangerous, on account of the free bleeding in patients that can little stand the loss of blood, and again, because the infectious bile cannot be carried away with the same facility as in drainage through the ducts, which latter operation enables the surgeon to remove the obstruction or reach the source of the infection, if the condition of the patient permits.

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[1] In acute cases the drainage should be confined to the gall badder when possible.

[2] *Transactions of the Southern Surgical and Gynæcological Association,* Vol. XIV, 1901.

I am not going to describe the technique of these operations for liver drainage, as those of you who operate are perfectly familiar with them.

I am particularly desirous of impressing upon those who practise general medicine that infection of the liver and its ducts can be cured by surgical means. Such infection is nearly always accompanied by gallstone formation and is liable at any time, from common duct obstruction, to be a source of deadly peril. I believe that the greater number of patients who are classed as dying from cholæmia, really suffer from infection, with its attendant injury to the liver cells, and not from the retention of bile *per se*. Such patients can be saved by drainage. The following conclusions are offered in the light of present experience with a desire to hear your discussion upon them:

1. Suppurative cholangeitis should be operated on before the infection injures the liver cells and before the retained bile has a chance to react injuriously upon the general organism. The presence or absence of gallstones is of no moment in deciding for early operation, though they are usually present.

2. Cholecystostomy is the operation of choice where the lesion is acute and the gall bladder has been functionating up to the time of infection.

3. Excision of the gall bladder can safely be performed in chronic calculous cholecystitis with an obstructed cystic duct.

4. Hepatic drainage must be provided for in all cases where infection is present or suspected; either through the gall bladder, or by opening the common duct or the hepatic duct.

5. Abscess of the liver is prevented and pancreatitis relieved by prompt drainage of infected bile ducts.

Clark County, Ky., Board of Health.—Auditor George B. Parks has appointed Dr. Marshall Varble, of Charleston, Ind., to succeed Dr. D. V. Scott as secretary of this board.

STERILE WATER ANÆSTHESIA IN THE OFFICE TREATMENT OF RECTAL DISEASES.*

By SAMUEL G. GANT, M. D., LL. D.,

NEW YORK.

After the diagnosis has been made, the first questions usually asked by patients suffering from disease about the lower rectum, anus, or buttocks, are first, " Doctor, must I go to the hospital? " and second, " Must I take ether or chloroform? " If these questions are answered in the affirmative, many of this class of patients decline operation and fall into the hands of the quacks, or resort to the use of patent nostrums without finding relief; and though their lives may be made miserable, they still refuse proper treatment, because of their fear of the hospital and general anæsthetics.

A local anæsthetic which would prove effective in operations about the anorectal region and at the same time would be devoid of toxic properties would enable the surgeon to perform most of these operations in his office, and the writer has been experimenting for many years, in order to find one which would possess these advantages. It was thought for a time that eucaine B[1] met these requirements, but even this preparation has not proved entirely satisfactory.

More recent experiments have demonstrated that *sterile water*, properly injected, is a trustworthy local anæsthetic, and, from experiments carried out in more than one hundred and fifty cases of rectal affections radically operated on by the writer, he is convinced that it is the most desirable local anæsthetic in these operations, because it produces a sufficient degree of anæsthesia, and in no instance has its employment been accompanied or followed by any of the annoying and dangerous complications which are frequently encountered when cocaine or similar drugs are used.

Burney Yeo and Griffith, of England, were among the pioneers (1868) to suggest the relief of pain by the subcutaneous injection of water beneath the skin. In 1886 and 1887, Feinberg and Corning succeeded in producing peripheral anæsthesia by injecting solutions of cocaine into nerve trunks. Corning (1885), Reclus (1889), Oberst (1890), and Schleich, in 1898 and 1891, all reported success in producing local anæsthesia by injecting into the skin and subcutaneous tissues, solutions containing cocaine alone or in combination with other drugs; Halstead, of Baltimore, is said by Dawbarn to have employed water successfully in the same manner as long ago as 1885. In 1891, Schleich described his method of infiltration anæsthesia. He stated that pure water produced a transitory anæsthesia, but its use was attended by some pain. He dismissed the subject of water anæsthesia in this manner and doubtless deprived the subject of further interest.

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* Read before the Medical Association of the Greater City of New York, December 14, 1903.

[1] A Plea for the Non-Hospital or Office Treatment of Diseases of the Rectum and Anus, Samuel G. Gant, M. D., *New York Medical Journal*, April 18, 1903.

Few, if any, cases have been reported where operations have been performed in any part of the body under local anæsthesia induced by the injection of sterile water into and beneath the skin. The writer, assisted by Dr. Edward Preble, has thus far been unable to find any reported cases where this method of producing local anæsthesia has been employed in operations about the rectum and anus.

It occurred to the writer to try distention of the tissues with water to produce local anæsthetization, on observing (1) that cocaine, eucaine, and other solutions were practically inert when distention failed of being obtained because of the escape of the fluid through an ulcer, fissure, or sinus, although the same solutions were effective where no such opening existed and distention was accomplished; and (2) that very weak solutions of the same drugs were apparently as effective as strong solutions where complete distention of the tissues was possible.

The experiments with sterile water anæsthesia were begun in September, 1901, but only recently has the technics been so improved that the writer has used it to the exclusion of general and medicinal local anæsthetics, with gratifying results, in a very large majority of his operations. The cases in which the method has been successfully employed include radical operations for fissure, ulceration, protruding and non-protruding internal hæmorrhoids, cutaneous and thrombotic external hæmorrhoids, polypi, prolapsus ani, ordinary complete and blind internal and external fistulæ, and marginal and follicular abscesses; excision of perineal cysts, sacral dermoids, and lipomata of the buttocks; removal of foreign bodies beneath the skin and mucosa; division of the sphincter in constipation, where the muscle was so hypertrophied that divulsion had proved ineffective; fixation of an elongated sigmoid to the anterior abdominal wall; colostomy; and exploratory laparotomy.

The *method* of producing local anæsthesia by the distention of the tissues with water is very simple. The only requirements are sterile water and a hypodermic syringe, fitted with a long, fine, sharp-pointed needle, both of which should be carefully sterilized. The temperature of the water is unimportant, cold, warm, and hot water being equally effective in producing anæsthesia; but the warm is preferable, as it causes the least discomfort. Again sterile saline solution has been frequently tried, but it does not appear to possess any advantages over water.

The *technics* of injecting the water varies, depending on the nature of the operation. When an incision is to be made through the skin and subcutaneous structures for fistula, colostomy, exploratory laparotomy, abdominal fixation of the sigmoid, excision of lipomata, dermoids, etc., or the removal of foreign bodies from beneath the integument, the procedure is as follows: A fold of the skin at one extremity of the line of incision is caught up between the thumb and forefinger and compressed for a few seconds, which diminishes, and often prevents, the momentary pain caused by the first injections. The needle is then quickly introduced between the layers of the skin and a few drops of water are slowly injected. They should produce a small, localized distention not unlike a blister, and as soon as this appears, anæsthesia of the skin should instantly occur at this point. The needle is then inserted slowly further and further along the line of the cut to be made, and the water is gradually injected as before, care being taken not to go entirely through the skin. When the syringe is emptied it is refilled, the needle is reintroduced within the anæsthetized area, and the injections are repeated as before, until the distention extends the entire length of the line of incision. The needle is then plunged through this distended line and subcutaneous injections are rapidly made until a firm, whitish, ridge-like swelling, about as wide and thick as the index finger is produced. These deep injections may cause a temporary discomfort due to the rapid distention of the subcutaneous tissues. If the procedure has been properly carried out, the skin and underlying tissues can now be incised without pain in almost every instance.

For external thrombotic hæmorrhoids it is necessary to make the injection of sterile water only between the layers of the skin overlying the clot to be removed.

In excising external cutaneous hæmorrhoids, both the skin and tumors should be distended tightly, in order to obtain effective anæsthesia.

Large internal venous or capillary hæmorrhoids can be anæsthetized within thirty seconds by injecting directly into the centre of each tumor sufficient sterile water to distend it tightly and cause it to turn white. They can then be removed painlessly by the ligature, clamp and cautery, or excision method.

Fissure, fistulæ, ulceration, epithelioma, stricture, and congenital malformations about the anus, constipation, fæcal impaction, or other affection which require operation to increase the lumen of the anal outlet or which necessitate incision or division of the sphincter muscle, may be operated on under water anæsthesia. For these operations the skin and subcutaneous structures up to the anal margin are distended, as previously described, and finally, injections are made into the mucosa, submucosa, the external and, if necessary, the internal sphincter muscle, until a sufficient degree of pressure is exerted upon the nerve endings to overcome sensation. The injection should be made slowly, as rapid distention of this sensitive region may produce considerable discomfort.

Follicular and marginal abscesses may be opened with but slight pain by injecting the water between the layers of the skin immediately over the abscess, subcutaneous distention being unnecessary. Ischiorectal abscesses, if small, may be incised in the same way, but the writer does not advocate this method of anæsthetization for deep ischiorectal, circumrectal, or pelvirectal, abscesses where extensive cutting and curetting are essential.

Prolapsus ani of moderate degree may be almost painlessly operated on by first distending with the sterile water the areas of mucous membrane and muscular structures which are to be removed by the ligature or clamp or cautery, or by distending the lines of incision when a segment of the bowel is to be excised.

The advantages of water anæsthesia are many:

(1) Effective local anæsthesia is so quickly and easily obtained by this method, that in a majority of rectal cases there is no necessity of requiring a patient to submit to the annoyance and expense of entering a hospital and undergoing general anæsthesia. For this reason it appeals strongly to the better class of patients.

(2) The anæsthesia instantly follows the injection of water sufficient to distend tightly the tissues to be incised or removed. This enables the operator to work quickly and, as the patient is not confined to the hospital during the after treatment, but can come to the office to be dressed, it economizes the surgeon's time and labor.

(3) No annoying or dangerous complications have been observed during or following the injection of the amount of water necessary to produce anæsthesia.

(4) In the writer's experience, the pain and bleeding following this method of local anæsthetization have been less than when medicinal local anæsthetics have been used.

(5) It eliminates the danger to life from heart, lung, and kidney complications, which are always to be feared during and following the administration of ether or chloroform, and it avoids the increased pain and hæmorrhage due to straining and vomiting after general anæsthesia.

(6) The only requirements are a hypodermic syringe, a suitable needle, and boiled water, and these are usually at hand.

(7) The radical treatment of hæmorrhoids can be so easily carried out under this method in the physician's office, with so little danger and inconvenience to the patient, that it should relegate to oblivion the much vaunted injection treatment, which is so dangerous and uncertain.

This method of anæsthetization is not practicable, however, for excision of the coccyx, or for extensive operations, such as are required for the removal of large tumors by excision or resection of the bowel, or for the relief of complete prolapsus recti, complex, horseshoe, rectovesical, rectourethral, and rectovaginal fistulæ, very extensive abscesses and strictures, congenital malformations, or other affections located in the upper rectum. Neither is it applicable for opening the abdomen in some cases where there is a thick layer of fat and the tissues are so loose and flabby that a proper degree of distention is impossible.

The anæsthetization and anæmia of the part occurs almost instantly on complete distention of the tissues, and from this it would seem that it is apparently produced by the pressure upon the nerves and their endings, or upon the blood vessels, caused by the pressure. If the distention is too quickly induced, however, by too rapidly injecting the water, it may cause considerable temporary discomfort, amounting to pain in extremely sensitive persons.

Following operations under this method of anæsthesia, the after pain is much less than when eucaine, cocaine, and similar drugs are used, as the latter apparently induce a state of nervous excitability in the patient; and, moreover, after their anæsthetic effect has worn off, there is increased local irritability of the nerves. There is also less danger of postoperative hæmorrhage after this method, due apparently to the fact that the drugs cause a relaxation of the small vessel walls, which frequently persists for a considerable time and permits oozing and sometimes profuse bleeding.

Recently, much has been written and said concerning operations performed on other parts of the body under local anæsthesia produced by very weak solutions of cocaine, eucaine, and similar agents, but in the writer's experience the addition of these drugs has been found unnecessary, and although the quantity used may be small, they still possess the disadvantage of sometimes producing toxic symptoms and other complications.

In conclusion, the writer wishes to state that, while anæsthesia by the injection of sterile water is not effective or cannot be applied in all major operations, he has employed it to the exclusion of general and local medicinal anæsthetics in nearly all his rectal operations (hæmorrhoids, fistulæ, and fissures, etc.), and with such gratifying results that he would heartily recommend its thorough trial by other surgeons.

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PUERPERAL SEPSIS, AND ITS TREATMENT BY IODINE.*

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Of all cases of puerperal fever only about 25 per cent. are strictly septic.

Septic puerperal fever may, therefore, be called a comparatively infrequent disease. Were it not for the mortality attending its presence and the morbidity resulting from its course, a precise differentiation from the other forms, which comprise 75 per cent. of all the cases, would be unnecessary.

The distinction between the septic and nonseptic forms becomes particularly important when we come to discuss the matter of treatment; for therapeutic measures applied to one class of cases will cause death, while in another the same procedures are accepted as proper.

A glance at the current medical literature will show the almost hopeless confusion which exists in the professional mind regarding the nature of puerperal sepsis. Reports are daily made of cases, evidently not septic, which have been subjected to some much lauded method of treatment. It is highly important that we determine what cases of puerperal fever are septic and what are not; otherwise rational treatment is impossible.

In this attempt at precise diagnosis, bacteriology is of the utmost value.

We are at the outset forced to admit that puerperal sepsis is due to the same bacteria as is sepsis elsewhere. The inaccessibility of the organ involved and the circumstances under which the infection occurs, have rendered observation of the local tissue changes exceedingly difficult. Even the examination of the discharges has given rise to a great deal of discussion, and only recently have we accepted a routine method of securing them.

As the microscopical findings will alone determine the exact nature of a given case, it becomes highly important to adopt fixed rules governing even the collection of the lochia.

Dübendorfer (working in Döderlein's clinic) found that the *vulva* of pregnant women showed streptococci in 72 per cent. and the colon bacillus in 48 per cent. These findings are approximately in accord with those given by Döderlein, Bumm, Burkhardt, and others. *It is evident, therefore, that an examination of the vulvar napkin after delivery is not a safe guide to a determination of the nature of the infection in a particular case,* because in 72 per cent. of cases pathogenic germs are present before delivery. In the vagina, Walthard found streptococci in 27 per cent.; Gönner in 5 per cent.; Koblanck in 10 per cent.; Stahler and Winkler in 23 per cent., and in another series in 50 per cent.; Dübendorfer in 36 per cent. Stoltz's elaborate work more than supports these findings. Contrary to these findings are those of Krönig, who found streptococci in but one of 167 cases, and John Williams in not one of 117 cases. *But the overwhelming burden of evidence is in favor of the common presence of streptococci and colon bacilli in the vaginæ of pregnant women.*

It is, therefore, unsafe to pronounce a given case of puerperal fever septic, merely upon an examination of the vaginal secretion, even though this be secured by means of the most precise technics. We are compelled, then, to base a diagnosis of puerperal sepsis upon an examination of the contents of the uterine cavity.

Franz has studied the contents of the uterus in afebrile puerperæ. In 262 cases without fever he found germs in 57. More recently he has studied 120 cases and has obtained positive results in 71, streptococci being present 9 times, staphylococci 12 times, and the colon bacillus once.

These findings are borne out by many others, particularly Stolz, and disputed by some. The different findings by equally competent observers may be due to the technics of the examination, those who never or seldom find germs in the uterus of afebrile puerperæ using solid culture media, while Franz and others who endorse him, use liquid culture media.

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* An address delivered before the Philadelphia Obstetrical Society, December 3, 1903.

However, the burden of proof is in favor of the occasional presence of germs which are known to be pathogenic in the uterus of puerperæ who are free from fever.

The conclusion is forced upon us that the genital tract of the puerperal woman may harbor pyogenic cocci and bacilli without detriment to her.

The interesting, because practical, question is, under what circumstances do these germs remain innocent and when do they become virulent?

Walthard has particularly studied this matter. He finds that pyogenic cocci may be present in the uterine cavity and behave as saprophytes only. In such cases they lie upon the surface of the endometrium only, and do not penetrate its substance. They furthermore, when thus behaving as saprophytes, produce but slight if any clinical disturbance unless drainage is interfered with. If the secretions become locked in, or the endometrium is subjected to trauma, these pyogenic cocci, which have heretofore been acting merely as saprophytes, may assume an attitude of the utmost virulence. Since we have learned this, we are unable to account for a number of clinical observations: The high mortality attending curetting in these cases; the sudden drop in temperature after irrigation, followed often by a rapid rise and aggravation of all the symptoms; and the rapid recovery under a simple packing of the uterus with strong iodoform gauze.

The important clinical distinction between the two types of streptococcic invasion, or rather between the two methods of behavior of the pyogenic cocci, is readily determined. If, under simple irrigation and packing with iodoform gauze, a case which has been shown to be streptococcic does not rapidly recover, the case may be laid down as one of infection by streptococci which are acting as septic, and not as saprophytic, germs. In no better place can I describe the technics by which I collect the lochia. It is known as Döderlein's method. The patient is drawn to the edge of the bed and the perinæum retracted by a sterile speculum, so as to expose the cervix. This latter is grasped by forceps and pulled close to the vulva. The cervical canal is in this way made to gape widely. The cervix is then cleansed carefully by means of cotton, and a curved glass tube is passed to the fundus, care being taken that it does not touch the vulva or vagina. Either by means of a rubber suction-ball or by pumping the tube up and down, a portion of the lochia is drawn into the tube. Both ends of the tube are then sealed by melted sealing-wax or the tube can be slipped into a large test tube. The bacteriologist at once makes a smear and strains it, and also inoculates culture media with the fluid which has been collected. In this procedure there can be but one element of error, and that is in case the cervical canal alone be infected—a very rare occurrence. Döderlein's method is now accepted as the only reliable one. In all others there are too many possibilities of mistake.

It has been shown that upon the vulva and in the vagina of pregnant women, pyogenic cocci and bacilli reside in a large percentage without producing symptoms. It has also been shown that they may be harbored by the uterus and produce no lesions, or be merely saprophytic. In other instances the same germs may produce fatal septicæmia. The explanation of this is found in the loss of resistance found in the infected tissues. If the vaginal secretions can lose their bactericidal properties it is reasonable to assume that the uterine secretions may also part with theirs. While the virulence of the infecting germs has much to do with the degree of local and general lesions, no one factor has so determining an influence upon the occurrence and degree even, of infection, as trauma inflicted directly upon the uterus.

Inasmuch as this paper is not to go extensively into the mode of infection, the author wishes to express his belief in autoinfection. If the gaping vulva admits germs into the vagina, it is reasonable to suppose that an open cervix will admit them to the *cavum uteri* from the vagina. All puerperal sepsis cannot be charged against unclean examining fingers, for Ahlfeld and Walthard have reported many cases in which fatal sepsis has occurred without vaginal examinations, and Stoltz has found more cocci in the uterus of unexamined women than in those examined. Furthermore, the wearing of sterile rubber gloves has produced no change in puerperal morbidity, as shown by Sticher in Küstner's clinic; and it is admitted by all that the morbidity is largely governed by the *number* of examinations made before and during labor. No matter what the body is which penetrates from the vulva into the vagina, sterile or unclean, it will carry germs into the vagina in 72 per cent. of cases, for it is in that number that we find germs upon the vulva.

I will now pass from a consideration of the work which has been chiefly that of others, to a statement of my own position regarding this disease.

After the bacteriologist tells me that I have a case of infection by either the *Streptococcus pyogenes*, the staphylococcus, or the colon bacillus, and if the constitutional symptoms are not grave, I wash out the uterus first with Thiersch's solution, then with boric acid, and *pack it full* of 10 per cent. or even 20 per cent. iodoform gauze; all of which can be done without narcosis and with the production of but little pain. If the infection is superficial the amelioration of symptoms is sudden, and nothing more is needed than to remove and renew the uterine packing in three days. The second dressing is removed in two more days and is not renewed. This method of procedure is a safe one to follow in all of the milder forms of puerperal fever, whether due to cocci acting as saprophytes, or to saprophytic bacilli; but if applied in the purely sapræmic types, a digital exploration of the uterine cavity should be made, to discover and remove fragments of placenta or membranes which so frequently are present.

If this method of treatment does not succeed in controlling within six hours a case of streptococcic endometritis, I feel sure that the germs have penetrated deeply into the mucosa, and that we have to deal with a case, not of bacteriotoxic endometritis, but of true septic endometritis or puerperal sepsis.

The presence of streptococci in the *cavum uteri* having been shown, and that method of treatment which should be effective were the infection superficial and sapræmic having failed to subdue the symptoms, it may fairly be assumed that the germs are acting, not as saprophytes, but as sepsis producers. They penetrate the thickness of the endometrium, and most often at the placental site, through all the component parts of the endometrium. When the muscularis is reached they proceed equally rapidly through the lymph channels and blood sinuses. After reaching the periphery of the uterus they extend to the general circulation very rapidly through both the lymphatic and venous systems. The exact time when the infection ceases to be localized within the uterine walls and when it reaches the vessels and lymphatics of the pelvis, we do not know and have no means of determining; for many factors, such as trauma, blood-state, etc., which cannot be precisely measured, govern it. However, the greater the degree of trauma and the larger the number of cocci introduced at one time, the more virulent will be the infection and the more rapid its extension. My own material came to me only after much delay, *but in no instance in which I have found cocci in the uterus have I failed to find them also in the fluid of the peritoneal cavity.* My impression is that the interval between the entrance of germs into the uterine musculature and their presence in the perimetric tissues, is exceedingly brief and is to be measured by minutes only. However, in all cases, at some stage the infection is limited to the outer layers of the endometrium, and even there is localized, usually at the placental site or wound surface; and from such a focus it may extend outward along the lymphatics and veins, and remain situated in those channels only which are connected with the isolated spot of infection. So then, not only may the infection be and remain localized in the *cavum uteri,* but it may produce complications in limited areas outside the uterus. The most common of these is a localized effusion of lymph upon the peritonæum. From the general symptoms we are not able to determine how much of the uterus is involved or how many lymph and venous channels are acting as carriers of the sepsis. Any method of treatment which is adopted must assume the existence of a general invasion.

Very many of these infections are mixed, the colon bacillus and saprophytes being associated with the streptococcus in about 60 per cent. of the cases; but these bacilli penetrate the tissues but slowly, so that when we examine the fluid from the pelvis we generally find it presenting a pure culture of streptococcus.

You will observe that my statement regarding the extension of streptococci outside the uterus is in direct opposition to those made by writers upon obstetrics; but in my 37 cases in which bacteriological examinations were made of the pelvic fluids, in every one we found streptococci. If my technics in collecting the fluid was faulty, it would hardly give such consistent results.

From these examinations I am forced to the conclusion that in streptococcus septic puerperal fever, pelvic lymphangeitis and phlebitis are early complications.

I shall not go into a description of the gross lesions produced in puerperal sepsis, and shall touch upon them only enough to make my argument clear.

I wish to combat from the beginning the obstetrical teaching that in most cases the infection remains localized in the uterus. I have shown by 37 operations that this is not so. In fact, in one instance no growth was got from the uterus, yet streptococci were found in the cul-de-sac. These findings have been corroborated by Hunter Robb in five instances.

Were the disease local, as gonorrhœa is, it would have little or no mortality and would have little tendency to produce pneumonia, endocarditis, general peritonitis, and nephritis. But it carries with it a very consistent mortality, never less than 7 per cent. and often much higher. The remote lesions you have seen and the peritonitis and annexal sequelæ I am sure you often operate for.

It is my belief that in every case of true puerperal sepsis, sepsis which does not yield to simple local cleanliness, peritonitis or annexal lesions are always produced, except in those rapidly fatal cases in which death takes place from septicæmia before local lesions can occur. We are also to consider the disease as a cause of destructive changes in remote organs, the heart, lungs, and kidneys. Two considerations influence us in our selection of a method of treatment; we must not only combat the disease within the pelvis, but also counteract the general infection. I seek to secure this result by isolating the infected uterus between masses of iodoform gauze, and by local and systemic iodism to destroy the cocci.

The Dressing.—The manner in which this is prepared is of the utmost importance. The best plain gauze, in five yard rolls, is sterilized. It is then dipped into a 5 per cent. solution of iodoform crystals in ether. About one pound of the solution is sufficient for five yards of gauze. The ether is then allowed to evaporate. When dry, the gauze has a pale blue tint, owing to the action of free iodine upon the starch in the cotton fibre. In this state the gauze is unfit for use. I then dip the gauze in a hot aqueous solution of bichloride of mercury, 1 to 4,000, and wring it as dry as the hands can. The bichloride acts as a fixing agent and the gauze becomes of the golden yellow characteristic of the presence of iodoform. But no crystals of iodoform are seen, for the drug has been carried by the ether into every hollow bast cell of the cotton fibre. It is also probable that the gauze also contains a trace of the single iodide of mercury. The drug-laden dressing is then packed into jars and sterilized for a half hour. When such a dressing as this is placed in contact with raw surfaces, such as those produced by a broad amputation of the breast or the abdominal incision when treated by the open method, in other words, when placed in contact with severed tissues, the iodoform is broken up very slowly and very little iodine is absorbed. But when the iodoform as embraced in this dressing is brought into contact with a serous surface its disintegration into its component parts is very rapid and its iodine becomes absorbed at once. The presence of inflammation in the peritonæum has no influence upon the process, even when a purulent effusion from the peritonæum is present. I also prepare a gauze of 10 per cent. solution strength for use within the uterus.

The Operation.—Most of my material is brought to me after other measures have failed to relieve. In not a single instance have we failed to find albumin in the urine, and many of the cases have presented grave changes in the kidneys. We have, therefore, been compelled to aid the kidneys in their eliminative functions. This we have done in the milder cases by high colon enemata of saline solution, and in the gravely ill by intravenous infusion. The latter may be given before operation under local anæsthesia, during the operation, or after. We are in the habit of using rather large quantities of fluid, the minimum being five pints and the maximum amount eight pints. We give it very slowly at a temperature (at the vein) of 115° F. I have taken three quarters of an hour for the infusion alone. I consider this subject of temperature of the fluid and the amount and the speed of its instillation, of the utmost importance. The rule generally obeyed is: the weaker the heart muscle the slower the infusion; and the more damaged the kidneys and the higher the specific gravity of the urine, the larger the amount of fluid to be used. There is another advantage in employing large quantities of water. As a rule, the concentration of the urine is marked, few specimens being below 1,025 specific gravity. The operation itself will raise this, and as the iodine is eliminated by the kidneys a still further rise would follow were hydrotherapy not employed. It is needless to state that hydrotherapy, practised alone, would cause an amelioration of the symptoms.

The cervix is thoroughly dilated and the uterus curetted. A specimen of the detritus removed is saved for examination. The uterus is then irrigated with saline solution to remove débris and is packed full of iodoform gauze of 10 per cent. strength. By a broad incision the posterior cul-de-sac is opened. In all instances a considerable quantity of fluid escapes. This may be serum, serolymph, seropus or almost pure pus. If there is much effusion of lymph the organs may be matted together, and if so, all adhesions are rapidly severed by the fingers. I now lift up the uterus with the towel and depress the posterior vaginal wall. Generally, the rectum will prolapse into the wound or a knuckle of intestine will present. From the surface of either I pick off a bit of lymph or wipe some fluid, and keep it for examination.

The pelvis is now packed full of iodoform gauze of 5 per cent. strength. As this folded dressing is withdrawn from the jar it will be of one yard width. Pieces are cut off of an average length of eight inches, so that each piece I insert into the pelvis will be, if unfolded, one yard long and eight inches wide. They are inserted, however, folded as shown. From ten to fifteen of such pieces are inserted. The first is passed well to one side of the pelvis, over the iliac vessels and extending to the pelvic brim. It is held in place by this long retractor. Other pieces are placed alongside this so as completely to fill the pelvis from side to side, and to be in apposition with the posterior layers of the broad ligaments and uterus, and in contact with all that portion of the pelvic peritonæum which overlies those lymphatics and veins that carry the infection. The gauze should not project from the vulva. A self-retaining catheter is inserted and such cardiac stimulants employed as the heart muscle demands. I employ nitroglycerin, digitalis, and *moderate* doses of strychnine. I may speak against those massive doses of strychnine given by some, as they induce contraction in the arterioles, a condition most undesirable in streptococcus infection.

The first local effect of the operation is an enormous outpouring of serum by the peritonæum. This I have never been able to measure, but it is frequently sufficient to soak the draw sheet within a day and render frequent changes in the vulvar pads necessary.

The catheter is opened every three hours, the urine measured, and tested for iodine as well as in the usual way. We employ the chloroform-nitric acid test for iodine. Frequently in two hours and on an average in five hours, we have secured a marked reaction of iodine. In order to keep up the function of the kidneys and assist them to eliminate the iodine, I give saline enemata in eight ounce quantities every four hours. The posture of the patient is a matter of indifference.

It will usually be noticed that the specific gravity of the urine rises in proportion as the iodine is eliminated.

We have never noticed an iodine eruption, but in three instances mild systemic effects were produced, dry red tongue, delirium, etc., but these passed off.

The effect of the iodine upon the blood we are now studying.

Almost immediately after the operation the temperature drops. In eight instances, and only when infusion was employed, I have noticed a violent chill and great acceleration in pulse rate as the patient comes out of ether. Although infusion has been used very often in other conditions, I have never noted this chill under circumstances other than when streptococcus infection was present. This chill is to be met by vigorous stimulation with brandy by rectum and nitroglycerin hypodermically. Champagne and cracked ice or acidulated sterile water by mouth, I allow in six hours.

Liquid diet is permitted in twenty-four hours. Endocarditis and pneumonitis are to be treated along medical lines. In three days the uterine packing is removed and is not renewed unless the *cavum uteri* is large.

The cul-de-sac dressing is removed in one week and is renewed. At first I employed chloroform at this first dressing, but do not now.

If purgation is employed it should not be by calomel, but by salines, for the administration of mercury in the presence of iodine may induce poisoning.

All dressings are saved and examined bacteriologically.

As already stated, the first result of the operation is a free outpouring of serum by the peritonæum. This, of course, has a strong iodine reaction. The general surgeon has probably noted the same result from his Mikulicz abdominal packs. It was but natural that, having found streptococci in the fluid collected from the pelvic opening, we should have studied the effect of the operation upon the infected field. Not only were the dressings from the uterine cavity examined, but those from the cul-de-sac as well. We have observed that the uterine cavity is rendered sterile with more difficulty than the pelvic. In every instance, save one, the pelvis was free from cocci at the second dressing. In this exceptional instance streptococci persisted until the third dressing. The anatomical conformation of the cervix in this case was such that I deemed it advisable to repack the uterus at each dressing, to keep the cervix open. In this instance we found streptococci on the uterine gauze of the fourth dressing, but not of the fifth. However, in this woman, the drop in temperature after the operation was particularly sharp and abrupt; so I have been led to consider the sterilization of the pelvis as of more importance than that of the uterine cavity. Anyhow, although we have found streptococci in both uterine and pelvic dressings, we have not failed to note the subsidence of symptoms in all cases not having complications.

The colon bacillus we have found consistently present upon all dressings. It appears but necessary to damage the peritonæum-covered tissues to even a slight degree in order to secure its presence. We have found it to appear upon the moist vaginal packs introduced into the vagina preliminary to a vaginal operation. I believe the colon bacillus devoid of virulence, unless associated with cocci or in the presence of greatly damaged tissues.

But our aim has been to kill the streptococci. That we have succeeded in doing this, so far as the pelvis is concerned, is shown by the results of the bacteriological examinations of the dressings. In our series of cases it will be noted that we have had four deaths, all from complications. In not one of these were streptococci found in the dressings. Although we succeeded in cleansing the locality of origin of the infection, those remote lesions which occurred before the operation and which, we must believe, were due to streptococci, destroyed life.

What is the effect of iodine upon the blood?

Inasmuch as streptococci occur only intermittently in the blood in even fatal sepsis, I have not considered a blood test of particular value, either as an indication for therapeutic measures, or as proof of their efficacy. To be frank with you, I cannot tell you why so sudden a fall in temperature occurs after operation. It cannot be due to the evacuation of a few ounces of serum from the pelvis. Nor can the curetting of the uterus be credited with it; for this, when practised alone, aggravates the symptoms. And although the system be loaded with iodine, so long as this is freely eliminated by the kidneys, the pulse also stays down.

We have begun a series of observations to determine the effect of the iodine upon the blood. Each of us sees so few cases in which thorough scientific observations of the blood can be made, that I shall merely mention what I am trying to show, so that each of you can take up the same work.

(1) We have so far failed to isolate iodine from the blood serum. (2) Streptococcus infection produces a marked diminution of the hæmoglobin, and intravenous infusion still further lowers the percentage. In the only two instances in which we have tested the blood along these lines, we have found the hæmoglobin *increased.* Does the iodine in the blood have a merely oxidizing effect? I shall be compelled to leave the solution of certain of these questions to Dr. Sajous and the chemists.

I use iodine in the infected pelvis and the streptococci are destroyed. All general symptoms subside, and I find iodine in the urine and in the saliva. My deductions are *post hoc propter hoc,* but are they not warranted?

I will now come to the final stage of my discourse, and to you the most interesting, the purely practical.

I have never been able to separate my septic cases into the post partum and post abortum. I showed six uteri removed by the coroner from women who had died from the most virulent septicæmia after criminal abortion before the fourth month. I could scarcely leave such cases out of the class of puerperal sepsis.

So many factors govern the degree and progress of an infection that I have established a purely arbitrary classification and include all infections occurring after the tenth week of pregnancy, as puerperal.

I have operated upon 37 women. In 36 streptococci were found in the uterine scrapings, and in 37 they were secured from the cul-de-sac. Torrens has operated on 6 cases, in all of which streptococci were found in the uterus and cul-de-sac. Killebrew (Mobile) has operated on 2 cases. Brooks H. Wells has performed 8 operations. In ten instances a previous curetting had been done, and three patients died—33 per cent. mortality. In forty-three cases not previously operated on, one died, a mortality of 2 per cent. These five deaths were due one to bilateral bronchopneumonia, and three to endocarditis with pneumonia.

As to the morbidity, we have found that six of the subjects have subsequently conceived, five going to full term, one inducing abortion at the fifth month. Contrast this treatment with that by curetting alone with a mortality of 22 per cent.; antistreptococcus serum mortality 33 per cent.; hysterectomy, mortality 55 per cent.; and the let-alone treatment mortality 7 per cent. to 25 per cent.; and we have nothing for which to apologize. But there is another phase to the subject. All the women we have operated on and who have lived, have kept their uteri, and six that we know of have had a restoration to physiological function.

Can the hysterectomist point to such a result? And can he who folds his hands and does nothing, see so slight a degree of morbidity in his cases? Even though our enthusiasm for this treatment, this isolation of the infecting organ and the establishment of local and systemic iodism, be not shared by you, I am not asking too much when I expect you to grant that: (1) In no case has death resulted directly from the operation; (2) there is no mutilation; (3) the pelvis is rendered free from streptococci; and the results can be accounted for in no other way than as the result of the action of iodine.

My own belief is that the mortality would be much lower if the operation were applied as soon as the cases were shown to be septic.

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Bequests of Dr. Albert Mosier.—Dr. Albert Mosier, son of Jacob Mosier, of this city, a noted student of tuberculosis who died at Saranac Lake, N. Y., leaves in his will, filed January 4th, one insurance policy to Lima Hospital, another to Saranac Lake laboratory, a large microscope to Berlin College, and his voluminous library to the Harvard Medical School.

PUBLIC HEALTH AND FOOD PRESERVATIVES.

By R. G. ECCLES, M. D., Phar. D.,
NEW YORK,
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Is the use of food preservatives injurious to public health? Does even a judicious use of them bring a balance of evil, instead of benefit, to the community? When one pauses to consider the quantities of preservatives that are being used, the millions of people by whom they are in daily use, the immense financial interests that are involved in their use, and the important hygienic problems that are involved in a reply to the above questions, their far-reaching import at once becomes apparent. To those not aware of the exact state of affairs connected with the use of preservatives it may seem a small matter to settle such questions off-hand, and to pronounce for or against them as fancy, self interest, or prejudice may dictate.

Some idea of the extent to which they are used may be culled from the *Report of the British Committee on Food Preservatives*, of 1901. The representative of the London Chamber of Commerce declared that, since the adoption of the use of modern preservatives on Canadian bacon and ham, " the increase in the trade is enormous." In proof of his assertion he presented to the committee a *certified* statement, from the high commissioner's office, in which it was shown that this trade alone had grown from $300,000 a year to $8,000,000 a year in nine years. When asked what the effect would be if the use of modern preservatives should be forbidden, he replied: " This gigantic trade that has increased by leaps and bounds from Canada in the last twenty years would come to an end, because if we were to prepare the product as we used, prior to twenty years ago, the trade would be absolutely useless to this country." When questioned further, he asserted that many trials had been made to see the effect of stopping modern methods of preserving imported goods of the kind named, and they had always ended in disaster to the trade. He was firmly convinced that the prohibiting of the use of such preservatives would end Canadian, Australian, and American importations. The president of the Liverpool Trade Association testified that if the use of preservatives was restricted in the direction indicated, he did not believe the public would be willing to take up meat in its old, salty condition. With the choice before them of meat containing, and other meat not containing, modern preservatives, he asserted that actual sales showed that 75 per cent. of the former was demanded, as against 25 per cent. of the latter. Domestic cured meat, without modern preservatives, was being passed by, unbought by three out of every four English purchasers. Only one of the four clung to goods cured in the old way.

During the twenty years that modern preservatives have been thus growing in favor and the quantities used of them increasing, public health has been steadily and surely improving, and the death rate diminishing. What does it mean? Is this lengthening of life in defiance of what has been called " wholesale public poisoning," and would the death rate have diminished still more if the old way of preserving food had been adhered to? To whom shall we appeal for an answer? Whither shall we look for a reply? Where is there a scintilla of evidence in this remarkable state of things, that can in the slightest degree support those who contend that modern food preservatives are wholly evil, should be unsparingly condemned, and the merchants who use them punished as adulterators of food? How do such facts bear out the claims that the use of such foods as are protected from decomposition reduces the resisting power of the community towards disease? How do they affect the claim that the millions of people who have been using them for twenty years or more have been made by them more certain preys of disease and death? No doubt, general sanitation deserves the chief credit for the lessened death rate, but, if chemical preservatives were half as injurious to public health as these opponents of them would like to have us believe, the great bulk of sanitary effort should have been neutralized. That no such neutralization is evident should, at least, make the opponents less positive of their unverified claims. When a man of the standing of Dr. Robert Bell, fellow of the Faculty of Physicians and Surgeons, of Glasgow, and fellow of the Royal College of Surgeons, of Edinburgh, testifies[1] that he and his family had knowingly and regularly taken food containing antiseptics for eighteen years, and without a sign of harm to any of them, it would seem as if unrestricted denunciation of them was somewhat unreasonable. He says that " during the whole of that period we have never had a single case of illness in the house; when scarlet fever, measles, whooping cough, and other ailments were rampant, there was not a single one of our children taken ill. There is another family that I know very well in the same position as ourselves." The eighteen years in which these two families were daily poisoning (?) themselves had lowered their resisting power to disease so much that they took no disease, while those whose constitutions had not been injured by such "doping" were so strong and resisting that they fell victims to scarlet fever, measles, whooping cough, etc. Either Dr. Bell deliberately testified to what was not true, or else he has laid before the foes of food preservatives a rather knotty problem, which they are bound in honor to solve, or else to tone down their extreme denunciations so that they may more nearly touch the facts of nature.

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[1] *Report of the Departmental Committee appointed to inquire into the Use of Preservatives and Coloring Matters in the Preservation and Coloring of Foods.* Presented to both Houses of Parliament by command of His Majsty. London, 1901, p. 96.

In the settlement of questions of such supreme importance mere opinions are futile until verified by experience or experiment; and the citation of authorities, however high, is delusive unless supported by facts. In twentieth century science there should be room for only one authority—Nature; and one arbiter—experiment. With even these there will be difficulty enough in properly understanding them. Let us deal with facts and not fancies, truths and not guesses. When science is forced to give in to prejudices truth must suffer. The whole experience of the race has shown that there are in every age and clime great numbers of people who are opposed, on general principles, to every sort of innovation. Education does not seem to enable such people to overcome their personal bias. Certain changes or certain things they do not like, and they cannot tell why. Because they dislike them they oppose them. Would it not be well for those free from such bias always to demand from those possessing the bias, evidence from Nature confirmatory of their mere assertions? Condemnation due to experience deserves commendation, but condemnation which has its foundation in some personal dislike deserves no encouragement. It is rank treason to science.

A study of the literature of the use of antiseptics in preserving food stuffs will show any unbiased person that unattested opinions have been passed along from author to author, have grown in forcefulness of expression at each succeeding reference, until at last they have become magnified into serious charges. When challenged on the way each author says: "I took it from Professor So-and-so's book, or paper, believing him a reliable teacher." Professor So-and-so, when asked about it, tells you that he took it from some other, presumably worthy, author. When finally run down to the original source, it is found to be from some one having a dislike to all preservatives, or to the particular one, who has made a general statement concerning possible injuriousness. There being many others with the same kind of bias, the story grows as it passes from one to another. Some one declares that since the article is antiseptic in its action, *we may infer* that it will hinder digestion. The next author says that since the article is antiseptic in its action *it will* hinder digestion. The next tells his readers that since the article is antiseptic it will hinder digestion and *probably* in proportion to its antiseptic power. Following him comes another author who expands upon this by saying that since the article is an antiseptic *it hinders* digestion in *exact proportion* to its antiseptic power. Finally comes the author who declares that, according to Professors A., B., C., and D., it is dangerous to use because it hinders digestion in exact proportion to its antiseptic power. In this way a guess has been magnified into a piece of positive scientific evidence, and though this guess is referable back to one man who made it in a mild form, yet it is finally quoted as the testimony of five, ten, or more authoritites. The opinion had its origin in the vague, antiquated notion that the ferments now known to be distinct chemical bodies, at present known as enzymes, and the microorganisms, at one time known as ferments, were identical in their natures. The contention, then, as seen through modern facts is that, since an antiseptic weakens or kills a living entity, once called a ferment, it *must* weaken or kill a dead, chemical substance *because* it was also called a ferment. The play and confusion of thought all reside in this juggling with the word "ferment" in its two, wholly unlike, meanings. As far back as 1886, experiments were reported,[2] which showed that all sorts of substances hindered peptic digestion. Even sugar and salt, spices and wines were no exception. Substances that possess little or no antiseptic power were shown to hinder digestion to a far greater extent than the most powerful antiseptics. Within the past year (1903) Dr. Macalister and Dr. Bradshaw have confirmed these experiments, so far as salicylic acid and salt are concerned. They[3] have shown that salicylic acid, in saturated aqueous solutions, hinders peptic digestion no more than does a small amount of table salt. Let the reader note particularly that these are not mere opinions, but results from actual appeals to Nature. If errors have been made, they can easily be proved errors by any intelligent man, after a little experience in experimenting. As long as one such experiment, however, stands uncontradicted, it must weigh more in the minds of intelligent people than a thousand vague opinions of the most eminent authorities, The dictum of Nature is supreme.

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[2] *New York Medical Journal*, November 27th and December 11th.

[3] *Lancet*, March 14, 1903.

In the use of modern means of preserving food stuffs, a steady adjustment had been going on in accordance with social and physical requirements, until personal dislikes undertook to direct legislation. Certain articles of food had come, by the consensus of opinion, to be usually preserved by refrigeration, others by sterilization, still others by vigilant care and enforced scrupulous cleanliness, while a large proportion were cared for by the use of antiseptics. Of the latter a similar adaptation had been going on, and the fittest system for the particular class of goods was steadily being reached. The properties of salicylic acid favor its use in foods designed for certain purposes, but hinder or prohibit its use in others. The same is true of boric acid and other chemical preservatives. The substances named have been abused unsparingly by the ultraconservative, but the first particularly so. Not a jot of scientific evidence has been forthcoming to sustain the denunciations, and the result of this crusade of defamation has been the hindrance of progress. The securing of proper restrictions on the use of antiseptics as preservatives has been thwarted, and all the real evils of their use increased and perpetuated. The extremists have compelled importers and exporters, packers and canners, manufacturers and agriculturalists, merchants and laborers, industrially interested in preservatives, to fight against beneficial legislation and desirable restrictions. No one would ever have opposed the passage of a law making it necessary to state on each package of preserved foods just what antiseptic was used and the quantity in which it was used, if it had not been for the utterly unjustifiable and wholly unsupported statements of those whose bias would not let them see any good in such preservatives. The prejudices such statements have created in the minds of people ignorant of the subject, and who took the denunciations as being the verdict of science, has caused all the opposition. Give the public facts and let the question of use or disuse rest upon the verdict of a fair trial, and everybody will welcome publicity. Unfortunately, those who clamor loudest for such publicity are the very ones who are making conditions that forbid it.

They, too, are responsible for a multitude of unreliable and unscientific preservatives that are foisted upon the market by all sorts of fancy names and at fancy prices. By falsely denouncing salicylic acid they have forced upon the public substitutes of less value, but of comparatively higher price. One of their stock charges against it has been a statement which Rideal[4] has quoted from Nessler, and which reads as follows: "Salicylic acid is not a natural constituent of any food, and its addition is a fraud on the quality." Nessler did not know whether this was true or false at the time he made it, but his bias compelled him to guess that it might be true. He probably knows better now, and it is quite likely that Rideal will expunge the quotation from the next edition of his book, for reasons presently to be given. No doubt, however, it will continue to be quoted for years to come as a strong argument against salicylic acid.

(To be continued.)

SOME INVESTIGATIONS OF A BACTERIAL TREATMENT OF TUBERCULOSIS.[*]

By STEPHEN J. MAHER, M. D.,

NEW HAVEN, CONN.

(*Continued from page 115.*)

Now what is this X bacillus?

One of the best authorities in the world on nonpathogenic bacteria is Professor H. W. Conn, of Wesleyan University. Nine months ago, I sent him some cultures of X and asked him for an identification. His decision, given after many weeks' study of the organism, was that my X bacillus was "a not uncommon dairy bacterium, which is at all events very closely related to *Bacillus mycoides*. I have found it," he wrote, "a few times myself in my studies of milk products, here in Middletown." His report in full follows. The plus sign means "yes," and the minus sign "no."

"This organism is a somewhat common dairy organism. It is No. 111 of Conn, list of Dairy Bacteria, *Bacillus mycoides* III. It is probably a form of *Bacillus mycoides* of author, and stands close to *Bacillus liodermos*. It does not exactly agree with any described species, except *Bacillus mycoides* III, Conn, and it differs slightly from this.

"1. Size 1 μ x 2 — 2.5 μ. Somewhat variable. Produces long motile threads.

"2. Motility evidently due to flagella which are distributed over the body.

"3. Spore formation in all cultures. Spores in the middle of the rods and of greater diameter than the rods, about 1.2 μ x 1.5 μ.

"4. Luxuriant growth, bouillon very turbid.

"5. Very heavy scum forms after a few days, which is much folded and has a ground-glass appearance. Scum not tough, breaking easily.

"6. Dense dry growth, whitish to yellowish, folded or smooth.

"7. Deep colonies, at first a dense tangled mass, somewhat resembling anthrax. Then the margin sends out a few irregular rays and colony spreads, breaking up into granules. Becomes in

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[4] *Disinfection and Disinfectants.* Second edition, p. 203.

[*] Read before the New Haven Medical Association, December 16, 1903.

TABLE.

Morphology.						Cultural Features.																Biochemical Features.										
						Nutrient broth tube.			Nutrient agar tube.		Gelatin Plate.			Gelatin Stab.					Potato tube.					Milk.								
Bacillus.	Coccus.	Diam. greater than 1m.	Motile.	Uniting in chains.	Spores.	Turbidity.	Scum.	Sediment.	Dull.	Wrinkled.	Characteristic.	Proteus-like.	Moss-like.	Liquefies.	Deep Funnel.	Needle Growth.	Surface Growth.	Gas produced.	Visible.	Luxuriant.	Fermentation tube. Growth in closed arms.	Grows at body temperature.	Facultative anærobic.	Curdles.	Acids.	Alkaline.	Digests.	Slimy.	Strong odor.	Chromogenesis.	Fluoresence.	Gas production.
+	—	[1] +	[2] +	+	[3] +	[4] +	[5] +	+	+	[6] +	[7] +	—	—	+	[8] +	+		−	+	[9] +	+	+	[12] +	[10] +	—	∓	[11] +	—	—	—	—	—

a few days a liquefying colony, ½ cm. in diameter, full of floating granules, among which motile chains can be seen.

"8. Deep funnel; after 2 to 3 days radiating fibres arise from the needle track, which are not very long, but always present. Liquefaction very rapid. Gelatin not completely liquefied in two weeks.

"9. Gray to white, wrinkled, soft growth.

"10. Curdles in oven at 37° C. in one day. At 20° C. commonly digests without curdling. Reaction amphoteric.

"11. Digests completely, but rather slowly, into translucent to transparent grayish, cloudy liquid, the reaction of which is slightly alkaline.

"12. Grows well under mica plate and also in closed arm of fermentation tube. Grows luxuriantly in contact with air."

In the course of my work with the bacillus I have discovered a few points which are not touched upon in the report by Dr. Conn. *(a)* That the membrane that it forms on the surface of agar is pale blue by transmitted light; *(b)* that this membrane is thin, as compared with the growth of any variety of *Bacillus subtilis; (c)* that if the seed colony is not too large, it spreads in peculiar, slender and graceful radii; *(d)* that if the seed colony is large, it quickly spreads in thin blue waves over the entire surface of the agar; *(e)* that at 37.5° C. its spread is noticeable in nine hours—sometimes in six hours; that if the seed colony is from a very old blood culture, it grows often with difficulty; *(f)* that its exposure for hours to the direct rays of the sun on the hottest summer days does not impair its vitality; *(g)* it has an inhibitory effect on the formation of moulds; *(h)* that, if planted on a dish containing colonies of *Staphylococcus aureus,* it quickly surrounds the latter, and sometimes digs underneath them and loosens them; *(i)* that on agar it goes largely to spores in forty-eight hours, more quickly than in any other culture medium.

On blood serum, Dr. Conn did not grow it, but it should be noted that on this medium: *(a)* It breaks down the blood into an almost colorless serum, with one third solid residue, in nine days at room temperature, and in four days at 37.5 C.; *(b)* that, from the beginning, the colony on blood serum is almost colorless and almost without pellicle—points of differentiation from the colonies of most of the liquefying bacteria; *(c)* that it does not readily turn to spores in blood serum; *(d)* that in blood serum it gives rise to a peculiarly unpleasant cheesy odor.

It will live in staphylococcic and streptococcic pus at room or blood temperature. It will live in glycerin. Blood serum cultures of it exposed to the air are resistant to an equal amount of absolute alcohol; after the alcohol has evaporated the cultures will still be alive. It will grow luxuriantly in blood serum on which staphylococci have been growing for days. It will grow luxuriantly in tubes in which streptococci have been growing. Streptococci will not grow in blood serum broken down with X. If X and streptococci are planted simultaneously in blood serum, only X will grow.

If X and the tubercle bacillus are planted together in glycerin agar, the tubercle bacillus will in two weeks make a weak effort to grow, but in ten weeks will not be discoverable by the microscope.

If purulent tuberculous sputa containing streptococci and staphylococci are inoculated with X and placed in the incubator for days or weeks at 37.5 C. the X, the streptococci, the staphylococci, and the tubercle bacilli will persist; whereas, if drops of this sputum are placed in agar petri dishes, there will be a prompt growth of X and a disappearance of the other germs.

If a rotten egg, a fresh egg, and a fresh egg of which the yolk and the white have been mixed together, are carefully spilled into three large sterile tubes, and a few drops of an X culture are poured into each tube, and the tubes are then plugged and put in the incubator at 37.5 C., it will be found that the rotten and the broken egg will soon show striking evidence of the power of X, while the sound egg will remain almost unchanged. At the end of three weeks the broken egg will be dry, excavated, and yellow, and will look almost as if it had been "hard boiled," the rotten egg will show the yolk yellow and caverned, and its white full of débris in suspension, and almost orange in color. The sound egg will be intact and of its original color, except for a dry and hard cap that will have formed, because of evaporation of the water from the upper layer of the white. In this dry top will be a few hollow places. The rest of the yolk and white will be normal in appearance, having the color and consistency of a fresh egg. The white will be of a very pale amber color. Cultures of X can be made from any one of the three tubes.

If X is injected into hard or softening tuberculous glands, in two days the resulting pus will contain no other microorganism than X. In the few cases in which suppuration has occurred at the point of injection of X, I have found X as rods or spores, usually spores, in the thin odorless pus. Six weeks after the injection I have grown X in pure culture from pus taken from one of these suppurating nodes. In an uncertain proportion of cases, I have been able to recover X from the urine of patients injected days and even weeks previously. In a few cases, I have found X in the expectoration of patients recently injected. My efforts to prove its presence in the blood of patients injected have not been entirely satisfactory, but they have been very suggestive and interesting. On September 20th, from the arms of three patients A (Blainy), B (Sherlock), and C (Sullivan), who had previously received injections of X—A and B on September 16th, and C on September 11th—Dr. M. P. Burnham, the resident physician at Seton, took 5 c. c. of blood and immediately injected it into three previously prepared Erlenmeyer flasks containing 20 c. c. of plain nutrient broth. Of course, everything concerned, arms, needle, and flasks, were properly sterilized. These three flasks were then placed in the incubator at 37.5 C. Neither the next day nor at any later time did the bouillon become turbid with bacterial growth; but the next day and for several days thereafter it was always possible to make on agar Petri dishes, weak subcultures of X from these three flasks. I cannot concede that I, by repeated accident, infected the dishes. The only remaining explanation that I know of, is that the antibacterial influence of the 5 c. c. of blood was sufficiently strong to prevent the development of the X spores in the 20 c. c. of bouillon, but that when they got free of this influence on the agar in the petri dishes, they sluggishly became rods.

This blood test was made at the suggestion of Dr. E. R. Baldwin, of Saranac Lake. He advised, also, that an effort be made to find out whether the injection of X had any effect on the secondary infection of consumptives, and he kindly sent me details of a method of procedure which he thought would help to solve the problem. I turned this matter over to Dr. M. P. Burnham, who is a good bacteriologist and, as resident at Seton, was in continual and intimate touch with the patients under observation. The subject is a highly important one. I therefore give his report in full:

The following bacteriological study of the sputum in conjunction with the treatment of pulmonary tuberculosis by the X bacillus was along suggestions made by Dr. Baldwin, of the Adirondack Cottage Sanitarium; the intention being to find what, if any, relation the X bacillus had on the existing secondary infection as shown by examinations of cultures grown from the sputum under proper precautions.

For this reason cases were selected which were of the type usually supposed to represent mixed infection, viz.: those having temperatures of at least 101° F., daily sweats, with or without chills, and signs of cavitation and of softening in the lungs. Diet and treatment the same in all cases. One observation was made on a class of four patients who clinically presented the condition and symptoms as above. The urine and sputum were examined every third day for three examinations before and following the injection of X bacilli. The urinary examination, consisting of the usual chemical and microscopical tests. A diazo reaction was also tried. The sputum was examined microscopically, after standing, by Gabbet's method, and tubercle bacilli and secondary infection noted.

In the study of the culture preparations made from the sputum, the following routine was followed in each case preparatory to inoculating the plate. Agar plates being used and incubated at 37.6° C. The morning sputum, usually between the hours of five and six a. m., was collected by myself, in no case being left to nurse or attendant. Usually the patient was found asleep and the change from a resting to a sitting posture was sufficient to cause cough and spitting. The mouth was as thoroughly cleansed as possible by the free use of sterile normal salt solution before any sputum was raised, and throat gargled with the same sterile normal salt solution. The first sputum was disregarded, and the mouth and throat again thoroughly rinsed with the salt solution, then the sputum raised from the next coughing was collected in a wide-mouth sterile bottle, taken immediately to the laboratory, and poured into a sterile Petri dish. The centre of the purulent mass was taken by sterile bent-pointed tweezers and transferred to another sterile Petri dish, and there the mass was trimmed down to the size of a pea. This small mass was taken by a sterile platinum loop and transferred to a tube containing about 10 c. c. of sterile normal salt solution, and gently shaken. The loop was again sterilized and the small mass removed to a second tube of sterile salt solution. In this manner the sputum was passed successively through five tubes, in each case being shaken, and at the end of the process was found fragmented and broken up. These fragmented pieces were taken by sterile tweezers and dragged around the surface of an agar plate, usually the central half being all that was inoculated. Plates thus prepared, and incubated at 37° C., were examined at the end of twenty-four and thirty-six, and forty-eight, and seventy-two hours. In case of doubt subculture plates were made.

At the end of twenty-four hours the set of plates from the four cases presented the following condition:

Case I. (Sherlock) had a profuse growth of staphylococcic colonies, of the albus and aureus variety and about equally divided in number, in all about 250 colonies. No other organism grew.

Case II. (Schultz) presented the same profuse growth of staphylococci, being about 200 colonies to the plate of the albus and aureus variety, with at least $^4/_5$ of the latter variety and the remainder of the albus.

Case III. (Barnes), at the end of twenty-four hours, presented a profuse growth of very minute pearly glistening colonies, very much smaller than staphylococci, of which there were only three colonies on the plate at the end of forty-eight hours. These minute glistening colonies had grown larger, but still presented the same appearance. On microscopical examination the colonies were seen to be of a diplococcus and presumably of *Diplococcus pneumoniæ*. Pure cultures of the same were made from the plate.

Case IV. (Blainy) grew about 50 colonies of staphylococcus aureus.

The second and third plates, made at third day intervals, showed that in each individual case the same organism grew as in the first plate and in a general way the number of colonies to the plate remained the same. Case IV grew fewer on the second, and rather more on the third, plate than on the first, always aureus in kind. Cases I and II continued in the second and third plate to grow *Staphylococcus aureus* and *albus* and about 200 colonies to the plate. Case III, diplococci as in the first set. It is interesting to note that three of the four cases were of staphylococcic secondary infection and one of diplococcic; that the same secondary infection continued constant in each case, and of about the same intensity, as shown by the number of colonies to the plate, and also that in the four cases no streptococci were found. In collecting the sputum, characteristic odor was noted in three of the patients' breaths, and in the plates grown from their sputum in the incubator the odor was recognized. Case III. (Barnes) who grew no staphylococci had no appreciable odor to the breath.

Following the injection, plates were made under the same conditions and precautions as before and the following conditions noted: Case V. grew ten scattered colonies of *Staphylococcus aureus* and *albus*, and at one side of the plate, a growth of X. On the second day no new colonies had developed, but X had covered the entire surface of the plate. Case II showed about 200 colonies, rather smaller than normal for staphylococci, at end of twenty-four hours, and the edge of the plate a thick filmy growth of X, which had at the end of forty-eight hours covered the entire surface of the plate. Case III, instead of the profuse growth of diplococci colonies, presented almost a clean plate—there being no colonies of diplococci and twelve of staphylococci, of the albus and aureus variety and a thin film of X growth on one edge which developed as in the other plates.

On the second set of plates made on the third day following, and the fifth day after the injection, the following was the condition: Case I. Showed, at twenty-four hours, a growth of X over the whole plate, obscuring the growth of staphylococcic colonies, which were demonstrated in cover glass preparations to be present in small amount. Case II. Same condition. Case III. Showed few staphylococci, no diplococci; no X. Case IV. Showed same profuse growth of X as in the first and third plates.

In the third set of plates made on the seventh day following the injection, the growth was similar to that in the first set made after injection of X. Viz.: a small growth of X on Cases I, II, and IV and none on III, but a return of the diplococcic colonies on III. Case I showed no change in urine before and after injection, by the chemical and microscopical tests usually applied. Case II. No change. Case III. Had before injection $^1/_{10}$ per cent. albumin and few fine granular hyaline casts. Following injection no albumin or casts detected. Case IV. Was the only case which gave a diazo reaction, and also had ¼ per cent. of albumin, with casts in large numbers, finely and coarsely granular and hyaline, and more dense strongly refracting casts of large diameter. And following the injection of X, no change was noted in the condition of urine either as to albumin or diazo.

(*To be concluded.*)

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Fewer Cases of Infectious Diseases in Chicago, Ill.—Thanks to the frequent snowfalls, in Chicago, which have purified the atmosphere from time to time and, by covering surfaces, have minimized the amount of wind-blown street filth during the last six weeks, there is a marked reduction in the prevalence and in the fatality of the infectious germ diseases. A total of 18.6 inches of snow fell during December and the ground has been pretty well covered since Thanksgiving Day. The effect is most marked in the January deaths from pneumonia—231 up to the close of the week, as compared with 266 during the corresponding period last year. The 2,100 predicted October 24th as the probable total deaths from pneumonia for the season, are, however, likely to be exceeded.

Therapeutical Notes.

Eczema of the Scalp, Eyebrows, and Beard.—*Journal des praticiens*, for November 11, 1903, advises cutting of the hair in men and children and the subsequent use, in any case, of steam, or gauze soaked in hot water to loosen the crusts. Oil of cade is the most valuable remedy:

℞ Oil of cade	20 grammes (5 drachms);
Sweet almond oil	80 grammes (20 drachms).

M. Ointment.

Or the following may be substituted:

℞ Zinc oxide	6 grammes (90 grains);
Calomel	3 grammes (45 grains);
Lard	30 grammes (1 ounce).

M. Ointment.

Sycosis of the beard requires treatment with boric acid solutions, or with the old Alibour's mixture:

℞ Zinc sulphate	7 grammes (105 grains);
Copper sulphate	2 grammes (30 grains);
Saffron	40 centigrammes (5 grains);
Camphor water	200 grammes ($6^2/_3$ ounces).

M. For use, dilute with two parts water.

Cough in Tuberculosis.—*Revue française de médecine et de chirurgie*, for December 14, 1903, gives:

℞ Bromoform	30 drops;
Alcohol	10 grammes (2½ drachms);
Syrup of ipecac	30 grammes (1 ounce);
Cherrylaurel water	20 grammes (5 drachms);
Syrup of opium (Codex)	150 grammes (5 ounces).

M. Three or four tablespoonfuls in the 24 hours.

Senile Pruritus.—Gaucher, in *Journal de médecine interne*, for December 15, 1903, states that in addition to local applications, the diet is of great importance. Nitrogenous substances should be eliminated, and milk first alone and then combined with vegetables substituted. As an ointment, he recommends:

℞ Guiacol Menthol } of each	20 grammes (5 drachms);
Vaseline	100 grammes ($3^1/_3$ ounces).

M. Ointment.

Ointment of zinc oxide may replace the vaseline if a thicker mixture is required. A two per cent. powder of camphor and talcum may be used subsequently.

Chapped Hands.—Brocq, quoted by *Journal de médecine interne*, for December 15, 1903, advises:

℞ Rose water	100 grammes ($3^1/_3$ ounces);
Glycerin	50 grammes ($1^2/_3$ ounces);
Tannin	½ gramme (7½ grains).

M. Use morning and evening.

Another of Brocq's prescriptions is:

℞ Lanolin	50 grammes ($1^2/_3$ ounces);
Extract of vanilla	7 drops;
Oil of roses	1 drop.

M. Use at bedtime.

Pain in Cancer of Stomach.—According to *Journal de médecine interne*, for December 15, 1903, Robin prescribes:

℞ Cocaine hydrochloride Codeine } of each	5 centigrammes (¾ grain);
Lime water	150 grammes (5 ounces).

M. Teaspoonful every hour.

Mathieu, according to the same journal, departs from tradition in prescribing for the pain of gastric ulcer, by giving, instead of one 20 gramme (5 drachms) dose of bismuth subnitrate in the morning, two doses of 10 grammes each, morning and evening, in a considerable quantity of tepid water.

Lecithin.—Lecithin may be prescribed in the form of pills, in oily solutions for hypodermic injection, or incorporated with codliver oil.

Pills, with a dose of ¾ grain of lecithin in each, may be prepared simply by mixing it with licorice powder.

Carrière, in a recent number of *Semaine médicale*, gives this formula:

℞ Codliver oil	1 litre (1 quart);
Lecithin	4½ grammes (67½ grains).

M. Tablespoonful at a dose.

Dissolve the lecithin in 90 minims of chloroform. Add 10 drachms of oil and, when the chloroform has evaporated, add the remainder of the oil.

An emulsion, well borne by children, is:

℞ Almond oil	1½ grammes (25 drops);
Lecithin	½ gramme (8 drops);
Powdered gum arabic	15 grammes (½ ounce);
Syrup	30 grammes (1 ounce);
Cherry laurel water	enough to make 150 grammes (5 ounces).

M. Tablespoonful as a dose.

Whooping Cough.—*Journal des praticiens*, for December 5, 1903, states that two of the best remedies are belladonna and bromoform; it offers a few prescriptions:

℞ Powdered belladonna root	5 milligrammes ($^3/_{40}$ grain);
Powdered sugar	4 grammes (1 drachm).

M. Divide into 8 powders; take 2 daily.

℞ Atropine sulphate	1 milligramme ($^3/_{200}$ grain);
Distilled water	200 grammes ($6^2/_3$ ounces).

M. Dessertspoonful at a dose; watch effects carefully.

℞ Bromoform	48 drops;
Alcohol	10 grammes ($^1/_3$ ounce);
Cherry laurel water	4 grammes (1 drachm);
Distilled water	enough to make 120 grammes (4 ounces).

M. Teaspoonful contains 2 drops of bromoform.

℞ Bromoform	48 drops;
Oil of sweet almonds Gum arabic } of each	15 grammes (½ ounce);
Cherry laurel water	4 grammes (1 drachm);
Distilled water	enough to make 120 grammes (4 ounces).

M. Teaspoonful at a dose.

As in the preceding, this prescription contains 2 drops of bromoform to the teaspoonful. Four drops may be given for each year of age, beginning at 4 years; do not give more than 30 drops in the 24 hours.

Insomnia.—*Nord médical*, for November 15, 1903, advises.

℞ Extract of belladonna	25 centigrammes (3¾ grains);
Sodium bromide	10 grammes (150 grains);
Cherry laurel water	10 grammes ($^1/_3$ ounce);
Glycerin	15 grammes (½ ounce);
Oily solution of trional, 5 per cent.	60 grammes (2 ounces);
Mucilage of Irish moss	70 grammes ($2^1/_3$ ounces).

M. Tablespoonful when required.

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THE PRECIPITIN TEST FOR HUMAN BLOOD.

The attempt in a criminal trial now in progress to surround the biological test for human blood with the sensational features of extreme newness, unreliability or uncertainty of results, and especially the assertion that the test had never before been employed in a criminal trial in the United States, indicate the necessity of assuring the public and the legal profession that this test has passed the experimental stage and taken its place in all civilized countries as an approved medico-legal procedure.

It is now nearly four years since Uhlenhuth demonstrated that solutions of dried human blood were precipitated by humanized rabbit serum just as precipitates had been shown to result when perfectly fresh specimens of sera were used. Not only this observer, but a score of others, have subsequently demonstrated that the method is applicable with slightly less definite results to blood stains aged from one to thirty years, to blood mixed with many substances which render its microscopical detection no longer possible, to decomposed blood, and to such highly diluted or altered specimens that the spectroscope no longer yields the absorption bands of blood pigment. Moreover, the extreme specificity of the precipitin reaction has been demonstrated for the blood precipitins as the reaction had before been shown to characterize the antibodies for definite bacterial stains. At least two observers have shown that, by the use of calibrated test serum or by the accurate measurement of the relative amounts of the precipitate secured after twenty-four hours, distinctions can be made between such closely related bloods as human and anthropoid monkey blood, and an elaborate system of classification of animals has been constructed upon the relations of their blood albumins as determined by the precipitin test. Even the identity of the proteids entering into the reaction has been determined with considerable certainty, and the fact shown that it is principally the globulins of the blood which are the carriers of the specific impress that the animal organism receives when submitted to repeated injections of an alien blood.

The more recent contributions to the subject have pointed out many possible sources of error and the methods of avoiding them. These include principally the presence in the tested blood of various chemical agents which precipitate blood albumins and develop spontaneous precipitates. The danger of confusing pure human blood with that of domestic animals has not been found so serious as at first seemed probable, as the biological distance separating the proteids of human blood from those of ordinary domestic animals is very great.

Of course, it is not to be supposed that the inexperienced worker can safely plunge into an experimental field requiring rather dextrous technics. The method is distinctly one for the expert, but the difficulties of the method are certainly no greater and the results obtained are vastly more certain than those of the micrometry of red cells. This latter method of identification of blood, which has never been given the prominence in Europe that it has reached in America, seems likely to be retired to a decidedly secondary position as a feature of expert evidence in medico-legal cases, since its field is with rare exceptions much better covered by the precipitin test.

The important fact which the legal profession should recognize is that this test is not an isolated discovery in relation to dried blood spots, but represents merely one practical application of the most comprehensive and subtle principle that has yet been demonstrated in biology, and that its application in the chemistry of physiology, pathology, and bacteriology, has been most extensive and almost revolutionary in its results. Finally, the insinuation of the daily press, that American observers have been slow to recognize the value of the method or have failed critically to test its claims, must not pass unchallenged, since the precipitin test has long been, and is constantly being, used when required, all over the United States.

THE OPTICAL SOCIETY'S BILL.

The attempt on the part of the Optical Society of the State of New York to secure legislation to legalize the acts of its members in practising medicine without the now legal qualifications is to be renewed. Its failures in former years were to be attributed in no small degree to the efforts of the State Medical Society and its committee on legislation. This year the president of the Optical Society has sent to each physician in the State a copy of the proposed act, a circular in which certain erroneous statements are made, and a postal card which it is requested that the physician sign and return. Doubtless many of these postal cards have been signed and returned by physicians who have forgotten for the time the struggles so ably waged at Albany, by our committee on legislation to maintain the standard to be required of all who shall practise any branch of medicine in this State, but who would not willingly or knowingly hamper the action of that committee. But when our committee presents the almost unanimous opposition of the profession to this or any other bill which will tend to "let down the bars," it will be confronted by this mass of postal cards from the individual members of the profession it represents, each one of whom has signed a statement directly antagonistic to its efforts. In his circular letter the president of the Optical Society says, "As the measure does not invade the domain of medicine we desire the support of all medical practitioners. . . . We want all who practice Optometry to be able to recognize disease for the SOLE purpose of urging the importance of consulting qualified physicians." Section I of the bill is "The practice of Optometry is defined to be the employment of any means, other than the use of drugs, for the measurement of the powers of vision and the adaptation of lenses for the aid thereof." By the "powers of vision" must be meant the functional activity of the retina as influenced by disease or malformation of some portion of the eye. The adaptation of lenses for the aid thereof can take place with benefit to the patient only when malformation is the fault, but the treatment of diseases and malformations of the eye is as much practice of medicine as treatment of the diseases and malformations of the limbs or of the internal organs, and all who practise this branch of medicine should be equally well qualified with those who devote their attention to the others. The statement of the president in his letter, that the measure does not invade the domain of medicine, is not true. If it were not for the desire to invade that domain such a bill as this would never be thought of, much less pressed year after year upon the legislature. Persons who suffer from troubles which call for attention to the eyes should be encouraged by the profession to avoid such people as those it is now proposed to license, and to consult physicians who are specialists in eye diseases, to determine what treatment should be instituted. Meantime, no effort should be spared to exclude this insidious measure. It is, in sooth, the wooden horse of Troy. Surely of it and its specious sops to the medical profession, we may well repeat "*Timeo danaos et dona ferentes.*"

THE MEDICAL SCHOOL INSPECTORS OF THE NEW YORK HEALTH DEPARTMENT.

There is no more honorable work for a medical man than public service in connection with the health department of a large city. Not only should such work attract the best men, but it should also offer to those who devote themselves to it some adequate rewards in the way of permanence of position, increase of salary with length of service, and pension on retirement after a lifelong term of continuous work.

Unfortunately these conditions do not obtain in the Health Department of the City of New York, so far as the medical school inspectors are concerned. Their positions are not at all permanent in practice, although they are so by law in theory. Owing to the peculiar system in vogue in New York, of working under insufficient appropriations to begin with, and of then securing temporary increases in the funds allotted to the department of health, through special bond issues, the number of school inspectors and vaccinators has been constantly changing. For example, in January, 1903, seventy-five men were dropped and about forty inspectors remained. In the fall a number were reappointed and about fifty were again dropped in November, while in the following month sixty-five men were once more reappointed. The cause of these dismissals was given in each case as "lack of funds," and the peculiar feature of this procedure has been that the board has the right to drop any inspector "for lack of funds," irrespective of his length of service and of his standing on the eligible list from which he was appointed. This loophole in the civil-service law practically destroys the entire meaning of this statute, so far as the health department is concerned. However, the legality of this method of procedure has not yet been finally decided, we understand, inasmuch as there is at least one suit which has been decided by the Appellate Division of the Supreme Court in favor of the plaintiff, who sued the city for arrears of salary from the time he was dropped. This suit is now on the calendar of the Court of Appeals of the State of New York.

It is with much satisfaction that we are able to announce that Dr. Darlington, the new commissioner, has signified his intention of thoroughly investigating this matter and of applying such remedies as are indicated. His action in the matter is in line with our prediction in a recent issue, that the new commissioner would prove to be a man eminently well fitted for his place.

As matters are at present, the work of the school inspector who has six or seven thousand children to look after, takes a great deal of time and he earns his salary by good hard work. In order to do this work conscientiously he must needs give up a certain amount of private practice or of opportunity for acquiring or increasing such practice. It is rank injustice to expect those who hold these positions for a salary of $100 a month to give up all their private work when they know that they may be dropped at any time. Naturally, such a state of uncertainty and the frequent shifting of men lessens the efficiency of each inspector, who lacks the impetus given by the knowledge that his position is permanent and that his work will be appreciated and lead to promotion, instead of being, as it now is, a temporary makeshift.

Every other civil service employee enjoys the right of a permanent position from which he cannot be dismissed, except under charges, and it is only just that physicians who work for the city should enjoy the same rights as the firemen and policemen and clerks in the various departments. A small increase in salary each year and a pension on half-pay after twenty years of service would only be just rewards for public work of the highest importance, in the case of school inspectors. We doubt not that Dr. Darlington, in any action that he may take in this matter, will show his sense of justice and his appreciation of the rights of his employees as men and as physicians.

THE INDICATIONS AND CONTRAINDICATIONS FOR THE RADICAL CURE OF CARCINOMA OF THE RECTUM.

Without entering into a description of carcinoma of the rectum, there are one or two points which should be considered. Carcinomatous growths of the rectum are in the beginning painless, only giving rise to difficulty at stool, with an alternating diarrhœa and constipation, which do not reveal the really serious condition of the patient. This indolence in the early stages of rectal carcinoma is a great misfortune, because, since the patient does not suffer, the neoplasm is allowed to continue its growth for many months before medical aid is asked for.

Then, again, mucopurulent or bloody stools are voided, in which case the patient will himself surely make a diagnosis of hæmorrhoids, and again a serious diagnosis is delayed for a number of months; and if, by chance, a physician is consulted for these slight disturbances, he unfortunately only too often is content with giving a prescription to the patient and completely neglects a digital examination of the rectum. Such conduct on the part of the profession is a serious mistake, and every physician should be guided by a rule which should be ever present in his mind, that a systematic examination of the rectum should be made in every case in which a patient comes complaining of the preceding symptoms. It is quite true that the patient himself does not always wish to submit to an examination, but the physician familiar with the consequences which the want of a local examination may cause, should persuade his patient in each and every instance to undergo it.

It is consequently by rectal examination that the contraindications for surgical intervention are made, as, for example, if the bladder, prostate, or seminal vescicles are involved in the process. When the neoplasm has extended beyond the limits of the rectum and all the organs within the true pelvis are involved, extirpation by the sacral route will naturally be incomplete and the result disastrous, and a palliative operation alone will remain.

It must be said that, in many instances, a carefully directed examination may lead the surgeon into error and it is only during the operation that one finds that the case is an inoperable one. Such, for example, are those instances in which the adhesions between the rectum and prostate or neck of the bladder are such that it would be imprudent to continue the operation; and medical literature, especially that coming from Germany, abounds in such cases.

Is it possible before undertaking a radical intervention to discover whether or not the lymph nodes are involved, and more especially whether the growth has extended to the neighboring organs? It is very difficult, but Quénu has proposed a means which will give an exact idea of the lesions. This is accomplished by a digital examination through an abdominal incision when this is made for the radical operation or when an artificial anus is to be established.

The involvement of the inguinal and pelvic lymph nodes has, however, not been a contraindication for certain surgeons, and during a radical operation very large masses of lymph nodes have been removed; but such operative recklessness can only render the prognosis of an operation very dark.

The diagnosis of the seat and extension of the lesions having once been determined, one should next consider the methods to be chosen for the various types of rectal carcinoma that have here been discussed. Rectosigmoid carcinoma does not enter into the subject proper, but it may be said in passing that combined abdominal, sacral, and perineal operations have their indications. The rectopelvic type of carcinoma may be treated by the sacral route, or perhaps still better, by prerectal resection, while Lisfranc's amputation, as modified by Quénu, will be the operation of choice in rectoperineal carcinoma. The same method is also indicated in cases of cancer of the anus or those in which the neoplasm is situated in the lower end of the rectum.

When the neoplasm has completely invaded the neighboring organs and peritonæum, if the cachexia is marked, all extensive operations should be discarded and a palliative treatment instituted with an endeavor to control the pain, secondary infection, and intestinal obstruction. To meet these indications, inguinal colostomy, proctotomy followed by curetting of the growth are proper, but dilatation should never be employed.

And, lastly, there is a general condition which should always seriously be taken into consideration when no matter what operation is to be undertaken on a cancerous subject; we refer to the general health. This has been purposely left aside until now, because it is by all odds the most important. An operation for carcinoma of the rectum, no matter what technics is used, will always remain a serious one, and on account of this gravity, a radical operation should never be undertaken in patients advanced in age or weakened by various disturbances of nutrition. To succeed, and this is the aim of all true surgical spirit, radical operations should not be performed unless the patient is fairly vigorous; we say fairly, because carcinomatous subjects who come for operation have usually arrived near the border line of cachexia; but if the operation can be carried out during the early stages of the affection, the surgeon is authorized to deliver his patient of a disease which sooner or later will lead him to the grave.

Charles Greene Cumston.

A DRUGGIST'S COMMENDABLE INNOVATION.

Many of our confrères, in the past, have had printed upon their prescription blanks a warning to the patient not to have the prescription repeated without especial instructions from the prescriber; this in order to protect the patient, not only from his own ignorance, but from the possible predacious qualities of an unscrupulous pharmacist in the patient's own town or elsewhere. We commend the action of a druggist of Grand Rapids, Mich., a pioneer, we believe, in this line, who, we learn from the *American Druggist,* makes a regular practice of attaching a small label to each bottle or package, bearing the following legend: "More harm than good is sometimes done by refilling a prescription, so consult your physician before getting this refilled."

THE NEW YORK HEALTH COMMISSIONERS AND EPIDEMIC PNEUMONIA.

The action taken by Dr. Darlington, health commissioner of New York, in issuing a public circular of instruction to indicate preventive measures for opposing the spread of pneumonia and other infectious respiratory diseases, is in the highest degree commendable. Many methods of striving after "cleanliness"—from the housekeeper's point of view—are but primrose paths to the everlasting bonfire of surgical and sanitary unwholesomeness. The instructions given in the circular, entirely at variance as they are with common conceptions on many points, will carry all the greater force and conviction to the public mind in consequence of their endorsement by such trusted advisers as Dr. Jacobi, Dr. Janeway, Dr. Loomis, Dr. Biggs, Dr. Brannan, and Dr. Derby. But the matter should not rest here. It is incumbent upon all medical practitioners to spread by precept and enforce by their own example the teachings conveyed in this circular.

MEDICAL CLUBS.

The extraordinary success of the Medical Club of Philadelphia, the annual meeting of which is briefly reported elsewhere in these columns, moves us to inquire why there is not a similar organization in every city with sufficient medical practitioners to support one. Medical societies are invaluable for educational purposes and for the furtherance of medical science; to some extent, also, they tend to promote good fellowship and professional comity. But, for the promotion of actual social relations among physicians, they can never equal organizations such as the Medical Club of Philadelphia, the functions of which are wholly social. There, the interest of a common profession is merely a means to an end, not an end in itself. The good already effected by that club in Philadelphia, in promoting harmony and personal friendships among the physicians of that city, is inestimable; and the sooner physicians in other large cities find a means of reunion in their avocations, as well as in their vocation, the better will it be for the medical profession, both collectively and individually. As men of diverse accomplishments and pursuits do well to group themselves together in societies for the prosecution of one hobby in whch they can all interest themselves in unison—can functionate centripetally, so to speak—so men of like occupation and training will undoubtedly benefit by uniting in a club in which they can give free vent to their individualities and diversity—in other words, can functionate centrifugally. Nothing could better foster the professional ideal or more successfully operate against the commercial spirit that threatens in these days to overwhelm it.

AN OFFICIAL JOURNAL FOR THE COLORADO STATE MEDICAL SOCIETY.

Colorado Medicine is the title of the new official organ of the Colorado State Medical Society. It is edited by Dr. Edward Jackson, and contains thirty-two pages, all devoted to medical matters; that is to say, there are no advertising pages. Among the contents we find original communications on a newly recognized disease, by J. N. Hall; the new silver salts, in the treatment of diseases of the conjunctiva, by Melville Black; the presidential address on the progress of American medicine and its relation to public affairs, by W. W. Grant; physiological factors concerned in gallstone disease, by Henry Lewall; and on intrabronchial injections in the treatment of certain chronic diseases, by Lorenzo B. Lockard. Then follow the minutes of the State societies and county medical societies. We wish *Colorado Medicine* success.

THE CART BEFORE THE HORSE AGAIN.

When is the dear public going to learn that excessive use of tobacco, liquor, tea, coffee, patent medicines, breakfast foods, etc., is merely a symptom of some form of mental degeneracy and not a cause? An endless chain of hortatory postal cards is part of the campaign of a new band of enthusiasts, hailing, so far, from Philadelphia and Cincinnati only, who have undertaken a crusade against the cigarette and intend to petition Congress to pass prohibitive laws against this harmless and necessary "purely vegetable product." We suggest a similar chain of postal cards, the recipient of each to promise to mind his or her own business for the future and to write more cards to as many friends as may be supposed to be in need of taking such a pledge. Our gentle, uncommercial mind wonders whether the manufacturers of cigars and of mixtures for chewing and pipe smoking are in any way interested in this latest attempt to interfere with the rights of others.

News Items.

Society Meetings for the Coming Week:

MONDAY, *January 25th.*—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, *January 26th.*—Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynæcology); Richmond, Va., Academy of Medicine and Surgery; New York Medical Union (private); Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, *January 27th.*—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private); Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

THURSDAY, *January 28th.*—New York Academy of Medicine (Section in Obstetrics and Gynæcology); New York Orthopædic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.; New York Celtic Medical Society.

Changes of Address.—Dr. Clarence G. Clark, to 335 East Eighty-seventh Street. Dr. Guy Hinsdale, of Philadelphia, after February 1st, to the Homestead, Hot Springs, Va.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending January 16, 1904:

	Week end'g Jan. 16.		Week end'g Jan. 9.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	878	21	789	14
Diphtheria and croup	425	59	460	57
Scarlet fever	365	21	410	34
Smallpox	..	..	..	..
Chickenpox	181	..	122	..
Tuberculosis	348	186	301	158
Typhoid fever	29	8	42	10
Cerebrospinal meningitis	..	7	..	5
Totals	2,226	302	2,124	278

Brooklyn Medical Society.—Officers of this society were elected on January 15th, as follows: President, Dr. W. B. Brader; vice-president, Dr. R. W. Westbrook; recording secretary, Dr. H. E. Rogers; corresponding secretary, Dr. Alfred Bell; treasurer, Dr. Peter Scott.

The Union of Old German Students in America will hold its next meeting (with ladies) on Wednesday evening, January 27th, at 8.15 p. m., in Arion Hall, Park Avenue and Fifty-ninth Street. The president, Dr. Carl Beck, will read a paper entitled Heidelberg und Studententhum.

The Trustees of Bellevue and Allied Hospitals, at a meeting held January 8, 1904, appointed the following physicians: Alienists and Neurologists to Bellevue Hospital: Dr. Frederick Peterson, 4 West Fiftieth Street; Dr. Joseph Fraenkel, 46 East Seventy-fifth Street; Dr. Edward D. Fisher, 19 West Fifty-second Street; Dr. Bernard Sachs, 21 East Sixty-fifth Street.

New York Orthopædic Dispensary and Hospital, 126 East Fifty-ninth Street.—The board of supervisors and the trustees of the New York Orthopædic Dispensary and Hospital cordially invite their friends to the annual meeting of the hospital to be held at the institution on Monday, January 25, 1904. Reports will be read at four o'clock. An address will be made by Reverend William S. Rainsford, D. D. The hospital will be open for inspection from three until six o'clock.

East Side Physicians' Association.—A medical society under the name of the East Side Physicians' Association of the City of New York was organized on January 15th with meeting rooms at 206 East Broadway, Manhattan. It will meet every third Friday evening of the month, excepting during July, August, and September. The following officers were elected for 1904: President, Dr. Ignatz Morway Rottenberg; first vice-president, Dr. Maurice J. Burstein; second vice-president, Dr. Frederic N. Wilson; secretary, Dr. Nathan Friedman; treasurer, Dr. Maurice Caspe.

The Officers of the Academy of Medicine for 1904 are as follows: President, Dr. Andrew H. Smith; vice-presidents, Dr. Virgil P. Gibney, Dr. M. Allen Starr, Dr. W. Gilman Thompson; recording secretary, J. H. Huddleston, 126 West Eighty-fifth Street; treasurer, Dr. H. L. Collyer, 153 West Seventy-seventh Street; corresponding secretary, Dr. Charles S. Bull. Trustees, Dr. A. Jacobi, chairman, Dr. Alexander Smith, Dr. Joseph D. Bryant, Dr. Arthur M. Jacobus, Dr. George L. Peabody, Dr. Reginald H. Sayre. Executive committee, Dr. A. Jacobi, chairman, Dr. A. H. Smith, Dr. Alfred Meyer, Dr. A. M. Jacobus, Dr. J. H. Huddleston. Librarian, John S. Brownne. Counsel to the academy, Howard Van Sinderen, Esq.

The Late Dr. Frank W. Shaw.—At a special meeting of the medical board of the Norwegian Hospital, held January 11, 1904, the following resolutions were unanimously adopted:

> *Whereas,* We, the members of the medical board of the Norwegian Hospital, have learned with profound regret of the death of our late associate, Dr. Frank W. Shaw; and
>
> *Whereas,* Dr. Shaw, by his nobility of character, scientific attainments, and devotion to the sick, endeared himself to us as a man and a physician; be it therefore
>
> *Resolved,* That we, the members of the staff, fully realize and feel that by his death the entire medical profession has sustained a grievous and lasting loss; and, furthermore, be it
>
> *Resolved,* That we tender our sincerest sympathy to his family in their bereavement; and, further, be it
>
> *Resolved,* That a copy of these resolutions be sent to the family, and to the medical journals of our city; and be it further
>
> *Resolved,* That these resolutions be spread in full upon the minutes of this board.

The New York Academy of Medicine.—The Section on Laryngology and Rhinology will meet on Wednesday evening, January 27th, at 8.15. Order: Presentation of Cases, Exhibition of Specimens and New Instruments, Nasal Tumors of Specific Origin, by Dr. Max Toeplitz; The Radical Operation for the Cure of Chronic Suppuration of the Antrum of Highmore, Sphenoidal Sinus, and Ethmoidal Cells, by Dr. T. Passmore Berens. Discussion. Dr. Harmon Smith, secretary, 44 West Forty-ninth Street.

The Section on Obstetrics and Gynæcology will meet on Thursday evening, January 30th, at 8.15. Order: Presentation of Specimens and Patients, Kidney Removed for Persistent Urinary Fistula Due to Injury of the Renal Pelvis, Sarcomatous Degeneration (?) of a Fibromyoma Uteri with Pyosalpinx, Hæmorrhagic Sactosalpinx, Enucleated Fibroid from a Patient 17 Years of Age, by Dr. A. Sturmdorf; Observations Upon the Protective Value of the Inspection of Public Women as Carried Out in Paris, by Dr. Frederick Griffiths. Subject for Discussion: Correlation of Abdominal and Pelvic Surgery. Election of officers. Dr. Charles F. Adams, secretary, 104 West Seventy-third Street.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g Jan. 16.		Week end'g Jan. 9.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	58	24	83	25
Diphtheria	81	14	86	17
Scarlet fever	124	9	130	6
Typhoid fever	89	13	155	22
Consumption	..	85	..	58
Cerebrospinal fever	..	..	..	..

The Alumni Association of the Medico-Chirurgical College, at its meeting on January 10th, elected the following officers: President, Dr. W. Blair Stewart; secretary, Dr. Stillwell C. Burns; treasurer, Dr. Emanuel S. Gans.

Bequest to Jefferson Medical College Hospital.—The Jefferson Medical College Hospital, of Philadelphia, has become the beneficiary of $25,000 by the will of Louis C. Vanuxem, who was one of the trustees of the institution.

Physicians and Nurses Leaving Butler.—It is stated that with the exception of a few sporadic cases, the activity of the Butler typhoid fever epidemic will soon be considered a closed incident. The physicians and nurses are leaving, and the temporary hospitals are being vacated. Interesting statistics, and the report of anomalous cases, are expected to figure in subsequent medical reports. The mortality is said to have been comparatively low.

The Philadelphia Neurological Society.—An exceedingly interesting and important programme is scheduled for the next meeting on January 26th. The papers are as follows: The Metaphysical Conception of Insanity, by Dr. James Hendrie Lloyd; The Mental Processes, by which the Rest Treatment was Developed, by Dr. S. Weir Mitchell; The Surgical Operations Applicable in Insanity, by Dr. J. Chalmers Da Costa; Mystic Medicine, by Dr. Francis X. Dercum. A cordial invitation is extended to all members of the medical profession to attend the meeting. Secretary, Dr. Augustus A. Eshner, 224 South Sixteenth Street.

Philadelphia County Medical Society.—A stated meeting of the society took place on January 13th. The programme was as follows: Bad Nauheim and the Schott Treatment, by Dr. A. Helena Goodwin; The Blood in Patients Suffering from Pulmonary Tuberculosis, by Dr. John M. Swan; The Plastic Surgery in the University for the Year 1903, by Dr. Barton Cooke Hirst; The Operative Treatment of Malignant Disease (Mammary Glands, Rectum, Penis, and Lips), by Dr. William L. Rodman. Discussion was opened by Dr. John B. Deaver. Report of the committee appointed to consider the question of the prevention of the communication of contagious diseases, particularly in private practice and with special reference to scarlet fever, by Dr. Alfred Stengle. The meeting of the north branch included the following papers: Address of the Retiring Chairman, by Dr. H. Brooker Mills; The Diagnosis and Treatment of Internal Hæmorrhoids, by Dr. Herman A. Brav. Discussion to be opened by Dr. J. Coles Brick. Report of a Case in which a Pin was Removed from the Vagina seven months after being swallowed, by Dr. Frank C. Hammond. The papers of the Kensington branch were: Diagnosis and Treatment of Pneumonia in Children, by Dr. Charles S. Judson (by invitation); Diagnostic and Prognostic Value of Examination of the Blood and Sputum in Pneumonia, by Dr. A. A. Ghrisky (by invitation). The West Philadelphia branch held a meeting on January 16th. The papers were: The Physical, Chemical and Medicinal Properties of Radium, with exhibition of specimen, by Dr. H. K. Pancoast; A Case of Appendicitis with Some Unusual Complications, by Dr. H. B. Allyn.

The Medical Club of Philadelphia held its annual meeting at the Bellevue Hotel on January 15th. About three hundred members were present, out of a total membership of upward of five hundred and seventy. The secretary, Dr. Guy Hinsdale, who has held that post for the past five years, showed the club to be in a most flourishing condition, and to be progressing with extraordinary rapidity, one hundred and twenty-six new members having been added during the past twelve months. The club has lost five members by death, viz., Dr. Cochran McClellan, Dr. W. H. Parrish, Dr. J. K. Lineawear, Dr. Jesse F. Pfaff, and Dr. W. Shaw Stewart. The influence of the club in promoting good social relations between members of the profession was evidencing itself more and more. Dr. Hinsdale regretted that his approaching removal from Philadelphia to Hot Springs, Va., precluded him from again undertaking the duties of the secretaryship. The treasurer's report showed the club to be financially flourishing. Dr. Cyril Fulton then on behalf of the club presented to Dr. Hinsdale a loving cup. Dr. Fulton's remarks were characterized by an eloquence and a warmth of eulogy as creditable to himself as they must have been gratifying to Dr. Hinsdale; the statement that in his vast exprience in dealing officially with secretaries in various institutions he had never met one who had fulfilled more faithfully, more ungrudgingly, more unquestioningly all that was demanded of him, was received with marked approval. Dr. Laplace moved a vote of thanks to Dr. Hinsdale and tendered him the good wishes of the club for his future prosperity in his new field. New officers were elected as follows: President, Dr. E. E. Montgomery; vice-presidents, Dr. Roland G. Curtin and Dr. G. Wharton Sinkler; governor, Dr. E. L. Duer; secretary, Dr. J. Gurney Taylor; treasurer, Dr. F. S. Pearce. Executive committee, Dr. Hobart A. Hare, Dr. E. Laplace, Dr. W. H. Warder, Dr. Alexander Macalister, and Dr. Walter Pyle. Business having been disposed of, an excellent collation followed, and social intercourse with music and an amusing negro monologue completed a very successful and enjoyable evening.

GENERAL

Statement of Mortality in Chicago, Ill., for the Week Ending January 16, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on estimated mid-year populations of 1,950,000 for 1904 and of 1,885,000 for 1903:

	Jan. 16, 1904.	Jan. 9, 1904.	Jan. 17, 1903.
Total deaths, all causes	566	516	626
Important causes of death—			
Acute intestinal diseases	19	17	20
Apoplexy	15	16	18
Bright's disease	45	38	34
Bronchitis	27	20	27
Consumption	64	44	55
Cancer	19	22	29
Convulsions	9	20	13
Diphtheria	9	10	9
Heart disease	50	33	49
Influenza	4	3	0
Measles	0	1	10
Nervous diseases	18	20	26
Pneumonia	117	114	131
Scarlet fever	4	2	9
Suicide	6	9	10
Typhoid fever	9	7	22
Violence (other than suicide)	30	30	25
Whooping cough	1	0	9

The German Hospital, of Buffalo, N. Y.—The dispensary staff of this institution has elected officers as follows: President, Dr. Alois Joki; vice-president, Dr. C. F. Durand; secretary, Dr. Adolph H. Urban.

The Johnstown and Gloversville, N. Y., Medical Society, after its annual banquet on January 7th, elected officers as follows: President, Dr. C. B. Mosher; vice-president, Dr. C. M. Lefler; secretary and treasurer, Dr. J. D. Vedder.

The Sullivan County, Ind., Medical Society, at its recent meeting in Terre Haute, elected officers as follows: President, Dr. E. D. Thixtun; vice-president, Dr. Arbaces Cushman; secretary-treasurer, Dr. C. Briggs.

The Presbyterian Hospital, of Chicago, Ill., has chosen Dr. A. B. Anker, formerly superintendent of the St. Paul, Minn., city hospital, to fill the same position there. Dr. Anker succeeds Dr. F. M. Nesbitt, who resigned in June, 1903.

For an Army General Hospital.—Secretary Root has transmitted to Congress an estimate of $400,000 as an appropriation for the purchase of land in the District of Columbia for the erection of an army general hospital.

Lebanon Hospital, Rochester, N. Y.—Dr. Herman Radin, house physician at this institution, and Dr. Henry Schuman, house surgeon, have left to begin regular practice, and will be succeeded by Dr. Joseph Schwartz and Dr. A. C. Butts, Jr.

Central Asylum for the Insane, at Hopkinsville, Ky.—Dr. Milton Board, Jr., of Hardinsburg, has been appointed superintendent of this institution to succeed Dr. W. W. Ray.

The Jewish Hospital, of Cincinnati, O., is to have a new dormitory for its nurses through the generosity of Joseph Joseps, of that city, who has given $15,000 for the purpose.

Dr. Florence Meder, a woman assistant physician at the Western Kentucky Asylum for the Insane, was painfully injured and knocked insensible in a train accident near Louisville on January 6th.

The Rocky Mountain Interstate Medical Association will hold its next regular meeting on September 6 and 7, 1904, in Denver, Col. Corresponding secretary, Dr. George A. Moleen, Denver.

The Epidemic in Lemont, Ill.—For their services during the outbreak of smallpox in this village, Dr. J. A. Fitzpatrick and Dr. John J. Leahy have presented to the county board bills amounting to $11,583. The bills will be contested.

Erie County, N. Y., Medical Society.—The election of officers of this society took place at Buffalo on January 11th, with the following result: President, Dr. William C. Krauss; vice-president, Dr. John D. McPherson; secretary, Dr. Franklin C. Gram; treasurer, Dr. Edward Clark.

The Johnson County, Mo., Medical Society, at its meeting on January 14th at Warrensburg, elected the following officers: President, Dr. Murray, of Holden; vice-president, Dr. Shy, of Knobnoster; secretary, Dr. E. H. Gilbert, of Warrensburg.

The McKeesport Hospital, of Pittsburgh, Pa., at its meeting on January 8th, elected the following officers: President, James Evans; vice-president, Dr. C. R. Stuckslager; secretary, William A. Demmler; treasurer, John W. Stewart; superintendent, James F. Woodward.

The Fort Wayne, Ind., College of Medicine is considering a proposition to become consolidated with the Northwestern Ohio University at Ada, whereby graduates of the latter institution, intending to study medicine, will probably elect to take the course at Fort Wayne, instead of going elsewhere.

Connecticut State Board of Health.—The bulletin of this board for December, 1903, shows among other data that the deaths from smallpox, reported during the month, numbered 2; measles, 1,722; scarlet fever, 184; diphtheria and croup, 152; whooping cough, 55; typhoid fever, 65; consumption, 22.

The York County, Pa., Medical Society, at its seventeenth annual meeting on January 7th, elected the following officers: President, Dr. C. G. Hildebrand, of Loganville; first vice-president, Dr. Charles Rea, of York; second vice-president, Dr. R. E. Butz, of York; recording secretary, Dr. Laura J. Dice, of York; corresponding secretary, Dr. J. P. Bennett, of York; treasurer, Dr. J. F. Klinedinst, of York.

Central Kentucky Hospital for the Insane.—W. H. Newman has been elected president of the board of commissioners of this institution, succeeding Dr. T. P. Satterwhite, to whom was tendered a resolution of thanks for his valuable work during the twelve years of his incumbency.

Georgetown University Hospital.—At the dedication of the new addition to this institution on January 7th, the speakers were the Reverend Jerome Daugherty, president of the university, and Dr. Joseph Tabor Johnson, vice-president of the medical faculty. The latter, in his speech, dwelt upon the long felt need of the enlargement of the hospital facilities for the neighborhood.

The New Antitoxine Packages.—The domestic manufacturers of antidiphtheritic serum have agreed to discontinue the manufacture and sale of the weaker diphtheria antitoxine, heretofore referred to as " X " or " Standard," and also of the concentrated form, formerly referred to as " XXX," and will hereafter place on the market only one strength corresponding to that now known as " Concentrated " or " XX " serum. The making of the 500 unit and the 1,500 unit package will be discontinued, and hereafter all American antitoxine serums will be put up in packages containing 1,000 units, representing the immunizing dose, 2,000 units representing a small curative dose, 3,000 units, representing a moderate curative dose, and 4,000 units, representing a full curative dose of the serum. The change will make for simplicity and uniformity. The reason assigned for the discontinuance of the marketing of the 500 unit package is that while that was intended for use as an immunizing dose, it has not turned out to be absolutely reliable.

Based upon these changes there has appeared in various daily journals a highly colored and somewhat hysterical denunciation of what the newspapers have chosen to designate " the antitoxine trust," the phraseology of which betrays a complete ignorance on the part of the writers of the subject treated. As a matter of fact, taking the curative unit as a basis for quotation, the prices asked on the new schedule are less than those formerly charged by the manufacturers. To the newspaper writer, however, a serum is a serum and nothing more, the question of strength, which is the all important question, being to him a matter in which he is not interested.

The Oakland, Cal., College of Medicine was formally opened on January 8th by Dr. Frank L. Adams, president of the college. The directors of the new medical college, which is situated at Thirty-first and Grove Streets, are: Dr. Frank L. Adams, president; Dr. C. R. Krone, secretary; Dr. Hayward G. Thomas, treasurer; Dr. D. D. Crowley and Dr. E. N. Ewer. The officers of the faculty are: Dr. J. L. Milton, president, and Dr. E. N. Ewer, registrar. The faculty includes: Frank Lemuel Adams, A. B., M. D., professor of clinical surgery; D. D. Crowley, M. D., professor of principles and practice of surgery; Robert Thompson Stratton, M. D., professor of surgical anatomy and surgical diseases of the nervous system; Hayward G. Thomas, M. D., professor of ophthalmology, otology and laryngology; Carl Rudolph Krone, A. M., M. D., professor of principles and practice of medicine and of clinical medicine; Joseph L. Milton, M. D., professor of anatomy; Edward Norton Ewer, M. D., professor of obstetrics; W. Francis B. Wakefield, M. B., M. D. C. M., professor of gynæcology; Oliver D. Hamlin, M. D., professor of medicine; William Surber Porter, M. D., associate professor of gynæcology; Jeremiah Maher, A. M., M. D., professor of pædiatrics; William Kelley Sanborn, Ph. G., M. D., professor of materia medica and therapeutics; Honorable S. P. Hall, professor of medical jurisprudence; William P. Milliken, B. S., professor of chemistry and toxicology; Thomas C. McCleave, M. D., lecturer on pathology and histology; Thomas J. Clark, M. D., lecturer on dermatology; Lemuel Payson Adams, A. B., M. D., demonstrator of anatomy; James Burris Wood, B. S., M. D., lecturer on organic and applied chemistry; Thomas A. Williams, M. D., lecturer on bacteriology; Dr. Allen T. Gillihan, histology; Dr. Benjamin F. Bakewell, anatomy; Dr. A. S. Kelley, instructor in physiology.

Eastern Section of American Laryngological, Rhinological, and Otological Society.—This body will hold its annual meeting at Fall River, Mass., on Saturday, January 30th, at 2 p. m. Following is the programme: Address of the Chairman, by Dr. George L. Richards, of Fall River; Exhibition of Instruments, by Dr. Frederick L. Jack, of Boston (a new mastoid and auricle retractor; also report of the effects of soft rubber dressings in mastoid cavities), and Dr. William E. Chenery, of Boston (a new mouth-gag); Further Notes on Adrenalin, by Dr. Norton L. Wilson, of Elizabeth, N. J.; An Unusual Case of Parosmia, by Dr. Carl E. Munger, of Waterbury, Conn.; Exhibition of Cases Operated Upon for Chronic Empyema of the Frontal Sinus and Maxillary Sinus, by Dr. George L. Richards, of Fall River; The Application of Conservative and Radical Surgery to Chronic Nasal Accessory Sinus Disease, by Dr. R. B. Canfield, of Montclair, N. J. (by invitation); Reflex Cardiac Inhibition Resulting from Irritation of the Peripheral Fibres of the Trifacial Nerve and Occurring in the Course of an Operation for Chronic Empyema of the Frontal Sinus, by Dr. George Fetterolf, of Philadelphia; Frontal Sinus Disease, by Dr. T. R. Chambers, of Jersey City; discussion of preceding papers, opened by Dr. F. C. Cobb and Dr. C. G. Coakley; Exhibition of Specimens Illustrating Anatomy of the Nasal Accessory Sinuses, by Dr. H. P. Mosher, of Boston; The Sphenoidal Sinus, by Dr. H. Holbrook Curtis, of New York; Further Experience with Intratracheal Medication, by Dr. P. S. Donnellan, of Philadelphia; Vincent's Angina with a report of two cases, by Dr. Thomas J. Harris, of New York; Report of a Case of Chronic Suppurative Otitis Media, with Thrombosis of the Lateral Sinus; Radical Operation; Excision of Internal Jugular Vein; Recovery, by Dr. E. B. Dench, of New York; Cholesteatoma with a report of a case, by Dr. William H. Dudley, of Easton, Pa.

Pith of Current Literature.

BERLINER KLINISCHE WOCHENSCHRIFT.

December 14, 1903.

1. When to Operate in Perityphlitis, By M. JAFFÉ.
2. The Hoglau Spring Baths, By E. MEYER.
3. Animal Experiments and Renal Tuberculosis with a Consideration of the Urine of Tuberculous Persons, By G. SALUS.
4. Cyclic Albuminuria, By HAUSER.

1. **Perityphlitis.**—Jaffé advises the avoidance of operation in those cases of pertyphlitis in which there are general peritoneal symptoms and in which there is evidence of the formation of an exudate or of an abscess cavity. He does not operate when one of the cardinal symptoms improves, but he does not recognize temperature and the subjective feeling of the patient among these. He advises immediate operation when a general peritonitis is present, or seems to be spreading. He does not believe in operating in all cases of appendicitis, even when the process seems to be localized about the appendix. He thinks that waiting until pus has formed is often of great advantage to the patient; but if this has not yet taken place, the appendix should be removed if an operation is performed, although it is a more serious procedure than the mere opening of an abscess. The author does not believe in statistics. [The difference of opinion between Jaffé and American authors is self-evident.—ED.]

3. **The Urine of Tuberculous Persons.**—Salus says that the most certain method of testing the urine for tubercle bacilli, is by animal experiment, that is, by injecting subcutaneously into guinea pigs urine secured in a sterile way and using the sterile, centrifugated sediment. As to the question of making a diagnosis of renal tuberculosis from a positive inoculation or from the presence of tubercle bacilli in the urine, Salus says that he examined the urine of twenty-seven persons suffering from tuberculosis in other parts of the body and found albumin in forty-four per cent., and in fifty-one per cent. of the cases he found renal cellular elements. According to this information, tuberculous persons often show kidney lesions. There is always the possibility, however, that tubercle bacilli may pass into the urine from the blood or from tubercle tissue. Animal experimentation is at any rate an important step.

4. **Cyclic Albuminuria.**—Hauser records his prolonged study of fourteen cases of cyclic albuminuria and concludes that these cases can always be traced back to an uncured nephritis, or to some of the acute infectious diseases, notably scarletina. The author puts no credence in a functional disorder in these cases, but refers the appearance of albumin to excessive muscular use which affects the epithelium of the vessels of the glomeruli by an increase in toxines or in metabolic products. Therapeutically, he recommends prolonged rest, a long milk and vegetable diet, a flushing of the kidneys with mineral waters, and a system of training to accustom the kidneys to increased physical exertion. A cure can often be accomplished although the prognosis is influenced by the fact that often an incurable nephritis is at the base of the affection.

ZENTRALBLATT FUER GYNÆKOLOGIE.

December 5, 1903.

1. A Case of Hebotomy, By G. ARNDT.
2. A Cæsarian Section, By R. VON UHLE.
3. Abortion Forceps, By M. NASSAUER.

1. **Hebotomy.**—Arndt reports a case of hebotomy in a woman thirty-six years of age, who became febrile after being in labor two days. The use of high forceps was attempted but were unsuccessful. By means of hebotomy and the high forceps a living child was secured. The operation consists in sawing through the inferior ramus of the pubic bone instead of through the symphysis. In the case reported the callus formation was good and the gait was subsequently unimpaired.

2. **Porro's Operation.**—Von Uhle reports the case of a primipara with a rhachitic pelvis in whom craniotomy and extraction with the craniclast had been unsuccessfully attempted Porro's operation was performed with a good result to the mother.

3. **Abortion Forceps.**—Nassauer describes a modification of Winter's forceps which he prefers to the use of the finger, as the latter, he says, is more apt to bring about infection. In this view, he is at odds with the majority of gynæcologists.

December 12, 1903.

1. A Modified Method of Inducing Sterility in Women. By P. RISSMANN.
2. Epithelial Cavities in Lymph Glands, By A. FALKNER.
3. Closure of Vesicovaginal Fistula with the Cervix, By H. THOMSON.

1. **Induction of Sterility.**—Rissmann operates by removing a wedge-shaped piece from the Fallopian tube at its uterine junction. He reaches the uterus through the posterior vaginal fornix. He reports an interesting case in which he performed the operation in a woman who suffered from convulsions of a very obscure nature. They were apparently epileptic, but seemed to be eclamptic when she later became pregnant, being accompanied by albuminuria. After delivery they continued and were then of an hysterical nature.

2. **Epithelial Spaces in Lymph Glands.**—Falkner discusses Wertheim's finding of spaces in the pelvic lymph glands in cases of uterine cancer. These spaces were lined with cylindrical epithelium. Wertheim regards them as characteristic of cancer. Meyer has found similar lacunæ in the femoral glands of an eclamptic woman, and the author saw them in a case of phlegmon of the leg. It would appear, therefore, that these spaces may arise from a variety of causes.

ZENTRALBLATT FUER CHIRURGIE.

December 12, 1903.

1. Treatment of Granulating Wounds of the Skin, By H. WAGNER.

1. **Granulating Wounds of the Skin.**—Wagner calls attention to the defects of the usual ointment treatment of granulating wounds of the skin. Under this treatment, the granulations grow too rapidly, the edge of the epidermis becomes thickened and looks swollen and is sometimes destroyed, thus interfering with the epidermization of the wound. He recommends, instead of this, treatment by the open method in cases in which skin transplantation is refused or is not desirable. He exposes the wound to the drying influence of the open air during the daytime, and at night covers it with some indifferent powder, e. g., zinc and starch. It is important that the clothing shall not come into contact with the wound. He notes a case in which an area the size of the hand becomes completely covered with epidermis in from eight to ten days. Wagner thinks, further, that his method is especially applicable in cases in which skin grafting has been unsuccessfully tried, as in these instances there are usually some islands of epidermis which rapidly grow larger. He does not fear the possibility of air infection in granulating wounds and has never seen one in the many years in which he has used this method of treatment.

December 19, 1903.

1. The Care of the Stump of the Appendix, By RIEDEL.

1. **The Stump of the Appendix.**—Riegel cuts through the appendix between a silk and a catgut ligature, the latter as near the cæcum as possible, after the appendicular mesentery is loosened as far as the cæcum. The mucous membrane of the stump is then removed with a curved scissors and the serosa and the muscular coat are united with three silk sutures. The catgut ligature is then removed and five more silk sutures are introduced through the serosa and muscularis of the cæcum, uniting two sewn surfaces about half a centimetre wide. This is reinforced by six or seven catgut sutures, so that the whole stump lies in the cæcum into which the silk sutures eventually drop. The abdominal wound is closed in three layers and gauze drainage is used only in cases is which pus or purulent serum has entered the abdominal cavity.

December 26, 1903.

1. The Technics of Artificial Bloodless Operations, By SIEGFRIED SPIEGEL.

1. **Bloodless Operations.**—Spiegel has devised an apparatus to replace the Esmarch bandage for constricting the blood vessels during an operation on the extremities. It can be easily applied to any extremity and as easily removed. It can be tightened or loosened at will and requires no strength or force nor the assistance of another person. The entire regulation is accomplished by means of a thumb-screw. As the bandage for the induction of artificial anæmia is frequently in the immediate neighborhood of the wound, its excessive manipulation is a menace to asepsis, which the present device entirely overcomes.

PRESSE MEDICALE.

December 9, 1903.

1. X Ray in Acromegaly, By A. BÉCLÈRE.
2. Actinomycosis, By H. NEUKIRCH.

1. **Acromegaly.**—Béclère agrees with Brissaud and Meige that this disease and gigantism are the same, acromegaly being gigantism of the adult, and gigantism acromegaly of the youth. Acromegaly supervenes on gigantism as soon as the sutures become closed. By revealing the irregular thickening of the cranial parietes, the exaggerated development of the frontal sinuses, and especially the hypertrophy of the sella turcica, the x ray becomes an indispensable agent in the diagnosis of acromegaly.

LYON MEDICAL.

December 20, 1903.

1. Symptomalogical and Prognostic Value of Spontaneous or Induced Chloriduria in Nephritides, By TEISSIER.
2. Action of X Rays on Nutrition (*Concluded*), By LÉPINE, and BOULUD.

2. **X Rays and Nutrition.**—Lépine's and Boulud's experiments are continued with defibrinated dog's blood, the x rays causing marked glycolysis therein. Experiments with the pancreas and starch showed that the rays increased pancreatic amylolysis. Five dogs, exposed directly to the rays, experienced loss of appetite, oppression and increased pulse; those protected by an aluminum plate did not suffer. On account of the complexity of a living organism, the authors say that the effect of the rays is a resultant of numberless different actions and recommend the protection of certain organs during experimentation by means of lead plates.

RIFORMA MEDICA.

November 4, 1903.

1. Albargin in the Treatment of Blenorrhagic Vulvovaginitis in Children, By C. VIGNOLO-LUTATI.
2. The Use of Antistreptococcus Serum in Puerperal Infection and Erysipelas (*To be continued*), By P. GUIZZETTI.
3. Varicocele and Its Modern Surgical Treatment, By A. VIRDIA.

3. **Varicocele.**—Virdia has operated upon 12 cases of varicocele, all on the left side. Only two patients showed the beginnings of a varicocele also upon the right side, in both as a complication of an inguinal hernia on that side. In some of the cases there were enlarged veins also upon the left leg. The best method of operation is phlebectomy, but if there is a great deal of sacculation and orchidoptosis a portion of the scrotum must be resected in addition. A rather large incision should be made for the phlebectomy, as it is well to have good access to the veins, and the small openings used by some surgeons are not advisable. In 4 of the 12 cases reported, the operation consisted only of ligature of the more distended veins; in 2, of removal of the lateral portions of the scrotal walls; in 5, of phlebectomy after ligature of the veins, and suspension of the testis (Jacobson-Bennet's method); and in 3, a mixed (phleboscrotectomy) operation was performed. The results were excellent. In all but

three cases there was a slight reaction, such as swelling of the testis, but this was transient. In neurasthenic patients the operative treatment is indicated, as it does not make the neurasthenia worse, but often improves the general state of the patient.

November 11, 1903.

1. A Second Case of Merycism, By Luigi Ferrannini.
2. A Case of Cerebral Abscess, By E. Boschi.
3. The Use of Antistreptococcus Serum in Puerperal Infection and in Erysipelas, By P. Guisetti.

1. **Rumination.**—Ferrannini reports a case of merycism, or rumination, in a man aged thirty-three years, in whom this condition was evidently the result of a motor neurosis of the stomach developing upon a neurasthenic basis. In this case the molar teeth had been destroyed at an early age by caries and the gums were tender and bled at slight irritation. These defects led to imperfect mastication and the badly chewed food irritated the stomach to irregular movements of regurgitation, thus inducing the rumination observed. In a previous case, reported by the same author, the rumination was not connected with a defect in the masticatory apparatus, but was simply associated with a bad habit of not chewing well. The patient ruminated after almost every meal, at intervals of from two to four hours which led to an extreme neurasthenia. The patient regurgitated, not only solids, but also liquids, even broth; and solids came up in a poorly digested state for the time which had elapsed since the food had been taken. The gastric contents showed a lowered total acidity, an absence of free hydrochloric acid, and a deficient motor and absorptive power of the stomach. In these cases atropine may be of benefit, but the digestion must be first corrected. The best treatment is the use of hydrochloric acid, with a proper diet, and the correction of the defects in the mouth by a dentist.

3. **Antistreptococcus Serum.**—Guizzetti concludes a study of this remedy in puerperal and erysipelatous infection as follows: This serum has a most beneficial effect upon puerperal streptococcus infection. This is best seen by the behavior of the symptoms. The fever rapidly disappears, the pulse improves, the albuminuria is diminished, the tumor of the spleen is reduced, the mental signs vanish, etc. The serum, also, tends to impede the development of septicæmia, and if there are germs in the blood, their growth and multiplication are rendered less active. The serum exercises a beneficial, though rather slow, effect upon pure streptococcus infection of the uterus itself. In certain mixed infections, howver, it does not produce any beneficial effects upon the uterine mucosa, but probably prevents the development of lymphangeitis and of thrombophlebitis in the walls of the uterus; therefore it is necessary, in puerperal infections, to combine the local treatment with the use of the serum. In the single case of erysipelas which was treated with the use of the serum, the process still extended within the first twenty-four hours, but after that it rapidly disappeared.

BOSTON MEDICAL AND SURGICAL JOURNAL.

January 14, 1904.

1. Cardiac Displacement, By Arthur K. Stone.
2. Intermittent Hydronephrosis—Uterine Fibroid, By M. H. Richardson.
3. Some Cases of Intussusception, By Franklin G. Balch.
4. The Bicycle as a Therapeutic Agent, By Luther Halsey Gulick.
5. Mercuric Cyanide as a Surgical Disinfectant, By Charles Harrington.

1. **Cardiac Displacements.**—Stone writes a long article on cardiac displacements; a subject of pathological rather than of practical importance. In displacement the heart tends to move as a mass from right to left; rotation is very rare, and when it occurs it is produced by contracting adhesions or by other exceptional circumstances; in practically all cases in which the visible cardiac impulse is seen to the right of the sternum the impulse is caused by the base of the heart and not by the apex; extreme displacement may take place without discomfort; sudden deaths occurring during pleuritic effusions are not due to the cardiac displacement.

2. **Uterine Fibroids.**—Richardson, in the second part of his paper, deals with uterine fibroids. He asserts that the danger of malignancy is a strong indication for the early removal of supposed benign growths. The danger from radical intervention is exceedingly small. According to the author, uncomplicated hysterectomy in a strong woman of child-bearing age is certainly as safe as a normal childbirth. In women near the menopause exploratory incision is specially called for, as the danger of overlooking a malignant tumor is much greater than the danger from a simple exploratory incision.

5. **Mercuric Cyanide.**—Harrington has conducted laboratory experiments to test the value of mercuric cyanide as a surgical disinfectant. A 1-1,000 solution of the pure salt was found incapable of destroying the *Staphylococcus pyogenes aureus* in three hours' time. The author has tested the salt on other germs and concludes that it is not a suitable preparation for use as a practical surgical antiseptic.

MEDICAL RECORD.

January 16, 1904.

1. The Serum Treatment of Typhoid Fever, By Max Einhorn.
2. The Röntgen or Triultra-violet Rays, Their Nature, Applications, and Dermatological Effects, By Francis Le Roy Satterlee, Jr.
3. X Ray Dermatitis as Influenced by Idiosyncrasy, By A. D. Rockwell.
4. Liquefied Air, By A. Campbell White.

1. **The Serum Treatment of Typhoid Fever.**—Einhorn has tried the serum treatment of typhoid fever in ten cases. He used the antityphoid serum of Jez and Tavel, of the Berne Board of Health. In some cases the serum was given by hypodermic injection, while in other cases it was given by the mouth. The doses were rather smaller than

those usually recommended. The author concludes: (1) That in most cases the disease does not seem to have been materially shortened. (2) That a fall of temperature usually follows the injections, and that the general condition of the patients seems to be improved. (3) That his experience is too limited to warrant absolute statements, but that so far as it goes it tends to show that the use of the serum is harmless and that it is deserving of further trial.

4. **Liquefied Air.**—White gives a description of liquid air, of its method of manufacture, of its physical properties and of the uses to which it can be put in medicine. The author asserts that it is a substance of great general utility, and that its chief value is as a local anæsthetic and as a disinfectant.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 16, 1904.

1. The Importance of Medical Organization in Securing and Enforcing Medical Laws, By T. J. HAPPLE.
2. Sources of Plague, By W. J. CALVERT.
3. The Prophylaxis of Plague, By J. J. KINYOUN.
4. Orthodontic Facial Orthomorphia. Importance of Differentiation in Cases of Apparent Mandibular Protrusion, By W. E. WALKER.
5. The Dental Pulp—Viewed Without the Microscope, By THOMAS E. CONSTANT.
6. The Immediate Relief of Hysterical Manifestations of the Larynx, By HANAU W. LOEB.
7. The Trend of Modern Psychiatry and Its Relation to General Medicine, By JOHN PUNTON.
8. Arthritis Deformans. The Report of a Series of One Hundred and Ten Cases from the Johns Hopkins Hospital (from the Clinic of Professor Osler), (*Concluded*), By THOMAS MCCRAE.
9. The Necessity for Medical Trusteeship and for a Central Laboratory in State Medical Institutions, By A. P. OHLMACHER.
10. A Plea for Unification and Uniform Organization, By J. N. MCCORMACK.
11. The Histology and Ætiology of "Migraine" (*To be continued*), By GEORGE M. GOULD.

2. **Sources of Plague.**—Calvert discusses the early and present pandemics, the cardinal features of the viability and dissemination of the *Bacillus pestis* and the transmission of plague. Infection may occur, according to the author, through an open wound, through the skin, through the intestinal tract or through the lungs. Direct transmission of the disease is possible but unimportant. The article ends with the following summary: "In conclusion, it may be said that plague sprang from Egypt, formed new endemic homes, and traveled along the routes of commerce. The *Bacillus pestis* is long-lived, and may be carried from place to place in merchandise, by rats, etc., and by convalescents; the disease thrives best in unhygienic places, and the lower classes are mostly affected."

6. **The Immediate Relief of Hysterical Manifestations of the Larynx.**—Loeb alleges great success in the treatment of hysterical larynx. He reports eight cases to illustrate his method of treatment and his results. He states only to be able to obtain symptomatic cures of the local manifestation and, of course, relapses may occur. His method is simply to suggest strongly to the patient that a cure will result through operative intervention. Then by digital manipulation of the larynx or by the application of the electric current, the previous oral suggestion is accentuated. He always takes into his confidence responsible members of the family and informs them that a real operation is not contemplated.

8. **Arthritis Deformans.**—McCrae concludes in this number the third instalment of his paper on arthritis deformans. He directs special attention to the three following points: (1) The frequency of the occurrence of acute polyarthritis in arthritis deformans and the danger of mistaking this for acute rheumatism. (2) The importance of the recognition of the spinal forms of the disease, especially the local involvement. (3) In arthritis deformans we have an obscure disease of considerable frequency worthy of study, especially from the ætiologic aspect.

AMERICAN MEDICINE.

January 16, 1904.

1. Cancer of the Stomach. A Review of Cases from the Standpoint of Diagnosis and Medical and Surgical Treatment, By JAMES RAE ARNEILL.
2. Congenital Intrauterine Poliomyelitis and Neuritis: The Question of their Occurrence and Influence Upon So-called Congenital Deformities, By JOSEPH FRÄNKEL, and B. ONUF (ONUFROWICZ).
3. Malaria Followed by Interstitial Nephritis and Peripheral Neuritis, By OTTO LERCH.
4. Hallucinations of Vision, By HOWARD F. HANSELL.
5. An Unusual Form of Tuberculous Disease of the Chest, By J. N. HALL.
6. Operation for the Radical Cure of Inguinal Hernia in Young Children, By PEARCE KINTZING.
7. The Society for Experimental Biology and Medicine, By WILLIAM J. GIES.

1. **Cancer of the Stomach.**—Arneill asserts that the physician's duty with regard to cancer of the stomach limits itself practically to making an early diagnosis. This is often a very difficult matter and reliance should not be placed too implicitly upon laboratory findings. A large number of analyses are reported of the stomach contents of cases of pernicious anæmia and of cancer of the stomach. These analyses show the following facts: In all of the patients with pernicious anæmia there was a complete absence of free hydrochloric acid and likewise a practical absence of loosely combined hydrochloric acid and lactic acid. Also an absence of the ferments, pepsin, pepsinogen and lab ferment when tested for. In other words, there was an achylia gastrica. Furthermore, in the vast majority of the cases of pernicious anæmia, the motor power of the stomach was good. In the cases of cancer of the stomach, several show a goodly amount of free hydrochloric acid; most of them, a total acidity of some moment, but made up of loosely combined hydrochloric acid, and especially of organic acids. In practically all the cases there was evidence of considerable stagnation and fermentation. These results show that the so-called classic evidences of cancer may be produced by other diseases. The diagnosis must, therefore, be made on the

case as a whole and not on any one class of evidence.

2. **Congenital Poliomyelitis.** — Fränkel and Onuf report elaborately a case which they have diagnosticated as either a poliomyelitis or a central neuritis of prenatal origin. The authors have succeeded in finding references only to two similar cases, and therefore deem their own case of considerable importance.

5. **Tuberculous Disease of the Chest.**—Hall calls attention to a class of cases characterized by cough, expectoration containing blood, pus, and tubercle bacilli, and hæmoptysis, but in which none of the physical signs of disease in the lungs can be demonstrated. The author believes that the most rational way of explaining such cases is to assume the presence of a slow tuberculous ulcerative process (in a bronchial gland) which with time perforates a bronchus and discharges into it the material subsequently found in the sputum. The author has had a number of cases such as he describes. None of them has, however, ever come to autopsy.

MEDICAL NEWS.

January 16, 1904.

1. The Social Evil in University Life; a Talk with the Students of the University of Pennsylvania, By Robert N. Willson.
2. Case of Mastoiditis; Sinus Thrombosis; Pyæmia: Two Operations; Recovery, By Thomas R. Pooley.
3. The Surgical Treatment of Acquired Incontinence of Urine in Women, By Charles Greene Cumston.
4. Some Subjective Hints of the Morphine Habit, By William Lee Howard.
5. The Hæmorrhagic Diseases and Their Allies in the Light of Modern Pathology, By F. L. Wachenheim.

2. **Mastoiditis; Pyæmia; Recovery.**—Pooley reports two cases of pyæmia due to mastoiditis. Both cases recovered. The first case only is reported in detail. It presented the following features: A girl, twenty-five years old, developed acute middle ear disease shortly after an attack of grippe. One week later, the mastoid became involved and Schwartze's operation was performed. A few days later a metastatic arthritis developed in a finger of the right hand and a few days after this all the symptoms became more urgent, and a diagnosis of septic thrombosis was finally made. For this condition a second operation was performed. As this operation progressed it was found that ligation of the jugular vein seemed to be imperatively called for, but the patient's condition was such that it was not attempted. The author had to be content with curetting the jugular vein and then reestablishing the blood current by more or less forcible manipulations of the jugular vein and neck. These attempts were successful and the blood flowed through the vein. Convalescence was slow. During its course the patient developed a number of metastatic foci and a right sided pneumonia. The author discusses the case at some length and defends his treatment of the case. Ligation of the jugular should be the rule in most cases, but it is a rule that in some cases admits of exceptions.

3. **Incontinence of Urine in Women.**—Cumston divides his subject into three parts: (1) Incontinence of traumatic urethral origin; (2) spontaneous incontinence; (3) incontinence due to uterine displacements or to the presence of cicatrices in the vagina. The treatment should be based on anatomical considerations rather than on ætiological ones. Various operations are discussed. The author claims priority for the following observations: Incontinence of urine in young unmarried women is often due to tension on the urethra produced by adhesions between the uterus and bladder. In such cases, brilliant results will be obtained by the following operation: The anterior vaginal cul-de-sac is incised tranversely and through this incision the bladder is separated from the uterus. The space thus obtained is packed with gauze and is gradually allowed to heal by granulation. By this means the drag on the urethra is abolished and the incontinence is cured.

5. **Hæmorrhagic Diseases.** — Wachenheim writes a very suggestive paper on the so-called hæmorrhagic diseases. He concludes as follows: "Summing up, then, we find that hæmophilia, congenital or acquired, is a toxinæmia with secondary autoimmunization to a quasinormal function; that the scorbutic affections are chemical autointoxications, hæmorrhagic only because the blood is especially involved; and that the purpura rheumatica group is only a manifestation of ordinary rheumatism or sepsis. After this exposition of their very diverse nature, it seems clear that the old class of the hæmorrhagic diseases has become obsolete, should be relegated to the domain of historic medicine, and cease to appear in our monographs and textbooks further to puzzle the student and physician."

BRITISH MEDICAL JOURNAL.

January 2, 1904.

1. Œdema of the Lungs and Its Importance as a Mode of Death, By Sir I. Owen.
2. A Note on Postural Albuminuria, By Sir W. H. Broadbent.
3. A Summary of Two Lectures on Empyema and Bronchiectasis, By A. James.
4. Three Cases of Abscess of the Lung, By D. J. Williams.
5. A Case of Purulent Pericarditis Associated with Empyema in a Child Aged Two and a Half Years. Death Nearly Four Months After a Double Operation, By J. A. Coutts, and R. P. Rowlands.
6. Note on the Method of Demonstrating Tubercle Bacilli in the Urine, By E. Trerithick.
7. Reaction with Perchloride of Iron in the Urine of Grave Cases of Hepatic Cirrhosis, By F. P. Weber.
8. A Method for Anastomosing a Severed Vas Deferens, By J. L. Thomas.
9. Pilewort Ointment and Suppository, By Sir J. Sawyer.

1. **Pulmonary Œdema.**—Owen calls attention to the fact that œdema of the lungs often plays a most important part in the close of many fatal

diseases. In disease of the heart valves death rarely occurs from stoppage of the heart itself; the commonest danger is the extension of the general dropsy to the lungs. In fatal acute croupous pneumonia, the unconsolidated portions of the lung are largely the seat of a morbid condition as detrimental to their utility as inflammation. They are distended and filled with a clear albuminous fluid—they are, in a word, affected by a severe œdematous process, which in many cases is the actual cause of death. Œdema of cardiac origin usually begins at the bases of the lungs, but in pneumonic œdema the first signs are often to be detected in the scapular regions. The author holds that such œdema in pneumonia is often the cause of death erroneously ascribed to heart failure. Pulmonary œdema is also a frequent cause of death in bronchitis. The most important and significant physical sign of œdema of the lungs is the presence of clear, fine, fluid, crackling râles of uniform size. As the process extends the râles are heard over a larger area, the percussion note becomes impaired, and if the lungs become entirely waterlogged, dulness may be complete and the breath sounds abolished. But the voice sounds and vocal fremitus persist, thus differentiating between œdema and pleural effusion. A careful investigation of the right side of the heart is an important preliminary to the treatment of œdema of the lungs. The signs of dilatation of the right ventricle and evidences of obstructed venous circulation are to be sought. If these signs are present and the conditions are urgent, venesection should be resorted to at once. The removal of from six to ten ounces of blood will usually be sufficient, and the relief afforded is often very marked. Failing venesection other less efficacious methods of lessening venous pressure may be resorted to—the use of leeches, or of free watery purgation by means of elaterium or jalap. Diuretics are useless, hot air baths are not always applicable, and pilocarpine, while an efficient sudorific, is contraindicated by the probable state of the heart. Bleeding should usually be followed by the administration of digitalis or strophanthus. Single doses of alcohol are often of temporary service, but its continuous employment in œdema of the lungs is useless, if not actually harmful. Oxygen is always of service. But the most useful drug, one whose action seems to be almost specific, is strychnine, given hypodermically, and its administration is strongly recommended as a routine measure in all cases of œdema of the lungs.

2. **Postural Albuminuria.**—Broadbent states definitely that there is an affection which may be called postural albuminuria. Its characteristic feature is albuminuria on rising from bed in the morning, usually passing off in the course of the day. It is most common in boys and young men, especially those who are studying hard. It is not due to food, does not appear if the patient remains in bed to breakfast, and disappears quickly on lying down. It is obviously in relation with the erect posture after a night's rest in bed, and with imperfect cardiovascular adjustment to the changed hydrostatic conditions. The amount of albumin may be very small, but it is usually very considerable. Its recognition is important, as the treatment required is the exact reverse of the usual milk diet and protection from cold and fatigue. The most common antecedent is a neurotic family history and cardiovascular instability. The pulse varies greatly in frequency and is greatly influenced by changes of position. The violent cardiac impulse is due to forcible action of the right ventricle, the apex beat being weak, and the second sound is reduplicated on lying down. The prognosis is favorable, all the treatment usually required being good simple food, fresh air, and vigorous exercise. Tonics may be useful and constipation should be corrected. If these cases are treated for renal disease they usually go from bad to worse, and become confirmed nervous valetudinarians.

3. **Empyema and Bronchiectasis.** — James states that a large bronchiectatic cavity, when incised or drained through the chest wall, tends to produce a pleural cavity which much resembles an empyema. Extensive resection of ribs is as necessary for the healing of a large bronchiectatic cavity as for an old empyema. If such extensive resection is not performed there will be, as time goes on, increasing difficulty in introducing the drainage tube through the pleural opening.

An inflammatory effusion into the pleural cavity can produce a bronchiectatic cavity. When a serofibromous effusion has lasted too long the portion of lung corresponding to the effusion becomes atrophied. Now as the fluid is gradually absorbed, the space must be filled, and this is partly done by the drawing outward of the bronchial walls, thus producing a bronchiectasis. When the effusion is purulent the production of bronchial dilatation is more active and more serious, as the pus tends to erode its way through the lung into a bronchial tube. The pus sets up irritative and destructive, perhaps gangrenous changes in the lung tissues, and this destruction leads to cavity formation. In conclusion the author reports a series of five cases which illustrate the above statements.

6. **Tubercle Bacilli in Urine.**—Trevithick asserts that the demonstration of tubercle bacilli in tuberculous urine is more simple and more certain than their demonstration when occurring in sputum. The secret of finding representative numbers of bacilli in film preparations made from urinary deposits, depends upon the thorough washing of such deposits with distilled water before the films are made. The urinary salts, if not washed away, seem to prevent the bacilli and even the pus cells, from adhering to the cover glass. The author allows the urine to stand some hours and then centrifuges its lower portion. The sediment thus obtained is then repeatedly centrifuged with distilled water before the films are prepared.

7. **Urine in Cirrhosis of the Liver.**—Weber has been struck by the presence of a strong perchloride of iron reaction in the urine of several patients suffering from hepatic cirrhosis. The color obtained was sometimes similar to that seen

in the presence of diacetic acid in diabetes mellitus, and sometimes to that obtained when salicylic acid has been taken. The appearance of the reaction sometimes coincided with very threatening general symptoms.

9. **Pilewort Ointment.**—Sawyer has found pilewort ointment (unguentum ranunculi ficariæ) to be of great value in hæmorrhoids and hæmorrhoidal conditions. To prepare it the whole fresh plant, gathered in the spring, should be used. The plants, cut into small fragments, are kept immersed in melted hog's lard, at a temperature of 100° F. for twenty-four hours, in the proportion of one part by weight of the plant to three parts of lard. Then the portions of infused herb in the fused lard are pressed, to cause the further yielding of their juices to the fatty infusion, which infusion is afterwards strained to form, when cold, the ointment. The heat must not be too high lest the bright green of the ointment be spoiled. The remedy may also be used as a suppository, the proper amount of spermaceti being added.

LANCET.

January 2, 1904.

1. Deceptive Signs of Improvement Following Upon Septic Intoxication in Acute Appendicitis, especially in Young People, By Sir W. H. Bennett.
2. Hallucination, By C. Norman.
3. On Hour-Glass Stomach from a Personal Experience of Twenty-three Operations, By A. W. M. Robson.
4. Ochronosis: the Pigmentation of Cartilages, Sclerotics, and Skin in Alkaptonuria, By W. Osler.
5. Some Simple Expedients in Physical Therapeutics, By W. E. Wynter.
6. Spiral Formations in Relation to Walking, Swimming, and Flying, By J. B. Pettigrew.
7. An Unusual Form of Family Paralysis, By J. A. Ormerod.
8. A Case of Facial Paralysis Associated with Herpes Zoster, By J. H. Fraser.
9. An Effectual Means of Dealing with the Conditions of Chronic Obstruction of the Large Bowel, resulting from the Adhesions which Develop in Consequence of Chronic Constipation, By W. A. Lane.
10. On the Action of Venoms of Different Species of Poisonous Snakes on the Nervous System, By G. Lamb, and W. E. Hunter.
11. Some Observations Regarding the Special Circumstances of Cases of Lead Poisoning Occurring Amongst Workers in White-lead Factories, By T. A. W. Ogg.

1. **Appendicitis.**—Bennett calls our attention to the fact that in appendicitis occurring in young people, the symptoms are, as a rule, very acute, and yet very deceptive. One case may show very acute symptoms, and yet there may be only inflammation of the appendix without suppuration—a condition not calling for operative intervention; while in another, the patient may apparently improve for a time—and yet there may be gangrene of the appendix with a rapidly fatal peritonitis. In all young subjects the infective processes are very acute and their results are very destructive. The slight septic irritation of a gland in an infant may result in immediate suppuration and entire destruction of the gland. The abundance of lymphoid tissue around the appendix in children favors destructive inflammation. And with the necrosis and decomposition, septic intoxication begins almost at once, so that a child is made dull and listless from septic absorption before the actual acute symptoms would have developed in an adult. And to this absorption is due the deceptive appearance of improvement so often noted.

In reaching a correct idea as to the gravity of a given case, the aspect and mental mood of the patient, and the body temperature are of the greatest assistance. Flushed and dusky cheeks, dark lines under the eyes, and a heavily coated tongue are of bad omen. The presence or absence of the so-called "abdominal face" is of little value in appendicitis in the young. A sudden fall of temperature from 102° F. to 99° F. is often a danger signal, as it is a common precursor of gangrene.

The diagnosis between simple stomach ache and appendicitis in young children is often difficult. In the former there is rarely any material rise of body temperature, and as the attack passes off the pain, at first general, tends to lean to the left side. Further after slight appendicular attacks, there is almost always a feeling of stiffness in the right iliac region.

3. **Hourglass Stomach.**—Robson reports 23 cases of hourglass stomach, of which 19 were simple, and 4 malignant. Of the simple cases, 11 were operated on by gastroplasty alone and all recovered; 1, by gastroplasty and pyloroplasty combined, the patient dying, as did 1 in which anterior gastroenterostomy was performed. Of 6 patients treated by posterior gastroenterostomy all recovered. Of 4 cases of cancerous hourglass stomach 3 recovered, 2 being treated by partial gastrectomy.

The condition always owes its origin to definite organic disease. The author has never met with a single case of congenital hourglass constriction. The symptoms for a time entirely depend on the cause, whether that be ulcer, cancer, or perigastritis, but ultimately when the deformity has developed, the signs are more or less distinct, and the diagnosis can be made in nearly all cases. The symptoms are, for the most part, pain after food, vomiting sometimes of blood, and great wasting. Where the proximal pouch is dilated the symptoms are those of dilatation from pyloric stenosis. The passage of fluid from one cavity to the other may be perceptible to the patient, and cause an audible gurgle or murmur. On distending the stomach with carbon dioxide, the proximal cavity is often distended first, and later a sulcus may be seen between the two distended cavities. On washing out the stomach until the fluid returns clear, suddenly there may be a gush of foul fluid from the distal cavity. Sometimes the fluid cannot be made to return, but passes into the second cavity. In most of the cases the constriction is about four inches from the stomach. In nearly all cases spasm of the pylorus is present, due to the associated hyperchlorhydria. The treatment is purely surgical and should be undertaken as early in the disease as possible. Gastroplasty is usually most efficient in promoting a cure; it may be performed either by means of simple sutures, or over a large bone bobbin, but the opening must be large enough to secure union without tension. In cases of cancerous hourglass disease the surgeon may perform either gastrectomy or gastroenterostomy.

4. **Ochronosis.**—Osler reports two cases of the curious condition known as ochronosis, occurring in connection with alkaptonuria, in which the condition could be recognized clinically by the deep pigmentation of the cartilages of the ears and of the sclerotics, and in one by a remarkable ebony black discoloration of the skin of the nose and cheeks. The two patients were brothers, one being fifty-seven, and the other forty-nine, years of age. The characteristic feature of alkaptonuria is that the urine turns very dark a few hours after it is passed, and that it reduces Fehling's solution, thus simulating diabetes mellitus. In both cases the diagnosis of diabetes had been made. The exposed V-shaped portions of the sclerotics were of a deep black color, the inside of the helix of the ear showed a blueblack discoloration like that due to dilated veins, and over the nose and cheeks, in very much the butterfly distribution of lupus erythematosus, the skin was of a coal-black color. These cases support Albrecht's suggestion that the pigmentation of the cartilaginous tissues is associated with the remarkable disturbance of metabolism evidenced by the changes in the urine. The condition does not appear to be of much moment and there are no symptoms directly due to the alkaptonuria. A few cases of ochronosis have been reported in which alkaptonuria was not present.

5. **Physical Therapeutics.**—Wynter advocates the following simple expedients in physical therapeutics. In continued pyrexia, such as that of typhoid fever, "cradling" often yields excellent results. It consists in arranging a tent over the bed in which the patient lies naked or very lightly covered. The ends may be left open or a trough containing broken ice may be suspended inside. The method is simple, continuous, efficient, and comfortable: The shock of baths is avoided, and the regulation of the patient's temperature can be largely left to the attendant. Cradling is of special service in dealing with children. In keeping the head cool, the parts to which cold should be specially applied are the occiput and the nape of the neck. This can be readily done by using as a pillow a rubber hot-water bag filled with iced water and crushed ice, and wrapped in a towel. The hot water bottle also supplies an efficient substitute for a poultice. The irritation of chilblains, the itching of psoriasis and eczema are speedily relieved by the exposure of the parts to the radiant heat of a red hot coal fire. Pruritus ani is mitigated by the use of very hot douches. Hot sand in a loose flannel bag furnishes an excellent means of applying dry heat to joints. The insecure and uncomfortable position of cardiac patients suffering from orthopnœa, is made comfortable by placing a firm bolster across the middle of the bed below the mattress, and firm support is afforded. In certain cases of pleurisy with effusion great benefit is often attained by raising the foot of the bed about twelve inches. This is especially true where the pleurisy is in the upper part of the chest, and is probably associated with a tuberculous lesion of the upper lobe. Cases of enteroptosis are benefited by applying a nearly rigid support to the anterior wall of the abdomen by means of plates of sheet lead, the elasticity of the retained gases furnishing a resilient padding to the solid organs. Patterns are made from paper, from which the lead plates are cut and sewed into brown holland cases which in turn are stitched to the inside of corsets. Gentle massage of the cricoid cartilage will usually arrest hiccough, especially in infants. Vomiting may often be checked by counterirritation of the epigastrium by means of a blister or mustard leaf. Continuous or repeated inhalation of oxygen will often check vomiting when everything else has failed. In cases of internal hæmorrhage the patient can be "bled into his own veins" by applying elastic bands to the proximal end of the limbs. A very moderate constriction is all that is required. In cases of epistaxis requiring pressure, the insertion and inflation of a rubber "condom" often works admirably, and when it cannot be obtained strips of raw bacon squeezed into the nostril will very frequently check the bleeding.

9. **Chronic Constipation.**—Lane states that when fæcal matter is allowed to accumulate in the cæcum and colon, adhesions form which support the overloaded cæcum. These adhesions often obstruct the hepatic flexure of the colon, and bring about symptoms of intestinal obstruction. Such cases are usually attributed to inflammation of the appendix, and the presence of adhesions about the proximal half of the appendix seem to support this view. But removal of the appendix has no effect whatever on the symptoms, and they are only relieved by the division of the constricting bands of adhesions, and by insuring the subsequent efficient action of the bowel by purges, massage, or exercise. In a few cases even this procedure produced only a temporary cessation of the symptoms of obstruction, this being the case especially in feeble women. Their intestines at the time of operation were found to be flaccid and plastic. In these cases the author determined to exclude the greater part of the large bowel from taking any part in the scheme of digestion. To this end he made a free lateral anastomosis between the lower limit of the ileum and the upper part of the rectum or sigmoid flexure. By this operation the patients have been freed from pain and tenderness, and obtaining daily evacuations by means of mild purgatives.

10. **Snake Venom.**—Lamb and Hunter report the results of their experiments, undertaken to determine the effect of various snake venoms on the nervous system. They conclude that cobra poisoning is due to a toxic substance which when injected subcutaneously produces symptoms of muscle paralysis, and degeneration of the nervous mechanism. Cobra venom has a direct action on the motor neurones, much more selective than that which it exerts upon the other tissues of the body.

Letters to the Editor.

AN APPEAL TO THE MEDICAL PROFESSION.

NEW YORK, *January* 16, 1904.

To the Editor,

Sir: An optical society, composed of so-called "refracting opticians," has issued a circular letter to the medical profession, asking for the endorsement of a bill about to be introduced in the legislature, legalizing the "practice of optometry."

This measure is not a new thing; we have met it several times in the past, and it has only been necessary to expose its pernicious features to defeat it. It will be necessary to do this again and again until the public awakens to the fact that measures such as this are only the efforts of incompetent people to evade the medical laws, in order that they may prey upon the community without fear of molestation, and then suitable provisions will be made to suppress them.

It is to be hoped that members of the medical profession will not be influenced by the specious arguments of these opticians to give them any encouragement or endorsement; for any success they may attain will be the signal for a host of osteopaths and other peculiar people to ask for similar privileges. There are no good reasons why opticians should be granted any special privileges. They undertake to do a work which they are not in any way qualified to undertake, and there is no doubt, in the minds of those who are competent to judge, that they do incalculable harm and injury. They, in common with all others who treat physical defects and infirmities, should have a medical education before they are allowed to pose before the public as competent to do the work they pretend to be able to do. It cannot be expected that future physicians will be willing to undertake a course of studies to prepare themselves for the work of caring for the sick and physically defective, if, when they have fulfilled all the legal requirements, they find themselves obliged to compete with others who have received almost identical rights and privileges with practically no preparation. If medical laws are necessary to the proper protection of the community, they should apply equally to all who make a business of advising or treating people, regardless of the disease or defect from which they suffer, or of the methods or measures employed. It is impossible for the State to discriminate between physicians, opticians, and the various "pathies" without injury to the cause of professional elevation. A single standard must be created for all, and with its requirements all should comply.

The committee on legislation of the Medical Society of the State of New York has fought these legislative battles successfully in the past and will continue to do so if the profession will back us as it always has. The members of the legislature have no knowledge of the merits of this and similar measures, and look to the medical profession for advice and guidance. The legislature is made up of fairminded, intelligent and loyal citizens, and when pernicious laws affecting the public health are enacted, it is, as a rule, because of the neglect of the citizens who are not members of the legislature to do their duty. We urge the members of the medical profession resolutely to oppose this "Optometry Bill," and its defeat is assured.

FRANK VAN FLEET,
Chairman, Committee on Legislation, Medical Society of the State of New York.

GONORRHŒA IN THE FEMALE: INFECTION BY THE DOUCHE.

PITTSBURGH, PA., *January* 11, 1904.

To the Editor,

Sir: I wish to report a case of gonorrhœa in the female; the point of special interest being the manner of contagion.

Mrs. P., age thirty-five years, the mother of three children, was delivered of a girl on November 20, 1903. Delivery was followed by the usual favorable recovery, but on December 12, 1903, I was called to see her and found a condition of acute inflammation of the urethra, vagina, and pelvic organs, a thick, creamy discharge of pus, and all of the other ordinary symptoms of an acute gonorrhœa.

On the following day I saw the husband, explaining to him the conditions and diagnosis; he promptly denied ever having had a gonorrhœa, and said further that he had had nothing to do sexually with his wife since her last confinement.

At my next visit he stated to me that he had seen the female servant with his wife's douche bag and there was evidence that she had been using it. Upon investigation it was found she had used it one day previous to the patient's using it for the first time since her confinement, and that on the third day following this douche the acute symptoms had developed.

A microscopical examination was not made, owing to the husband not wishing to arouse his wife's suspicions; but there was no doubt that clinically it was true gonorrhœa; further, upon confronting the servant she admitted having gonorrhœa and having used the douche bag.

As it has been stated that the gonococcus cannot withstand drying this case is interesting; of course, it may be that a few of the gonococci found a harbor in some retained moisture in the douche nozzle; however, it casts an element of doubt over the theory.

GEORGE W. ELY.

HICCOUGH.

NEW YORK, *January* 2, 1904.

To the Editor,

Sir: Anent the subject of hiccoughs the following may be interesting to your readers. Some time ago a man suffering from this trouble came to me. Seating him on a chair I placed three fingers of each hand on either side of the larynx and trachea, and, with my thumbs on the back of the neck, I made pressure on the phrenic and pneumogastric nerves, pressing them toward the spinal column. The hiccoughs, which had been persistent for over four hours, stopped instantly, and ceased entirely. I have used this method on several other patients. One was an infant, four months old—and always with success. I spoke about it to a brother practitioner who has since employed it with like result. I do not know whether the method has ever been advocated before, or whether it has any great advantage over the ordinary treatment, but as it has been uniformly successful in my own cases, I felt that it might be beneficial to others.

DAVID FREDERICK KELLY.

THE AMERICAN CONGRESS OF TUBERCULOSIS: A DISCLAIMER.

FORT WAYNE, IND., *January* 16, 1904.

To the Editor,

Sir: Permit me to say through the medium of your journal that I am not in any way connected with the "Clark Bell Congress" on tuberculosis.

G. W. MCCASKEY.

Proceedings of Societies.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

SIXTEENTH ANNUAL MEETING HELD IN CHICAGO, SEPTEMBER, 22, 23, AND 24, 1903.

(*Concluded from page 139.*)

The Pelvic Musculature in Disease.—Dr. HUGO O. PANTZER, of Indianapolis, Ind., read a paper on this subject. The symptoms in pelvic disease arising from the unstriped and voluntary musculature of the pelvis were unmistakable and had important definite diagnostic significance. The textbooks were inadequately expressive on this subject. Two extreme cases were narrated in detail. The first case dealt with a subperitoneal hæmorrhage involving both broad ligaments. While there was active hæmorrhage going on, the muscles of the pelvic floor were in spastic, painful contraction. This symptom had been found available in differential diagnosis between pelvic hæmatoma and hæmatocele. The second case described similar contraction of the pelvic musculature observed in a case of gangrenous appendicitis.

Veratrum Viride in Surgical and Obstetrical Practice.—Dr. CHARLES L. BONIFIELD, of Cincinnati, Ohio, in a paper on this subject, said that the physiological action of veratrum had been carefully studied by Dr. H. C. Wood, who says that "it is a cardiac and spinal depressant." Veratrum slowed the pulse, but the author did not believe that it lessened the force of the beat, when used medicinally, except it produced nausea. It stimulated the liver, kidneys, skin, and salivary glands, and it lowered temperature and relieved inflammatory pain by its effect. These properties made it valuable in the treatment of localized peritonitis. In appendicitis the appendix should, if possible, be removed during the first twenty-four hours. When this could not be done, the Ochsner treatment should be given, supplemented by the hypodermic administration of veratrum.

Acute salpingitis was usually treated by hot and cold local applications to influence the circulation. These were valuable, but the circulation could be more profoundly affected with veratrum, and it was therefore more valuable. Local treatment could, however, be used at the same time the veratrum was, with advantage.

In the treatment of postoperative peritonitis free purgation was of the greatest importance, and should never be neglected. But, in some cases, after the bowels had been thoroughly evacuated, the exceedingly rapid action of the heart indicated that that organ would exhaust itself before convalescence could be established. In this condition there was no drug equal to veratrum. It was superior to strychnine or digitalis because, while they might stimulate the heart to act for a time with renewed vigor, it made the work of the heart easier, and gave it a chance to rest between beats.

Although veratrum had been used for thirty years in the treatment of eclampsia by a considerable number of practitioners without a fatality, it was acknowledged by everyone who had given it a thorough trial to be superior to chloroform, morphine, or any other drug in general use. Obstetrical textbooks almost without exception failed to recommend it with any enthusiasm. Valuable papers had been presented by Jewett and Reamy to the American Gynæcological Society on the use of this drug; also, a paper read by Dr. A. B. Isham on the general use of the drug before the Cincinnati Academy of Medicine, was published in the *Philadelphia Medical News*.

Ovarian Grafting.—Dr. ROBERT T. MORRIS, of New York, detailed some experimental work in connection with this subject. His results showed that an ovary grafted from one patient into the same patient had a tendency to retain its character as an ovary, to continue to furnish ova, to continue to furnish its internal secretion, and to carry on the function of an ovary, no matter at what point it was transplanted into the host, but preferably at some point near the point at which the ovary formerly grew. An ovary transplanted from one patient into another had a tendency to degenerate, and did degenerate. One could not make an ovarian graft practically from one patient into another at the present time, because the graft was absorbed. The tissues of a patient were destructive to those of another. The ovary underwent fatty degeneration or absorption, and this was the line of experimentation upon which he and his assistants were at work now. By making one series of rabbits immune to the serum, and by making another series of rabbits immune to extracts of rabbits, absorption or fatty degeneration of the graft from one patient to another, might be prevented.

At the present time he had reached this point in the practical use of ovarian grafting: (1) If, in a case of pyosalpinx, the ovaries and oviducts had to be removed *en masse*, the patient would suffer from a precipitate menopause if she was left without an ovary. If a piece of ovary from this patient was taken, or a piece of ovary taken from another patient operated upon at the same time, was taken and put in a salt solution at a temperature of 100°, and then engrafted in the broad ligament of the patient who had lost her ovaries and oviducts it avoided a precipitate menopause. That patient would continue to menstruate. She would continue to have the comfort that went with the possession of an ovary. But if an ovary was grafted from another patient, at the end of a year, perhaps, the grafted ovary would have practically disappeared and the menopause have begun. If a woman was grafted with a piece of her own ovary, the menopause might not begin for some years afterwards, or until the normal time for it. This was a practical point, he said, which surgeons could apply in their everyday work.

(2) A patient grafted with a piece of her own ovary might become pregnant, if a tube and oviduct on one side were left, or part of the tube on one side. A patient grafted with a piece of an ovary from another patient might become pregnant, if pregnancy occurred quickly. This had occurred twice with rabbits during his experimentation. But pregnancy must occur before degeneration had gone to such a point that the ova were not well formed. We must not expect pregnancy to occur as late in grafting an ovary from another patient. We might expect it after grafting a patient with a piece of her own ovary. There were many cases in which the ovaries must be sacrificed, in which part of a tube or an entire oviduct on one side could be saved. This was another point of practical importance. Pregnancy might be expected to occur in a small proportion of cases. He expected to obtain further good results. He was hopeful. Thus far it was known that a precipitate menopause could be prevented. Furthermore, the internal secretion of the ovary of a patient could be retained.

A Consideration of Combined Ectopic and Intrauterine Pregnancy, with Report of a Case.—Dr. F. F. Simpson, of Pittsburgh, read a paper with this title. The combination of ectopic with intrauterine gestation in the same patient was termed compound pregnancy. Cases of this kind recorded in literature were grouped as follows: Class 1. The woman became pregnant while carrying the dead products of an ectopic gestation. Class 2. The ectopic and intrauterine products of conception were both living at the same time. *(a)* Ectopic conception preceded the uterine—three cases only. *(b)* Ectopic conception followed the uterine (?). *(c)* Ectopic and uterine conception occurred coincidently—98 cases.

The condition was being recognized more frequently. Prior to 1893, but 56 cases were found, while in the next decade an equal number were recorded. The common errors in diagnosis had been *(a)* the recognition of the uterine pregnancy and mistaking the ectopic for an inflammatory condition or neoplasm; *(b)* the recognition of ectopic and overlooking the uterine pregnancy. It was incumbent upon teachers and authors to give the subject proper recognition by reason of its actual frequency and perilous course.

Treatment in many particulars was identical with that of simple ectopic. It varied with the duration of the ectopic, the degree of its integrity, and the patient's power to withstand the treatment or the disease. It differed from the treatment of simple ectopic by reason of the third life in question, and the varying exigencies of its existence. To the ordinary dangers of ectopic pregnancy were added the dragging and pressure of the enlarging gravid uterus, and its evacuation prematurely or at term. There was, therefore, greater reason for appropriate and timely surgical intervention in compound than in simple ectopic pregnancy. As the ectopic fœtus was rarely delivered alive, it should be disregarded when considering proper treatment, unless almost visible and proper surroundings rendered delay safe. The greatest safety to the mother and her offspring (uterine) lay in the removal of the ectopic products by abdominal section.

Accompanying the paper was a table of 118 cases the author had been able to cull from literature, including the report of one of his own. A woman, aged twenty-four years, became pregnant coincidentally in the uterus and tubes. The tube ruptured, and was removed by abdominal section. Convalescence was normal. Uterine pregnancy continued, and a living child was delivered at term.

Emergency Abdominal Surgery at the Patient's Home—A Demonstration.—Dr. Willis G. MacDonald, of Albany, N. Y., in discussing this subject, said that abdominal surgery became imperative and immediate in its demands in appendicitis, perforations with typhoid fever, or gastric and duodenal ulcer, acute gangrenous cholecystitis, acute pancreatitis, acute intestinal obstruction and hernia, ectopic gestation, conditions requiring Cæsarean section, and penetrating gunshot and other wounds of the abdomen. Patients suffering from any of these conditions would not admit of delay in operation, or withstand the shock of transport from points remote from hospitals. Operation in the patient's home became a necessity. The surgeon must be prepared to treat such emergencies without delay. Conditions for aseptic operations in private houses were difficult to attain. He alluded to the selection of a room for operation, kitchen or dining; dust, operating table, and utensils, water supply, etc. The dry method in operations presented distinctive advantages. The paraffin gauze tamponing was a useful device. The surgeon's traveling case (field outfit) must be complete. In making provisions for anæsthesia and its complications, he emphasized the importance of skin sterilization of the field of operation, and of the surgeon's hands. He alluded to the immediate aseptic surroundings of the field of operation, and said that sufficient instruments and rubber gloves should be at hand with suitable sterilizer; sponges and tampons for dry method; a suitable sterile dressing, general abdominal flushing and saline infusion; drainage-glass, rubber and gauze. The surgeon's traveling outfit must be clean, complete, compact and mobile, independent of express—or baggagemen—always available when required and sufficient for complete aseptic surgery under the most adverse conditions.

Ectopic Pregnancy.—Dr. Henry D. In-

GRAHAM, of Buffalo, contributed a paper on this subject. He reported twelve cases of ectopic pregnancy that he had operated upon. A careful serial microscopical examination was made of the removed tubes and ovaries. In only three of the twelve cases were there any signs of previous inflammatory disease, with loss of epithelium in the tubes. In one case there was obstruction of the lumen of the isthmus, probably due to congenital malformation. In two cases the corpus luteum of pregnancy was not found in the ovaries removed. Although the number of cases reported was too small from which to draw conclusions, yet he was inclined to think that previous inflammation of the tube had but little to do in causing ectopic pregnancy. That the only condition discovered in any of these cases that could be the cause was the case of constriction of the tube, the cause of which at present was unknown. The two cases in which the corpus luteum of pregnancy was absent gave additional proof to the theory of external transmigration.

Officers.—The following officers were elected for the ensuing year: President, Dr. Walter B. Dorsett, of St. Louis, Mo.; first vice-president, Dr. A. B. Miller, of Syracuse, N. Y.; second vice-president, Dr. W. D. Haggard, of Nashville, Tenn.; secretary, Dr. William Warren Potter, of Buffalo, N. Y., reelected; treasurer, Dr. X. O. Werder, of Pittsburgh, Pa.

The time and place for holding the next annual meeting of the association were left to the executive council to decide.

NORTHWEST MEDICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, December 1, 1903.

The President, Dr. WILLIAM EGBERT ROBERTSON, in the Chair.

Some Observations on the Occurrence of Nephritis in Infancy was a paper read by Dr. CHARLES C. BIEDERT, in which he reviewed the work of Goulkewitch, who, in a postmortem study of the kidneys of 200 infants, found nephritis in 23 (the primary disease being pneumonia in 11; tuberculosis in 6, and enteritis in 6) of Morse, who recommended the routine examination of infants' urine; Jacobi, who divided the disease in infancy into the acute, subacute, and chronic forms, and considered the cause as either congestive or obstructive; and of Holt, and D. J. Milton Miller, who had devoted particular attention to the study of the influenzal nephritis. He recommended that the urine be examined for albumin in all doubtful cases, as many of the fatal cases of uræmia were frequently unaccompanied by œdema or dropsy. Among the causes of uræmia were mentioned, scarlatina, diphtheria, measles, rubella, varicella, vaccinia, malaria, typhoid, cerebrospinal fevers, amygdalitis, parotiditis and pyæmia, whooping cough, bronchopneumonia, and the stasis dependent upon other pulmonary and cardiac affections. The primary form was very rare in infants. While albumin and hyaline casts were frequently present in the urine of infants, yet, after the first week, they should be given the same significance as in later life.

He reported four cases, all following pneumonia, which in two cases was a sequel of whooping cough, in one a sequel of influenza, and in the other a sequel of acute gastroenteritis. The first cases occurred in a child aged five months; at the beginning of the attack, there was a temperature of 103° F.; pulse 125, and some vomiting and diarrhœa, from which recovery to a great extent took place in three or four days, but leaving a cough. Twelve days after the beginning of the first attack the patient was again seized with fever, temperature 104° F., cough and diarrhœa, and on the following day had two slight convulsions. Nine days later the physical signs of bronchopneumonia appeared, with a temperature of 104.4° F.; respirations 80, and a distinct swelling and puffiness of both feet. After this the temperature and pulse continued high and the urine showed albumin and hyaline and granular casts and pus, the child dying on the thirtieth day after the beginning of the first attack, after having had several hard convulsions, probably uræmic.

The second case was that of a male, four months old, and was first seen in the second week of the convulsive stage of whooping cough, with a temperature of 103.2° F.; pulse 130, and respirations 50. During the course of the disease, he had been crying and fretting with spasmodic coughing, followed by vomiting. After four days he developed symptoms of bronchopneumonia, and the urine was scanty, but showed only a slight trace of albumin and no casts. He apparently improved and had a subnormal temperature for ten or twelve days, when a relapse occurred, with a temperature of 103.2° F. with a return of the symptoms and bronchopneumonia, with albuminuria and numerous hyaline and granular casts and pus cells. The patient was markedly anæmic and continued to grow worse until the fifty-third day of the disease when he died.

The third case was that of a female infant, seven months old, who was first seen with a temperature of 104° F. and a pulse of 150, and marked catarrhal symptoms indicating influenza, with moist râles, but no consolidation. Four days later bronchial breathing developed and patient continued in about same state for about a week more, when the bronchopneumonia symptoms still persisted, the patient was very pale, passed very litle urine and a week later, albuminuria was present, but no distinct casts; convulsions developed in the meantime and the patient died four days later on the twenty-fifth day of her illness. The autopsy showed areas of consolidation in both lungs posteriorly, congested spleen, enlarged and congested liver, and red and congested kidneys.

The fourth case was in a male infant, aged four months, the illness beginning with high fever, diarrhœa and vomiting, followed by extreme weakness and emaciation and then improvement for a few days, after which he was taken with a high fever and cough, with albuminuria, pus and granular casts, followed by convulsions and death.

In conclusion, the author emphasized (1) the importance of the examination of the urine in all acute diseases of infancy and especially in the bronchopneumonias.

(2) The importance of marked anæmia as the

most pronounced symptoms of kidney involvement.

(3) That œdema when present was a valuable symptom, but that grave kidney involvement might exist without it.

(4) There was almost always a diminution in the renal secretion.

(5) The presence of grave nervous phenomena and convulsions.

The Importance of Dropsy as a Symptom was read by Dr. A. C. Morgan, in which he divided the condition into the unilateral, in which the cause existed into the unilateral proximity; bilateral, which might be caused by obstruction of a corresponding point of the two sides affected; and the bilateral œdema in which there was a central cause, either in the heart, liver, lungs, or blood. The local variety was caused by pressure on the capillaries, veins, or lymph spaces, and might be either acute, as from an abscess, in which it was caused by arterial dilatation; or chronic as from lymphangeitis, after operations or fractures of the bones. An important point was the association of œdema of the ankles with anæmia, accompanied by a slight irregular fever, oftentimes, closely simulating the fever of incipient phthisis. The malleolar dropsy in anæmia was chiefly due to the decrease in the solid contents of the blood caused by the primary disease, such as Bright's disease, pernicious anæmia, intestinal toxæmia, chronic dysentery, scurvy, or cachexia. In a transudate, the skin was cold, symmetrically swollen, pale, shiny, and smooth, pitting on pressure, and slowly resuming its former shape. In an exudate, the skin was hot, nonsymmetrical, red, pitting on pressure, constantly painful—throbbing in character, the exudate being constantly mixed with blood and breaks only when the abscess points. Œdema of the skin, in contradistinction to a bulging, indicated that the fluid contents were septic. He stated that dropsy should always be considered as a pathological condition, requiring for its cure, proper medical or surgical attention, and should be given full importance in diagnosis, prognosis, and treatment. As a general rule, initial dropsy of Bright's disease appeared as œdema under the lower eyelids, seen upon arising in the morning, disappearing by night; in valvular heart disease, myocarditis, lung or blood conditions its first appearance is in the ankles, appearing late in the day and increasing towards night; and hydroperitonæum or ascites was the first dropsy due to failure of compensation in the portal circulation, as in cirrhosis of the liver.

The Non-Medicinal Treatment of Dropsy was read by Dr. Albert G. Miller, in which he stated that there were frequently cases of œdema due to cardiac or renal causes, which baffled the practitioner if he relied upon drugs alone. Hygienic and dietetic measures should be resorted to, mental excitement avoided, as this would tend to functional cardiac derangement. The diet should be simple and the quantity limited; foods tending to produce gaseous distention or fermentation should be avoided, and if of nephritic origin, the proteids should be reduced to a minimum. Water might be more limited in the cardiac than in the renal cases. The clothing should be carefully regulated, woolen undergarments being preferable throughout the year. Climatic surroundings should be carefully considered, prolonged residence in a warm, dry climate being often beneficial to the nephritic cases. Careful attention should be given to bathing—hot baths being favorable in renal but not in cardiac cases; muscular strain and fatigue should be avoided and in severe cases, cessation of labor was desirable. Carefully regulated exercise and elevation of the part are also of value, and where there was no inflammation of the affected part, massage and electricity were of value; in some cases the use of kaolin, spread thickly on the parts; and in nephritic cases, particularly if there were urinary suppression, the use of dry cups. In severe cases, the employment of Southey's tubes, and in some cases accompanied by extreme cyanosis, bleeding to relieve the intracardial pressure, might be resorted to, either directly, by opening a vein, or by means of leeches and wet cups. In cases of transudation into the serous cavities, paracentesis might be necessary.

Dr. Harry Lowenburg emphasized the importance of the examination of the urine of infants as a routine measure, particularly in those suffering from the infectious fevers, more especially scarlet fever, which he believed could be classified into the postscarlatinal and the septic nephritides. He believed that in nearly all cases of scarlet fever albuminuria was present at some period of the condition, and that, if the skin was kept active by baths, and alkaline and fruit juices were given the patients to drink, the danger from nephritis would be reduced to a minimum. He reported the case of a colored boy in whom the only symptoms manifesting themselves were watering of the eyes and sneezing, the case having been diagnosticated as one of hay fever. Urinary examination was suggested by slight puffiness under the eye, and there were also cardiac hypertrophy, displacement of the apex beat, and thickened arteries.

Dr. Hugh Hanna remarked the importance of early diagnosis and treatment of the nephritic condition, and reported the case of a mild scarlatinous condition, which was improving very nicely, when the patient in the absence of the nurse went to the window and the effect of the cold air was to immediately develop nephritis, with almost complete suppression of urine for nearly forty-eight hours. By the use of actively eliminative preparations and large amount of water the patient made a good recovery.

Dr. Luther C. Peter suggested the practicability of the employment of Fuller's earth or chalk with glycerin and some of the volatile oils.

Dr. H. C. Masland believed that the condition of the kidneys should be carefully watched throughout the course of all infectious diseases, and careful attention to any symptom arising, he believed, would oftentimes prevent permanent impairment or fatal results.

Dr. I. Valentine Levi reported three cases of scarlet fever in which examinations of the urine were made every other day and no albumin was discovered, although casts were present in one, which he felt indicated the necessity for centrifugation and microscopical examination in all cases.

Dr. Arthur P. Hitchens reported that staphylococcus could be recovered from the kidneys of rabbits after five or six days, even although not strong enough to produce death, and the germs were more numerous in the kidneys than in any part of the body. With streptococcus, the reverse was true; they were practically never found in the kidneys unless the rabbit died, and even then were much less numerous than in other parts of the bodies.

Dr. J. THOMPSON SCHELL stated that he had great difficulty in collecting the urine of infants for examination. He believed that infantile nephritis was a very frequent condition, and also that children were oftentimes born with a form of nephritis. He also felt that many cases of young infants were treated for ordinary colic when it was really of nephritic origin.

Dr. WILLIAM L. PEPPER reported a case of nephritic dropsy which terminated favorably, in which the albuminuria was not increased by giving the patient a large amount of eggs.

Dr. WILLIAM EGBERT ROBERTSON felt that in many cases the term nephritis was a misnomer, as probably a majority of the cases of so-called nephritis, particularly all those accompanying infectious diseases, were cases of toxic degeneration. He thought that the urine from a male baby was comparatively easy of collection by the use of a small bag, such as was sometimes worn by adults in cases of urinary incontinence. He stated that the youngest case of this condition he had ever seen occurred in a male infant six weeks old, following an enteritis. There was anæmia, but no œdema; albumin, leucin, and tyrosin were present in the urine. Autopsy revealed a septic infarct in the lung, from which area and the heart blood streptococcus was recovered. He divided the condition into the infectious, and the metabolic, which might be due to altered metabolism, consequent external agencies, such as lead and other metallic poisons or to syphilis, gout, and possibly rheumatism. He recommended careful examination of the urine, both for albumin and microscopically for casts in all cases of infectious diseases. The dropsy due to renal conditions, he stated, did not terminate fatally nearly so quickly as that due to cardiac disturbance, and as in renal conditions there was usually an associated heart lesion, he felt there was a possibility of increasing the cardiac hypertrophy by the too free administration of water in the renal cases.

Dr. ELLIS E. W. GIVEN stated that at the Children's Hospital a wide mouthed bottle was employed for the collection of urine from the male infants and the child was kept as quiet as possible; but that for female infants, the only means that could be employed was a catheter (which it was very difficult to obtain small enough) or absorbent cotton.

Dr. A. C. MORGAN, in closing, stated that the best method of collecting the urine was to excite urination by putting a grain or two of salt upon the lips of the meatus, or if the child was old enough to be responsive to stimuli, running water would excite urination, and then you could collect the urine in a vessel. He further stated that he had seen one case of œdema of the chest wall, occurring in a woman at Blockley, in which the process had been present for over a year.

Dr. A. G. MILLER, in closing, stated that the effect of the kaolin was due entirely to the abstraction of fluid or some toxic principle, and the remedy required great nicety of preparation, as if too much glycerin was used, it would not stay on well, and if too much clay was employed, it will be too hard to produce any effect.

Dr. CHARLES C. BIEDERT, in closing, stated that he saw no objection to the employment of the catheter in female infants, having used it with no untoward results. In none of the cases reported was the albumin sufficient to estimate quanitatively, and in all, hyaline and granular casts and some kidney cells were present.

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Book Notices.

A Surgical Handbook for the use of Students, Practitioners, House-Surgeons, and Dressers. By FRANCIS M. CAIRD, M. B., F. R. C. S. (Ed.), Assistant Surgeon, Royal Infirmary, Edinburgh, and CHARLES W. CATHCART, M. B., F. R. C. S. Eng. and Ed.), Surgeon, Royal Infirmary, Edinburgh. With very numerous illustrations. Twelfth Edition. London: Charles Griffin & Company, Limited. Chicago: W. T. Keener & Co. 1903.

While not unlike other manuals of elementary surgical methods, this one, in the present enlarged edition especially, is more comprehensive than most of them. It covers a wide range of minor, and many major, surgical manipulations, and various cognate subjects—as indicated in the following list of chapters: Case taking, pre- and post-operative treatment, anæsthetics, antiseptics and wound treatment, hæmorrhage, shock, and wound fever, emergency cases, tracheotomy, minor surgical operations, bandaging, fractures, dislocations and sprains, temporary appliances and ambulance work, massage, surgical electricity, joint fixation, etc., trusses and artificial limbs, the uses of the syphon, uranalysis, post mortem examinations, etc.—all well written and as thorough as conciseness would allow.

By the use of thin paper and small type this is all condensed within the limits of a convenient pocket volume with flexible leather cover. It is an excellent manual for students and assistants in surgical clinics.

Das Röntgen-Verfahren mit besonderer Berücksichtigung der militärischen Verhältnisse. Von Dr. STECHOW, Generalarzt und Korpsarzt des X. Armeekorps. mit 91 Abbildungen. Berlin: Verlag von August Hirschwald. NW. Unter den Linden 68. 1903.

This work deals with apparatus and methods exclusively, not with clinical considerations. Indeed there is not a single skiagraph printed in the book. The employment of the x rays in military work being the special subject of consideration, nothing is said of static machines, but considerable space is devoted to portable outfits. It is surprising to note the large number of electrolytic and other "interrupters" that have been devised for use with coils, as illustrated and described here in detail. A long chapter is devoted to the chemical aspects of skiagraphy, i. e., the treatment of the plates. The use of various "orthodiagraphic" apparatus for securing, undistorted, the projection outlines of the heart, etc., a subject to which German x ray workers have given much attention, is described at some length.

"Das Röntgen-Verfahren" is strictly technical, and will appeal only to skiagraphists and military surgeons, to whom, however, it will prove of great interest.

Nose and Throat Work for the General Practitioner, by George L. Richards, M. D., Fellow American Laryngological, Rhinological, and Otological Society, etc. New York: International Journal of Surgery Company. 1903. Pp. 330. (Price, $2.00 net).

This work is based mainly on the author's personal experience, and, as the title indicates, it is intended for the use of general practitioners who wish to devote little time to the subject. Such a book cannot be complete and it would perhaps seem hypercritical to complain of too great brevity where the author had concluded it was necessary to abbreviate, probably after deliberate consideration. But it may not be amiss to suggest that what such practitioners need most is a guide in diagnosis, rather than descriptions of operations. Operative skill cannot be taught in books, and many of those which are performed in the nose need to be done by a trained hand. Some chapters are excellent; among them may be mentioned those on atrophic rhinitis and adenoids. Throughout the book the descriptions are clear, the language is attractive. In its class, as a brief abstract of an important subject, this work takes a high rank.

Clinical Treatise on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Professor Dr. Carl von Noorden, Physician in Chief to the City Hospital, Frankfort. Authorized American Edition, Translated under the Direction of Boardman Reed, M. D., Professor of Diseases of the Gastrointestinal Tract, Hygiene and Climatology, Department of Medicine Temple College, etc. Part iv. The Acid Autointoxications by Professor Dr. Carl von Noorden and Dr. Mohr. New York: E. B. Treat & Company. 1903. Pp. 80. [Price, $0.50].

In this little volume, which is the fourth of a series upon diseases of metabolism and nutrition, the author has dealt with the subject of the derangements of metabolism that result in an overproduction of acid. Beginning with a chapter of general remarks on autointoxication with acid products of metabolism, the author goes fully into the question of the sources of the acetone bodies, then takes up pathological non-diabetic, and diabetic acetonuria, and ends with a chapter upon therapeutics. As in the previous books of the series, the subject has been treated in a very concise way, which is possibly more noticeable in the volume under consideration, as the field of study is one which is but too little understood, more especially by American physicians. The same clear and interesting style, so characteristic of the author, is evident in this volume. The book is full of valuable observations, and written as it is, upon a subject which has of late years become so very prominent, it certainly should be accorded a most welcome reception.

BOOKS, PAMPHLETS, ETC., RECEIVED.

Transactions of the American Gynæcological Society. Volume 28. For the Year 1903. Philadelphia: Wm. J. Dornan, Printer. 1903. Pp. 343.

Transactions of the National Association of United States Pension Examining Surgeons. Second Annual Meeting, Washington, D. C., May 13 and 14, 1903. Including an Account of First Meeting, at Saratoga Springs, June 9, 1902. Volume 1. Published by the Association, Rochester, N. Y. 1903. Pp. 215.

Blood Pressure in Surgery. An Experimental and Clinical Research. The Cartwright Prize Essay for 1903. By George W. Crile, A. M., M. D., Professor of Clinical Surgery, Western Reserve Medical College; Visiting Surgeon to St. Alexis Hospital, etc. Cleveland, Philadelphia and London: J. B. Lippincott Company. 1903. Pp. 422.

An Atlas of Human Anatomy. For Students and Physicians. By Carl Toldt, M. D., Professor of Anatomy in the University of Vienna, Assisted by Professor Alois Dalla Rosa, M. D. Translated from the Third German Edition and Adapted to English and American and International Terminology, by M. Eden Paul, M. D., Brux., M. R. C. S., L. R. C. P. Second Section. C. Arthrology. (Figures 378 to 489, and index). New York: Rebman Company, 10 West Twenty-third Street, near Fifth Avenue. London Agents: Rebman, Limited, 129 Shaftesbury Avenue, Cambridge Circus, W. C. 1903. Pp. 164 to 256a.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending January 15, 1904:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
California—Fresno	Dec. 1-31	2	
Illinois—Belleville	Dec. 19-Jan. 9	12	1
Illinois—Chicago	Jan. 2-9	1	
Illinois—Danville	Jan. 2-9	2	
Indiana—Evansville	Jan. 6	14	
Louisiana—New Orleans	Jan. 2-9	3	
Maine—Milford	Jan. 7	2	
Maine—Orono	Jan. 7	1	
Michigan—Grand Rapids	Jan. 2-9	1	
Missouri—St. Louis	Dec. 26-Jan. 9	6	
New Hampshire—Manchester	Jan. 2-9	6	
New Hampshire—Nashua	Jan. 2-9	1	
New Jersey—Camden	Jan. 2-9	2	1
New Jersey—Trenton	Jan. 2-9	1	
New York—Buffalo	Dec. 26-Jan. 9	5	
Ohio—Ashtabula	Dec. 28-Jan. 4	1	
Ohio—Cincinnati	Dec. 24-Jan. 8	6	1
Ohio—Cleveland	Jan. 1-8	2	
Ohio—Dayton	Jan. 2-9	1	
Ohio—Youngstown	Dec. 26-Jan. 9	37	
Pennsylvania—Braddock	Jan. 2-9	6	
Pennsylvania—Philadelphia	Jan. 2-9	83	25
Pennsylvania—Pittsburgh	Jan. 2-9	20	4
Pennsylvania—Reading	Jan. 4-11	1	
South Carolina—Charleston	Jan. 2-9	2	
Tennessee—Nashville	Jan. 2-9	1	
Texas—San Antonio	Dec. 1-31	6	
Utah—Salt Lake City	Jan. 2-9	1	
Wisconsin—Milwaukee	Jan. 2-9	10	
Smallpox—Insular.			
Philippine Islands—Manila	Nov. 14-Dec. 5	2	1
Smallpox—Foreign.			
Austria-Hungary—Prague	Dec. 12-19	16	
Austria-Hungary—Trieste	Dec. 5-12	21	
Brazil—Pernambuco	Nov. 1-30		20
British Guiana—Demerara	Oct. 31-Nov. 28	62	
Chile—Antofogasta	Nov. 1-30		8
France—Paris	Dec. 12-26	31	3
Great Britain—Edinburgh	Dec. 12-19	1	
Great Britain—Glasgow	Dec. 19-26	64	2
Great Britain—Leeds	Dec. 26-Jan. 2	1	
Great Britain—London	Dec. 19-26	7	
Great Britain—Manchester	Dec. 19-26	2	
Gt. Britain—Newcastle-on-Tyne	Dec. 19-26	1	
Great Britain—Nottingham	Dec. 12-26	11	
Great Britain—Southampton	Dec. 26-Jan. 2	1	
India—Bombay	Dec. 8-15		4

Italy—Catania	Dec. 17-24		1
Italy—Messina	Dec. 11-18		1
Malta	Dec. 5-19	8	
Netherlands—Amsterdam	Dec. 19-Jan. 2	6	1
Russia—Moscow	Dec. 12-19	1	1
Russia—Odessa	Dec. 12-26	3	
Russia—St. Petersburg	Dec. 5-19	101	2
Russia—Warsaw	Nov. 21-28		3
Spain—Santander	Dec. 28-Jan. 4	3	1
Turkey—Smyrna	Dec. 13-20		6
Venezuela—Maracaibo	Oct. 24-31	1	1
Yellow Fever—Foreign.			
Mexico—Merida	Dec. 20-Jan. 2	4	2
Plague—Insular.			
Philippine Islands—Manila	Nov. 14-Dec. 5	1	1
Plague—Foreign.			
China—Hongkong	Nov. 29-Dec. 5		1
Egypt—Alexandria	Dec. 5-12	3	2
India—Bombay	Dec. 8-15		56
India—Calcutta	Dec. 5-12		13
India—Karachi	Dec. 6-13	8	7
Mauritius	Oct. 9-Nov. 5	377	211
South Africa—Cape Colony	Nov. 14-21		1
Cholera—Insular.			
Philippine Islands—Manila	Nov. 14-Dec. 5	643	567
Philippine Islands—Provinces	Nov 14-Dec. 5	13	11
Cholera—Foreign.			
Afghanistan—Herat	Dec. 21	Present.	
India—Bombay	Dec. 8-15		1
India—Calcutta	Dec. 5-12		38
Japan—Nagasaki	Nov. 30	130	64
Java—Batavia	Nov. 28-Dec. 5	14	2
Straits Settlements—Singapore	Nov. 14-21		4
Turkey in Asia	Dec. 7	37	30

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending January 14, 1904:

AMESSE, J. W., Assistant Surgeon. Granted extension of leave of absence, on account of sickness, for ten days from January 11th.

DUKE, B. F., Acting Assistant Surgeon. Granted leave of absence for five days from January 14th.

GRUBBS, S. B., Passed Assistant Surgeon. Granted leave of absence for ten days. January 8, 1904.

GUITERAS, G. M., Surgeon. Detailed as inspector of unserviceable property at Havana, Cuba. January 12, 1904.

MAGUIRE, E. S., Pharmacist. Granted extension of leave of absence for ten days from January 8th.

RICHARDSON, S. W., Pharmacist. To proceed to New York, N. Y., for special temporary duty. January 9, 1904.

TIDD, R. M., Acting Assistant Surgeon. Granted leave of absence for seven days under paragraph 210 of the regulations.

TUTTLE, JAY, Acting Assistant Surgeon. Department letter granting Acting Assistant Surgeon Tuttle leave of absence for ten days from December 21, 1903, amended to read five days from December 21st.

WALKER, R. T., Acting Assistant Surgeon. Granted leave of absence for twenty days from January 5th.

WHITE, J. H., Surgeon. Granted leave of absence for seven days from January 11th.

WICKES, H. W., Passed Assistant Surgeon. Granted leave of absence for two days from January 16th.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending January 16, 1904:

CRANDALL, R. P., Surgeon. Detached from the naval station, Guam, L. I., and ordered to the *Wisconsin.*

HEINER, R. G., Assistant Surgeon. Appointed assistant surgeon, with rank of lieutenant, junior grade, from December 26, 1903.

MURPHY, J. A., Passed Assistant Surgeon. Commissioned a passed assistant surgeon, from March 3, 1903.

STOOPS, R. E., Assistant Surgeon. Appointed assistant surgeon, with rank of lieutenant, junior grade, from December 26, 1903.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending January 16, 1904:

BANISTER, WILLIAM B., Major and Surgeon. Relieved from duty as attending surgeon, Washington, D. C., April 1, 1904, and ordered to Jefferson Barracks, Missouri. for duty.

CHAMBERLAIN, WESTON P., Captain and Assistant Surgeon. Relieved from duty in the Department of the East, and ordered to proceed to San Francisco, Cal., for transportation to the Philippines.

GARDNER, EDWIN F., Lieutenant-Colonel and Deputy Surgeon-General. Relieved from duty at Fort D. A. Russell, Wyo., and ordered to proceed to Atlanta, Ga., for duty as chief surgeon of the Department of the Gulf.

HUTTON, PAUL C., First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence on account of sickness.

IVES, FRANCIS J., Major and Surgeon. Leave of absence extended twenty-three days.

STARK, ALEXANDER N., First Lieutenant and Assistant Surgeon. Relieved from duty at West Point, N. Y., and assigned to duty as assistant to the attending surgeon, Washington, D. C., until April 1, 1904, when he will assume the duties of attending surgeon.

THOMASON, H. D., First Lieutenant and Assistant Surgeon. Ordered to proceed to the Presidio of San Francisco, Cal., for examination for promotion.

VAN DUSEN, JAMES W., First Lieutenant and Assistant Surgeon. Relieved from duty at Columbus Barracks, Ohio, and ordered to proceed to West Point, N. Y.

Births, Marriages, and Deaths.

Married.

ASHBURY—HICKS.—In Philadelphia, Pennsylvania, on Saturday, January 9th, Dr. Howard Ashbury and Miss Lotta Hicks.

ATWATER—MAGIE.—In Brooklyn, N. Y., on Tuesday, January 12th, Dr. Henry Harrison Atwater and Miss Grace Magie.

BANTA—JENSEN.—In Frankfort, Kentucky, on Monday, January 4th, Dr. W. P. Banta, U. S. A., and Miss Viola S. Jensen.

KALTEYER—REDMOND.—In New York, N. Y., on Friday, January 15th, Dr. Frederick J. Kalteyer and Miss Helen Redmond.

THORP—BOAL.—In Denver, Colorado, on Tuesday, January 5th, Dr. Charles W. Thorp, U. S. A., and Mrs. Arta Cody Boal.

WILLEY—POWELL.—In Baltimore, Maryland, on Tuesday, January 12th, Dr. Waitman T. Willey and Miss Elise Madesta Powell.

Died.

AHLBORN.—In Boston, Massachusetts, on Saturday, January 9th, Dr. Henry C. Ahlborn, in the eightieth year of his age.

BLEDSOE.—In Lafayette, Indiana, on Monday, January 4th, Dr. John H. Bledsoe.

BUCHMAN.—In Trenton, New Jersey, on Thursday, January 7th, Dr. Margaret Preston Buchman.

CHAPELL.—In Oregon, Illinois, on Tuesday, January 5th, Dr. W. H. Chapell.

FISHER.—In Bolton, Georgia, on Wednesday, January 6th, Dr. W. C. Fisher.

IRELAND.—In Camden, New Jersey, on Tuesday, January 12th, Dr. William H. Ireland, in the sixty-first year of his age.

MARSHALL.—In Abbeville, South Carolina, on Wednesday, January 6th, Dr. Joseph W. Marshall, in the eighty-fourth year of his age.

PURCELL.—In Glasgow, Kentucky, on Thursday, January 7th, in the eighty-first year of his age.

SCOTT.—In Jeffersonville, Kentucky, on Wednesday, January 6th, Dr. Daniel Voorhees Scott, in the thirty-third year of his age.

TOLMAN.—In Chicago, Illinois, on Friday, January 15th, Dr. Henry L Tolman, in the fifty-sixth year of his age.

New York Medical Journal
AND
Philadelphia Medical Journal.
CONSOLIDATED.

A Weekly Review of Medicine

VOL. LXXIX, NO. 5. SATURDAY, JANUARY 30, 1904 WHOLE NO. 1313.

Lectures and Addresses.

INAUGURAL ADDRESS OF THE PRESIDENT AT THE ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

BY ALGERNON T. BRISTOW, M. D.

Mr. Vice-President, Ladies, and Gentlemen:

The responsibilities of the office with which this society has been pleased to honor me have always been great and its duties manifold, but the year which has passed into history has been full of peculiar difficulties and questions of momentous importance. All my energies have been devoted to the task for which I should, nevertheless, have been unequal had it not been for the loyal and unfailing support which I have received from all parts of the State. Never has a president of this society needed wiser counselors, never has a president been surrounded with kinder and wiser helpfulness than it has been my fortune to enjoy. The labors of the office have been many, its compensations great. It has been my high privilege to meet in intimate intercourse men throughout the State whom I have long respected and admired; their wisdom, their unbroken friendliness, and their forbearance I shall ever hold in most affectionate remembrance. To their counsels, if I have done anything worthy of recollection, my successes are due—my failures are my own. . . .

The annual meeting should always be held in our State capital. For excellent reasons this has become the settled policy of the society. The semiannual meeting might most appropriately be held consecutively in Buffalo, Rochester, Syracuse, and New York. In this way the perfectly natural wishes of our most distinguished members could be gratified, and we should all become better acquainted with the great State of which we are citizens. . . .

The present membership of the State society is as follows: Delegates 673, permanent members 462, total active list 1,135. The total membership of all the county societies in affiliation with the State society is 5,680. If we reorganize on the plan which will be presented in the report of the conference committee, which makes every member of the county societies also a member of the State body, our membership would then be nearly 5,700 men. The present dues of the State society are $5.00, which gives a present income of $5,675; with the larger membership, dues of but $2.00 per year would give us more than twice our present income, so that if it seemed best to expand our activities and to conduct a *State Journal of Medicine* to appear monthly, we should have sufficient means to handle the enterprise. While our transactions form a notable series of volumes, yet in most libraries they have long been accumulating the dust that comes with an undisturbed quiet, and our secretary finds it difficult to dispose of all the copies printed annually. The substitution of a monthly journal to replace a single volume printed annually is worth consideration. Illinois, Kansas, California, Michigan, Kentucky, and Colorado now support such a publication. A periodical journal keeps the State society alive through twelve months of the year. It is an active, vital force and offers opportunities for the discussion of topics of interest and importance as they occur from time to time, as well as providing an official organ for the society. Such a periodical conducted by the Medical Society of the State of New York ought to number among its contributors the ablest men in the country.

THE RESPONSIBILITY FOR TYPHOID EPIDEMICS.

The recent severe epidemics of typhoid at Ithaca, in this State, at Butler and Pittsburgh, in Pennsylvania, and in Montreal, call for more than a passing notice. The aggregate monetary loss to the communities concerned is immense, not to speak of the suffering and loss of life. It is fair to assume that the average wage of the wage earner stricken by typhoid is at a low estimate $15.00 per week; the average duration of the disease is certainly not less than ten weeks; the loss, therefore, to each family in which one wage earner alone is stricken down, will be not less than $150.00. If to this sum we add $150.00 as the expenses of medical attendance, and an additional sum of $50.00 for drugs and incidentals, we shall have a total loss of $350.00 for each wage earner who recovers. This estimate, however, assuming that the nursing will be done by the family, takes no account of the expense of a trained nurse. A thousand cases of typhoid fever occurring in wage earners, will thus entail a loss of at least $350,000. If the death rate is but 15 per cent., to this must be added the sum of $15,000 for funeral expenses, which makes a total loss to the commonwealth of $365,000 per thousand cases. Assuming that there is but one case of typhoid fever to each family, this by no means includes all the loss, which would require the services of an actuary and the resources of a life insurance office properly to compute. The Butler and Pittsburgh epidemics will cost the citizens of Pennsylvania in the neighborhood of $1,000,000, a loss which is absolutely unnecessary, without excuse, and, therefore, a total waste of capital, due entirely to the filthy habit of contaminating running water with fæcal matter. Our boasted civilization tolerates this crime simply because it is the easiest and, so far as first cost is considered, the cheapest, way of disposing of human excreta. Until it is made a criminal offense to locate latrines on the banks of streams or to permit sewage to be emptied into water used for drinking purposes or from which ice is cut in winter, we shall continue to have these frightful epidemics of typhoid fever. Costly filtration plants maintained by towns and cities, Pasteur filters and similar contrivances in the home, are nothing but makeshifts and fail to attack the source of the infection. It is better not to defile living water at all than to attempt to filter out the abomination afterwards. True, it has been asserted that running water purifies itself by a process of rapid oxidation; nevertheless, in spite of this assertion, we find that typhoid fever is carried far down the course of rapidly running streams, as, for instance, in the cases which occurred some years ago in the Adirondack wilderness, which were reported to this society by Dr. Brush at the time. To defile running water is a crime, not only against decency and humanity, but against political economy, and it ought to be a crime in the eyes of the law. In this State, thanks to our State board of health, it is now a punishable offense to permit sewage to empty into running water without the permission of the State board. It would be better if the law gave the State board the right to investigate the causes of local outbreaks of typhoid fever and to prosecute those whose criminal acts are responsible for the disaster. Every case of typhoid fever is logically just as much a coroner's case as a case of poisoning. The new law will do something to abate the evil. If, however, we take down our atlas and trace the course of the streams which flow from Pennsylvania, Connecticut, and Vermont into New York waters, we shall be convinced that no local State legislation can ever protect a State from an infection without its borders and therefore beyond its control. It is of little use for our State board of health to protect the New York shore of Lake Champlain from desecration, while Burlington and other communities pour a volume of sewage into the lake from the Vermont shore. The problems of modern sanitation can be solved neither by local nor State boards of health working independently of one another and often at cross purposes. Ultimately we shall clearly see the necessity of creating a department of health which, with a cabinet officer at its head, shall have jurisdiction similar to that of the United States courts. Another problem which can never be satisfactorily settled is that of yellow fever, since it will be of no use for one State to wage warfare on mosquitoes and institute drainage systems if a neighboring State neglects similar precautions.

The sanitary and engineering problems connected with the question of malarial, typhoid, and yellow fevers are of too costly a nature ever to be properly handled by local or State governments. The national government many years ago undertook the maintenance of river and harbor improvement, and until it takes hold of the problems connected with the propogation of typhoid fever, and the diseases transmitted by the mosquito, we shall never be rid of them. National health is national wealth; great epidemics always hinder the wheels of commerce, if they do not bring them to a standstill altogether. Thus, a secretary for public health is as much a necessity to the national welfare as a secretary of commerce or of agriculture. We cannot hope in the immediate future to secure all the legislative reforms which are necessary to protect us against the really preventable diseases. We can, at least, however, treat symptoms. In this connection should be mentioned Senator McCabe's pure ice bill, designed to prevent the harvesting of ice within a dangerous distance of open sewer outlets, which met with defeat last winter. Strange to say, men are quite willing to put money in their pockets at the price of the lives of their fellow creatures, if they do not actually see their victims in the death agony. Nothing but corporate greed stands in the way of this bill, and efforts should be renewed to pass it, since it is as necessary to the public health as it was creditable to a member of our own profession, the senator who introduced it.

SMALL LOCAL HOSPITALS FOR SUFFERERS FROM SURGICAL TUBERCULOSIS.

The hospital for the cure of incipient tuberculosis is well advanced towards completion, thanks to the labors of Dr. McDonald, an honored ex-president of this society. It will save many lives and prevent much suffering. We ought, however, to remember that there are other cases of tuberculosis besides those for which this hospital is designed. Surgical tuberculosis is a disease, which, in the majority of cases, is far more curable than are the cases of pulmonary tuberculosis, yet, up to the present time little attention has been paid towards securing the same conditions of climate and general hygiene, which have proved so successful in sanitariums for the consumptive. We see case after case of surgical tuberculosis, fade away and finally die after long suffering, in spite of the best surgical care, because the crowded wards of a large hospital in the midst of a great city do not give the fresh air and sunlight which are just as necessary to the successful treatment of these cases as in the pulmonary class. To me there is no ward in the hospital more distressing than the children's ward, in which you will find most of these cases. Many of them require daily and most painful dressings. These little creatures suffer torments which they might be spared if to the surgical aid which is necessary, was added the same outdoor treatment and climate which the much less hopeful pulmonary cases are now receiving. I trust that neither the profession nor the public will lose sight of these little unfortunates, and that future provision may be made for them. It is not necessary or desirable that they should be sent to distant sanatoria in the Adirondacks, since they need constant and skilful surgical care. The best conditions for their recovery may be secured by the erection of small suburban hospitals near our large cities, but within easy reach of a visiting surgical staff. This plan would give them all the advantages of an outdoor life in the sunlight, and at the same time provide for the peculiar care which their disease demands. One small hospital for this purpose is located at Tarrytown, with a capacity of twenty-five beds.

The attention of the society is respectfully directed to the frequency of tetanus, occurring as the result of wounds made by wads from the toy pistol. Over four hundred cases occurred in the United States last summer after July 1st, most of the victims of the disease being young boys. It seems a crime that men should sell children such deadly toys for the purpose of gaining a few dollars, and it ought to be made a crime by State law. The Mississippi Valley Medical Association sent a resolution to this effect to your president last fall. It surely ought not to be difficult to procure legislation which would prevent the suffering and loss of life incident to this traffic with babies in dangerous toys.

INCREASING FREQUENCY OF SUICIDE BY CARBOLIC ACID.

Cases of suicide by carbolic acid are becoming alarmingly frequent. We cannot take up a daily paper without reading of a case. Death follows so swiftly and surely that the poor victim of despair or poverty has no chance of rescue or a second thought. Many of the victims are women. The following figures have been supplied me by Dr. S. J. Byrne, registrar of vital statistics for Brooklyn:

DEATHS AND SUICIDES BY CARBOLIC ACID.

	1898.	1899.	1900.	1901.	1902.	Total.
Deaths from carbolic acid...	263	242	327	286	315	1,433
Suicides from carbolic acid.	230	201	292	256	267	1,236
Female suicides, carbolic acid	97	88	101	97	90	473
Per cent. female suicides from carbolic acid....	51.61	53.99	55.19	47.76	48.70	....

Dr. Byrne further states that the percentage of female suicides by means of carbolic acid is based on actual findings by the coroner's office and not on the total deaths from carbolic acid, which in all probability with very few exceptions are all suicide. In the five years tabulated, there were 1,433 deaths from this poison. It is my experience based on many years' practice in large hospitals that when a first attempt at suicide is unsuccessful a second is rarely made, but carbolic acid is too swift to permit a rescue and the unfortunate victim is usually reported by the ambulance surgeon as "dead on arrival." There is a curious want of uniformity between the pharmacy law and the penal code with reference to the restrictions placed about the sale of the drug. Thus the pharmacy law merely requires a poison label to be affixed to the bottle without registration of the name and address of the purchaser, but the penal code requires registration in the case of the sale of all poisons. This is certainly the wiser plan. The almost universal superstition concerning the value of carbolic acid as a disinfectant which exists even among medical men renders it an easy matter for the intending suicide to deceive the conscientious druggist as to the use to which the drug is to be put. In view of the alarming frequency of deaths from this drug, it would be well to require the prescription of a physician for it when sold in quantities of less than five pounds. This would not embarrass the use of the acid in the arts. Two very dangerous drugs are commonly sold under various copyrighted names, respectively, as headache powders and catarrh snuffs. The former contain antipyrin or acetanelide, the latter almost always, cocaine. It is unnecessary to point out the dangers of this evil practice. In the *New York Medical Journal and Philadelphia Medical Journal* for January 16th, of this year, the death of a woman is reported from a dose of two headache tablets, and no physician is ignorant of the fact that from the use of any preparation containing cocaine a drug habit may be formed which is the most dangerous and ineradicable of all the forms of habitual intoxication. It ought not to be possible for manufacturers to place such dangerous drugs within the reach of the public in order that they may earn a dollar stained with blood.

Under Section 405A of the penal code, it is a misdemeanor to fill more than twice, without the order of a physician, any prescription which contains over $^1/_{20}$ of a grain of morphine or ¼ of a grain of opium to the dose, but any person may demand of the druggist a copy of the prescription and take this copy to another druggist and repeat this process indefinitely, so that the purpose of the law is entirely defeated. Unless the druggist is by law forbidden also to give a copy of such prescriptions a morphine habitué has really no restrictions in the purchase of the drug. There is much need of more stringent legislation restricting the indiscriminate purchase of opium and its salts, and cocaine. The present poison law requires nothing more than the registration of the name and residence of the purchase, so that the victims of drug habits have no difficulty in securing their favorite poison.

Some years ago the legislature made an appropriation of $5,000 for the purposes of a State medical library at Albany. Since that time, as the appropriation has to be made annually, the amount has steadily dwindled until now it is barely sufficient to provide for the purchase of current periodical literature. Surely the medical profession of this State, in view of the hundreds of thousands of dollars which it saves to the State annually by gratuitous attendance at public hospitals and dispensaries, deserves from the legislature the modest recognition of an appropriation of $5,000 per year for a medical library at Albany. It has been suggested by the State librarian that travelling libraries may be made available to the profession of the State, which shall be under the supervision and from the shelves of the State library. The books which are of the greatest value to the physician, especially in the rural districts, are those which are fresh from the press; for, unlike the law book, our text books are practically valueless ten years after publication, so great are the advances of our art. It would be of great advantage in the promotion of this idea of traveling libraries, if lists of new books on file in the State library could be sent monthly, or at least quarterly, to the secretary of each county society.

A DEFINITION WANTED FOR THE PRACTICE OF MEDICINE.

One of the greatest difficulties which we encounter in our endeavors to prosecute unlicensed quacks for what may be termed murder by misadventure, is the fact that we have in this State no proper definition of what constitutes the practice of medicine. Thus, it has been held by the courts that unless a drug has been administered the act complained of is not the practice of medicine under law. The Territory of New Mexico may teach the ancient State of New York a lesson in this particular. In Section 6 of the Act which establishes a board of health, passed March 12, 1903, it states: " Sec. 6. For the purposes of this Act the words ' practice of medicine ' shall mean to open an office for such purpose or to announce to the public or to any individual in any way, a desire or willingness or readiness to treat the sick or afflicted, or to investigate or diagnosticate, or to offer to investigate or diagnosticate, any physical or medical ailment or disease of any person, or to suggest, recommend, prescribe or direct, for the use of any person, any drug, medicine, appliance or other agency, whether material or not material, for the cure, relief or palliation of any ailment or disease of the mind or body, or for the cure, or relief, of any wound, fracture or bodily injury or deformity, after having received, or with the intent of receiving therefor, either directly or indirectly, any bonus, gift or compensation.

" Provided, That nothing in this Act shall be construed to prohibit gratuitous services in cases of emergency, or the domestic administration of family remedies, or women for practising midwifery, and this Act shall not apply to surgeons of the United States in the discharge of their official duties."

If this is sound law in the Territory of New Mexico, it ought to be good law for the Empire State. The attention of the legislature is respectfully called to this act.

Two years ago the osteopaths attempted to pass a law in this State which would have permitted them to attend midwifery cases, to administer drugs provided they were not given by the mouth or hypodermic injection, to practice minor surgery and obstetrics, and grant death certificates, but without the education which the law requires of physicians as now licensed by the State. Their proposed law especially exempted them from a knowledge of drugs, so that it would have been possible for a case of criminal poisoning to have escaped detection if treated by an osteopath, and for the victim to have been buried under cover of a certificate of death from gastritis, had this law passed. Through the efforts of this society, and affiliated bodies, this dangerous law was defeated. It is, however, within the bounds of probability that other attempts in the same direction will be made in the future. In May, 1903, the State of Wisconsin passed an act of which the title is as follows: "An Act relating to the State Board of Medical Examiners and to the Registration and Licensing of persons engaged in the practice of medicine, surgery, or osteopathy in the State of Wisconsin." This act provides that osteopaths shall have the same rights and privileges and be subject to the same laws and regulations as practitioners of medicine and surgery, except the right to give or prescribe drugs or perform surgical operations. Evidently the profession of medicine had too little influence in the State of Wisconsin to prevent the passage of so pernicious a law.

Almost every ten years the profession witnesses the birth of some new form of quackery. If it is attractive to the public, provided also that it has the support of the impudent, the ignorant, and the credulous, and offers an easy pathway to profitable fees, it is likely to obtain legislative recognition. Are we then to witness with idle and helpless hands, assault after assault by a horde of impudent quacks on the admirable medical laws which through the influence of the medical profession have been enacted in every State in the Union? Must the doors of medical examining boards open every few years to admit the professor of some new form of quackery? It is a pity that in the State of New York we cannot have union among all medical men without regard to school. We shall never be able successfully to resist these constant assaults upon the earthworks which defend the approaches to a medical career until the homœopaths and eclectics see clearly that it is to their interest to abandon their distinctive titles based on therapy or treatment. This is after all nothing but the adoption of a trademark, and forms the basis on which countless systems of sectarianism may find foundation in the future and a point of attack from which to menace the laws which regulate medical education. The practice of using distinctive titles based on therapeutics is a wide open gateway through which may enter numberless and petty little systems. If the State is to license physicians of different schools of therapeutics as such, there is no pretender with a sufficient following of dupes who is not logically entitled to recognition by the State and to a separate board of examiners from his own sect. But this is the road to ultimate chaos and the nullification of our present medical laws. It is high time that all educatd physicians without regard to school recognize this danger. The Medical Society of the State of New York is founded on principles so broad that a man may use any system of therapeutics, any treatment which he deems of value, so long as he declines to advertise his methods by a distinctive title. Thus the only real and permanent protection which the medical profession can rear against the licensing by the State of indiscriminate systems of practice in the future lies in the abandonment of these distinctions. If we were all content to be called physicians without reference to school, we should present a front which would be impregnable to every assault. We shall never have complete protection against these incessant attempts on the part of impudent pretenders to legislative protection, nor shall we merit that complete confidence on the part of the public and the legislature, which will always be our best defense, until the name of sectarianism becomes merged and lost in the ancient and honorable title of Doctor of Medicine.

The following members of the Medical Society of the State of New York have found rest from their labors during the year which has passed:

HONORARY MEMBERS.

William E. B. Davis, of Birmingham, Ala., February 24, 1903, age 40 years.

George J. Engleman, of Boston, Mass., November 6, 1903, age 81 years.

PERMANENT MEMBERS.

Herman Mynter, of Buffalo, N. Y., February 9, 1903, age 53 years.

F. M. Perine, of Dannsville, N. Y., July 13, 1903, age 72 years.

Elisha H. Bridges, of Ogdensburgh, N. Y., October 9, 1903, age 62 years.

James Z. Hunt, of Lowville, N. Y., November 14, 1903, age 40 years.

Cornelius C. Wyckoff, of Buffalo, N. Y., November 6, 1903, age 81 years.

Charles H. Porter, of Albany, N. Y., November 21, 1903, age 69 years.

Francis W. Higgins, of Cortland, N. Y., December 18, 1903, age 46 years.

Dr. Porter was for thirty years the treasurer of this society. In view of this long and faithful service, it is eminently proper that we should pass suitable resolutions, to be published in the daily press and sent to his family.

THE UNIFICATION OF THE PROFESSION IN NEW YORK STATE.

Nearly a quarter of a century ago this society was rent in twain by a dissension which had its origin in a question of principle. Each side viewed the question from a different standpoint, and so the difference was irreconcilable. Changes in medical education, the establishment of medical examining boards, the elevation of the standard of requirements, and the slow progress of advancing years which heals all wounds and finally composes all differences, have made it possible for our brethren who left us so many years ago, to return to us, who gladly welcome them. Two years ago my honored and distinguished predecessor, Dr. Henry L. Elsner, initiated the movement which we hope to-day to see completed. The negotiations of the past two years have been full of incident and not without difficulty. The way has been beset with obstacles. In October both the Medical Society of the State of New York and the New York State Medical Association, each gave its committee full power to take such measures as shall equitably settle our differences and make us one again. The two committees, meeting soon afterward, by mutual consent, merged themselves into one committee, and thereafter met as a whole. Dr. Abraham Jacobi, an ex-president of this society, and the Virchow of American medicine, was chosen chairman of what is now known as the joint committee of conference. It was my privilege by invitation to attend one of the sittings of this committee. At that meeting one fact shone out brilliantly, that beyond all other considerations the members of this joint committee were seeking to do the best in their power, not for the Medical Society of the State of New York, nor for the New York State Medical Association. They sought instead the welfare of the entire profession of this State. Nor was one side seeking to outdo the other, unless by honorable concessions which might lead to union. The sentiment that animated all hearts appeared to be this: Union first, details afterward. The results of their labors will be laid before you this morning, nor have those labors been small. It was necessary to submit many difficult questions of law to counsel, and inasmuch as many of the propositions involved were novel, much time was required for their determinations. The committee have had the assistance of able counsel. The plan of union which they submit is one that has required months of elaboration and careful thought. Every section and paragraph has been completed only after much deliberation. The committee does not present this plan as necessarily perfect in all its parts. It is quite possible that some details may after trial need modification or amplification. The united society will be just as competent on a majority vote to alter its constitution or by-laws, as either of the contracting corporations to alter or amend its own rules before union. I urge the members to yield the same confidence to the joint committee which they reposed in their own conference committee last October when they gave it full power to bring about union in an equitable and just manner. We have had twenty-two years of strife, of heart burnings, of recrimination, of misunderstanding. With a stroke of the pen we can now have peace. Shall we have it? It is for you to determine. After one of the battles of the civil war, a great captain, who fought on the other side, lay dying, and as the sounds of strife faintly fell upon his dulled hearing, with his last breath he uttered these words: " Let us cross over the river and rest beneath the shade of the trees." For all these years the river of strife has flowed with sullen stream and leaden wave between us, let us now cross over the river and rest beneath the shade of the trees.

I now declare the ninety-eighth annual meeting of the Medical Society of the State of New York open for the reports of committees, the transaction of business, and the reading of scientific papers.

Original Communications.

A CASE OF PURULENT PERICARDITIS, SECONDARY TO PNEUMONIA, WITH OPERATION AND RECOVERY.*

By J. A. SCOTT, M. D.,

PHILADELPHIA,

PHYSICIAN TO THE PENNSYLVANIA HOSPITAL.

Primary pericarditis is a disease attended with high mortality; I have collected 41 cases occuring in the wards of the Pennsylvania Hospital since 1892, with 14 deaths. This is a mortality of 34.1 per cent. In 100 consecutive cases at the Boston City Hospital, 43 died; but 5 of the cases were purulent. Pericarditis, as a complication of, or secondary to, other disease, is much more fatal. Occurring in pneumonia, it darkens the prognosis very much. Pye Smith (1) says: " Double pneumonia with pericarditis is almost invariably fatal." He collects 434 cases of pneumonia, with 111 deaths; there were 14 cases of pericarditis, and all died. " The pyopericardial cases are usually fatal," says Tyson (2). Anders (3) states that " purulent pericarditis runs an almost uniformly unfavorable course." " Endocarditis is extremely grave," says Osler (4), in discussing the complications of pneumonia, " much more so than pericarditis." The frequency with which pericarditis occurs in pneumonia is rather difficult to state. Anders's (5) statistics, collected to show the frequency of cardiovascular lesions in croupous pneumonia, show in 275 autopsies the presence of acute pericarditis in 14, or 5 per cent.; a chronic pericarditis in 11 cases, or 4 per cent. Clinically, however, the lesion is not found so frequently: thus, in 500 cases of croupous pnuemonia occurring in the Pennsylvania Hospital recently, reported by George W. Norris (6), pericarditis is noted in but 4 cases, 3 of them being fatal. It is interesting to note that the total mortality in these cases was 125, or 25 per cent.—figures identical with those of Pye Smith's quoted above.

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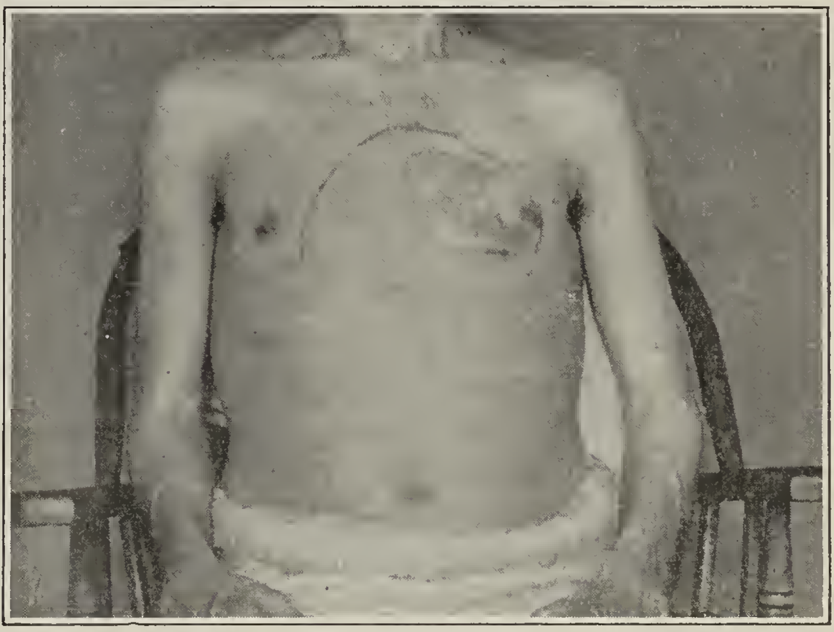
* Paper read and patient shown before the College of Physicians of Philadelphia, Medical Section, May 18, 1903.

G. E. Still (9), in an article on Suppurative Pericarditis in Children, finds in 769 autopsies 28 cases of pericarditis, apparently due to pyogenic infection. Twenty-three of the 28 cases occurred in children under three years of age, and 24 of the 28 showed empyema, thick lymph on the pleura, or acute pleurisy. In 13 cases in which the fluid was examined bacteriologically, 11 were due to pneumococcal infection; of the remaining 15, a large proportion were due to the pneumococcus, empyema, pneumonia, and meningitis being associated.

The possibility of the pyopericardial cases recovering without operation is demonstrated at times at autopsy by the presence in the pericardium of semisolid grayish masses in all stages of calcification. Yet this must be rarely the case. I desire to report the following case, not only because the patient made a good recovery after a desperate illness, but because he as yet presents but few physical signs to be developed with our present means of diagnosis.

M. D. L., an Italian laborer, aged thirty-six years, was admitted to the Pennsylvania Hospital, January 24th, with the history of sickness of six days' duration, beginning with chill, cough, and pain in the right side. On admission there were present physical signs of consolidation of the right base; the pulse and heart sounds were weak, though the heart was not displaced. On the ninth day of the disease, beginning consolidation of the left base occurred, with extensive pleurisy, especially marked about the left cardiac border; on the sixteenth day the right base had not yet cleared, fine râles remaining at the base, and coarse friction rubs in the right mammary region. He was very sick, with weak, rapid pulse, and anxious expression. Though no pericardial friction had been heard, by the thirteenth day the pericardium was considered involved, empyema of the right base having been excluded by exploratory puncture of the suspected area. The apex beat was not visible or palpable, and by the twenty-first day the cardiac dulness was decidedly increased in all directions, especially toward the right. The paradoxical pulse was marked on the eighteenth day. An exploring needle was inserted in the fourth right space, and about 10 c. c. of turbid light greenish fluid secured. On culture a pure growth of pneumococci was found. On the following day the pericardium was aspirated in the fourth right space, and 14 ounces of turbid seropurulent fluid were withdrawn (sp. gr. 1016; albumin, 2 per cent.), with almost immediate relief to the urgent symptoms. In seven days rapid reaccumulation had occurred, and, as was expected, exploratory puncture now showed thick yellow pus in the pericardium. Operation was primarily refused, but finally consented to, and was performed by Dr. R. G. Le Conte, at 4 p. m. on January 31st. General anæsthesia with chloroform was at first attempted, but resulted in such struggling and cyanosis that local anæsthesia with cocaine was immediately substituted, and the fifth space incised in site of normal apex beat, the pericardium opened, and between a pint and quart of non-odorous pus slowly liberated. The laboratory examination of fluid showed many leucocytes and pneumococci. The man was very ill for two weeks after operation, with weak, irregular pulse and great weakness, and slight fever. From February 22d to 27th slight œdema of the face, back, and ankles was present, though the urine at this time was free from casts, many leucocytes only being present. At no time after operation were pericardial frictions heard. The drainage tube was removed twenty-six days after operation, and the patient was permitted to leave the hospital on February 23d, fifty-one days after operation.



Case of purulent pericarditis. The arched outline represents the area of dullness of pericardial effusions at the time of aspiration and subsequent operation; the pear shaped figure shows the area of cardiac dullness six weeks after operation.

Blood: on the ninth day of illness the leucocytes were 8,800; on the tenth day, 6,600. With the development of the pericarditis the leucocytes rose; on the sixteenth day, 21,000; on the nineteenth day, 18,600, and on the twenty-eighth, 17,050. Cultures taken from the arm on the 8th, 17th and 23d of January were negative. The temperature from the sixth to the eleventh day a continuous fever, 103° to 101° F.; from the eleventh to the twentieth an irregular and remitting curve, by lysis to normal, and with the pericardium full. A subnormal temperature after aspiration, and pus rapidly filling the pericardium till operation.

The features of interest in this case are as follows:

1st. The absence of a leucocytosis during the pneumonia, and its development with the pericarditis.

2d. The absence of the pericardial friction both before and after the pericardium was opened.

3d. The absence of fever—subnormal temperature—with pus in the pericardium.

4th. The recovery of the patient without the physical signs of an adhesive pericarditis.

Leucocytosis is not always present in lobar pneumonia; of 74 cases under my care this winter, in 3 the leucocytes were under 5,000, and in 11 cases were between 5,000 and 10,000. Three patients died with leucocyte counts respectively of 4,400, 4,325, and 6,250. The absence of friction sounds throughout the entire course, and lack of fever have frequently been noted, and as F. T. Roberts (7) (Allbutt's *System,* vol. vi, p. 778) points out, are of value in the diagnosis of septic pericarditis.

To Hilsman (1844) is accredited the first operation for the relief of purulent pericarditis. J. B. Roberts (8) has collected 35 cases, from 1844 to 1897; 20 of these patients died; excluding the 10 cases with general sepsis, of which the pericarditis formed a part, and in which death would doubtless have resulted without operation, the percentage of recoveries is very favorable.

Recovery, if we can judge by analogy from our empyema cases, follows rather slowly, and adhesions, partial or complete, occur between the visceral and parietal layers; if this does occur, we should be able to secure one or more of the physical signs of adherent pericardium. The most important, according to Roberts are: 1st. A fixed displacement of apex, not modified by change in position; the most suggestive is elevation. 2d. An undulatory impulse. 3d. Precordial systolic retraction and Broadbent's sign. Auscultatory signs are not of much value; though, when there is evidence of right sided hypertrophy, a weak pulmonic second sound is regarded by Broadbent as an indication that the cause of the hypertrophy is probably not backward pressure, but some intrinsic cause, such as adherent pericardium.

Patient's condition four months after operation: Has gained in weight, and looks fairly well. During the past month he says he has had some pain over the region of the ensiform cartilage and between the shoulder blades; has a slight cough, with no sputa. No dyspnœa, and no digestive symptoms. Has tried to work, against advice, and has been unable to continue, on account of palpitation of the heart.

The radial pulse is small, rather weak, but regular; 76 to the minute. The lungs show nothing unusual; inspection of the precordial area reveals no evidence of retraction; the operative scar is in the fifth space, and is not more retracted than is usual in such cases. The apex beat is visible immediately beneath the scar; when he lies on the right side there is no change in its position; when he lies on the left side, the visible pulsation is moved outward to just below the nipple; the left border of the heart's dulness also coincides with the change in the apex beat. The cardiac outlines are: Upper border midway in the third interspace; right, the left border of sternum; left, just within and at the nipple line in the fourth and fifth spaces respectively.

Auscultation.—At apex the first sound is a little short, without murmurs, and on one or two occasions was reduplicated; the second sound is clear. The pulmonic second is decidedly plus; the aortic and ensiform areas are clear. No friction sounds are heard at any point. He is slightly tender on palpation just below the ensiform cartilage; and he also insists that both breasts, especially the right, are sore to the touch. Examination of them elicits nothing. Broadbent's sign is absent. The abdominal organs are normal, though the edge of the liver can be felt just below the costal cartilages in the right parasternal and median lines; it is not tender. The extremities are normal. The temperature is normal.

1834 PINE STREET.

References.

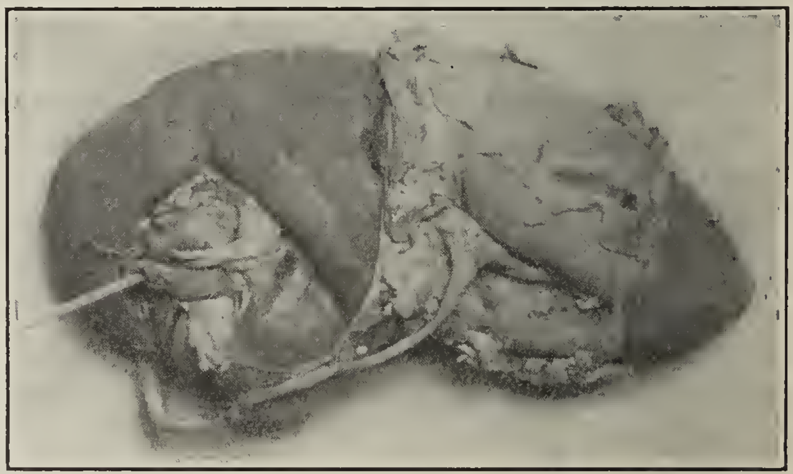
(1) Allbutt's *System of Medicine,* Vol. vi, p. 139.
(2) *Practice of Medicine* 1900, p. 555.
(3) *Practice of Medicine,* 1900, p. 584.
(4) *Practice of Medicine,* 1901, p. 132.
(5) *American Medicine,* May 9, 1903.
(6) *American Journal of the Medical Sciences,* June, 1901.
(7) Allbutt's *System of Medicine.* Vol. vi, p. 778.
(8) *American Journal of the Medical Sciences,* December, 1897.
(9) *British Medical Journal,* September 7, 1901.

SOLITARY, OR FUSED, KIDNEY, WITH REPORT OF A CASE.*

By WARREN A. DENNIS, M. D.,

ST. PAUL, MINN.

The human body may be provided with only a single renal mass as the result of any one of several conditions: First, there may be entire absence of one kidney or any rudiment of it, apparently because it was entirely overlooked in the development of the embryo. The organ which is present may be either normally located or displaced into any part of the



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* Read before the Surgical Section, Minnesota State Medical Association, St. Paul, Minn., June 17, 1903.

lower abdominal or pelvic regions. "Unsymmetrical kidney" is the name applied to this condition. Second, there may be an absence of one kidney as a result of congenital atrophy or of atrophy after birth, as the result of disease; or because of the organ remaining in a rudimentary state. Third, two renal masses may be represented, but so fused together into a single organ as to be indistinguishable. This is known as a "fused" or "solitary" kidney, of which the horseshoe variety is the commonest form.

It is not always easy to decide under which of these three heads a given case should fall. For example, if a renal mass was found provided with two pelves and two ureters and located in the position of one or other kidney, there being no organ on the other side, the question would arise as to whether this was a case of "fusion" or of "unsymmetrical" kidney; in other words, whether the one kidney was displaced to the opposite side and joined to its fellow, or whether it was entirely absent and there was a reduplication of the pelvis and ureter on the other side, a condition which is not extremely uncommon, even when both renal masses are present. This may be determined by a consideration of the position of the hilum and the relations of the renal vesicle and ureter, together with the points of opening of the ureters into the bladder. A fused kidney has its hilum misplaced toward or upon the anterior surface, and its pelvis and ureter between or in front of the vesicle instead of behind it; and, further, in case of "fusion" the second ureter ordinarily crosses to the other side and enters the bladder at the normal point, while, in cases of reduplication, the two ureters regularly enter the bladder on the same side whether there is another kidney or not. A unique case is reported in which the two kidneys were united over the promontory of the sacrum and were provided with a single ureter, which entered the bladder in the median line.

The horseshoe kidney is the commonest example of renal fusion. The organ usually lies across the median line a little above the promontory of the sacrum and with its concave border looking upward. It is provided with two ureters which pass downward across the front of the organ and enter the bladder at the normal points. The two parts of the organ are sometimes so fused as to be indistinguishable, and sometimes the band of connection is made up of fibrous tissue, the former oftener being the case. Rarely, the concavity looks downward.

A second variety of fused kidney has the appearance of a mass of carrots grown together, and is found in the median line and is provided with two ureters. Occasionally, the two spindled shaped organs are so united as to form a letter "S," and in one instance they were joined at right angles like the two limbs of a capital "L."

The rarest form is that in which the two kidneys are so united as to resemble closely a long normal kidney lying in its normal position. In all the hilum is directed forward and the ureters descend over the front of the organ. Morris, to whose excellent work on the *Surgical Diseases of the Kidney and Ureter* I am chiefly indebted for the pathological anatomy and statistics of this paper, quotes Rokitansky as follows: "The more intimate the union, the more the hilum of the kidney is directed forward; also the more considerable the fusion is, the lower are the kidneys situated; so that the completely fused organs are usually placed over the promontory or the hollow of the sacrum; the solitary kidney is situated on one or other side of the vertebral column only in exceptional cases." According to Beumer, as quoted by Küster, defective or rudimentary kidney is associated in one fourth of the cases with abnormity of other parts of the urinary or genital apparatus on the corresponding side.

From the post mortem records of Guy's Hospital, for ten years, the Middlesex Hospital, for twenty-four years, St. Bartholomew's, for ten years, and the Great Ormond Street Hospital for Sick Children, for ten years, Morris has collected the statistics of 15,908 cases. In this number he found six cases of absence or extreme atrophy of one kidney, or one in 2,650. Horseshoe kidney was found approximately once in each thousand cases, while the solitary, or fused, other than the horseshoe kidney, was found only once: *i. e.*, one case in about 16,000. When it is remembered that of these others the irregular forms are most common, it is seen that the fused kidney with approximately normal outline and position can occur only once in a great many thousand times.

The danger of removing the only kidney present is extremely small, as is shown by the statistics quoted, and yet the case reported shows that it cannot be ignored. A cystoscopic examination would demonstrate the presence of an "unsymmetrical" kidney, because it would show but a single ureteral opening in the bladder; or if two, both on the same side, showing the very rare condition of absence of the kidney on one side with reduplication of the ureter on the other. The same examination in case of atrophy, either congenital or as the result of post-natal disease, causing destruction of the kidney, would demonstrate the absence of one ureteral opening or the failure of one of them to discharge any urine. This simple procedure, then, will give the necessary warning in these two classes of cases.

But in the case of fusion of the kidney cystoscopic examination yields no information, since two ureters are present, and each opens into the bladder and discharges its contents at the proper point. However, over 90 per cent. of these will be horseshoe kidney, which should be readily recognized when the organ is exposed, by the abnormity both of its shape and of its position. The statistics quoted show that the great proportion of the remaining cases of fused kidney will present unusual and irregular forms and will be misplaced, usually occupying the median line. The cases, then, in which the operator is likely to make the mistake of removing the only renal organ, are those in which the cystoscopic examination has shown two ureters opening and discharging normally, and in which the organ, when exposed, is approximately normal in size and shape, and occupies the one or the other loin; when, then, the kidney is exposed for nephrectomy the operator should endeavor to satisfy himself of the normal position of the hilum and normal relations of the ureter to the vessels, as well as the absence of any duplication of parts. Except in the presence of dense adhesions following a previous operation or old inflammatory trouble, this should not be difficult.

CASE.—The case to be reported is that of a young woman, twenty-six years of age, who first came under my observation in March, 1901. She had a rather large movable kidney on the right side and had had the usual symptoms for two or three years, but until this time had not known the cause of them. Besides being painful, the kidney was tender to the touch and appeared during the summer to increase somewhat in size. She had a slight mitral lesion and the signs of an incipient tuberculous condition, and in September, 1901, she went to California, remaining there for eight months. While there, her general health improved greatly, and all signs of active trouble disappeared from the lungs, but the kidney continued to be painful, and in May, 1902, she returned to Minnesota for operation. Her temperature, which before going West had been 100° F., did not now go above 99° and was usually normal. The pulse was between 100 and 120 and the patient was extremely nervous; she was unable to sleep well and the extended hand with separated fingers trembled excessively. The appetite was not even fair. Repeated examinations of the urine failed to show the tubercle bacillus. Albumin was found only occasionally, and then as a barely perceptible trace. The urine was pale and below normal, both as to specific gravity and amount.

On May 27, 1902, she was chloroformed and the kidney was exposed. It was very long, measuring between six and seven inches, and seemed to be about one half heavier than normal, and on account of its size I did a nephrotomy, discovering nothing abnormal. A tube and gauze were left for drainage and the kidney was fixed in position by Senn's method. The results seemed very favorable and so long as urine escaped from the side the patient was relieved of every symptom. The pain and nervousness disappeared, the pulse and temperature remained at normal, and the appetite was good. With the closure of the wound, however, there was a gradual return of all the symptoms. The amount of urine fell to twenty-six ounces in the twenty-four hours, but could be brought up to forty by the use of five grains of urotropin three times a day. Albumin was absent. There was 1½ per cent. of urea. Pain was at times complained of in the other loin. The kidney remained firmly fixed. It fluctuated in size from time to time so that even the patient herself could observe it.

It seemed plain that the kidney was the cause of the trouble, though its nature could not be determined. The variation in size suggested ureteral stricture, but cystoscopic examination with catheterization of the ureter failed to disclose any obstruction and the urine flowed freely from the catheter. It was also seen to escape normally from the left ureteral orifice. There seemed to be a little irritation about the right ureteral orifice and it was felt that we had probably to deal with a tuberculous kidney, although another sedimentation of the twenty-four hours' urine and examination for the tubercle bacillus failed to disclose it.

As the patient was continuously losing ground I decided on nephrectomy and did the operation November 25, 1902.

There were many adhesions as the result of the former operation. Over the lower half of the kidney, which had at that time been supported by gauze, these were so dense that the capsule was stripped back in freeing the kidney and tied together with what appeared to be a broad adhesion. The patient passed no urine after the operation and died uræmic at the end of seven days.

An examination of the specimen after removal revealed the fact that the adhesions about the lower half had concealed a second pelvis and ureter and that the lower portion represented the displaced and fused left kidney. A limited autopsy showed that there was no kidney in the left loin and that the lower ureter crossed the median line to the left side just below the promontory of the sacrum, behind the rectum, and in front of the great vessels, and that it then followed along the left wall of the pelvis and opened into the bladder at the normal site.

The renal mass is six inches and a half long and three inches wide. It weighs six ounces and a half, the weight of the normal female kidney being from four ounces and a half to six ounces. The convex half is typically uniform. It is not lobulated, nor does it suggest any abnormity except in its increased length. The same, however, when freed from adhesions and stripped of its capsule, shows striking departure from the normal. Two hila are present; the upper triangular in shape, and the lower roughly circular. Each barely extends to the concave border, being limited almost entirely to the anterior surface, a condition which is characteristic of the fused kidney. The vessels enter above and below the ureter instead of in front, as in the normal kidney, and are somewhat smaller than normal.

Microscopical section of the organ shows throughout a marked congestion and a quite general round-cell infiltration, but little or no fibrous tissue. Many areas show a considerable degree of parenchymatous degeneration of the cells of the tubules, and swelling of the glomeruli. There is little difference between the sections taken from the two portions of the renal mass, though at the time of removal the cross section of that portion which had been subjected to nephrotomy presented a much more healthy appearance than the other, which looked decidedly pale.

Summary.

1. According to available statistics, complete absence or extreme atrophy of one kidney is found once in 2,650 cases; horseshoe kidney once in 1,000 cases; and the fused kidney, exclusive of the horseshoe variety, once in about 16,000 cases.

2. The great majority of fused kidneys are misplaced, being usually in the median line and lower than normal.

3. The completely fused kidney, with normal position and approximately normal outline, is the rarest form of all.

4. Cystoscopic examination, with catheterization of the ureters, will prevent the error of removing the only organ present in all cases, except those of fusion.

5. Horseshoe and irregularly fused kidneys may be recognized on exposure by their abnormal shape or position, or by both.

6. The single remaining and rarest variety, that with normal outline and position, can probably always be at least suspected and left, if the ureter and pelvis are found shifted to the anterior surface.

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National Jewish Hospital for Consumptives, of Denver, Colo.—The advisory board of this hospital for the current year is composed of Dr. John Elsner, Dr. S. Simon, and Dr. M. Kleiner. The staff is as follows: Medicine, Dr. John Elsner, Dr. S. T. Jarecki, Dr. William N. Beggs, Dr. S. Simon, Dr. A. Zederbaum, Dr. C. B. Van Zant, Dr. M. Kleiner, Dr. H. B. Whitney, and Dr. H. W. McLaughlin; surgery, Dr. Leonard Freeman, Dr. John Boice, Dr. William B. Craig; gynæcology, Dr. H. G. Wetherill and Dr. Thomas H. Hawkins; obstetrics, Dr. T. Mitchell Burns and Dr. J. C. Hutchison; rhinology and laryngology, Dr. J. H. Allen, Dr. Lorenzo Lockard, and Dr. Robert Levy; ophthalmology and otology, Dr. D. H. Coover, Dr. W. C. Bane, and Dr. Melville Black; neurology, Dr. B. Oettinger and Dr. W. J. Rothwell; bacteriology and pathology, Dr. Philip Hillkowitz; dermatology, Dr. James M. Blaine; dentistry, Dr. George J. Hartung.

SOME INVESTIGATIONS OF A BACTERIAL TREATMENT OF TUBERCULOSIS.*

By STEPHEN J. MAHER, M. D.,

NEW HAVEN, CONN.

(Concluded from page 166.)

On April 20 and 21, 1903, Professor C. H. Bartlett, at the Yale Medical School bacteriological laboratory, injected for me eight anæsthetized rabbits with a pure culture of tubercle bacilli received a few days before from Dr. E. R. Baldwin, of Saranac Lake. On April 24th, one of the rabbits was found to have a broken spine, and was therefore killed. The experiment was continued with seven rabbits. Of these, three received the tubercle bacilli in the anterior chamber of the eye, and four in the abdomen intraperitoneally. One of the four also received the germs subcutaneously in the thigh; and the other three of the four, a second injection into the abdominal wall. On May 7th, there was evidence of tuberculous development in all seven rabbits. I prepared some fresh culture of X on blood serum, and on May 12th injected the culture into the eye of the rabbit showing the greatest development of tubercle bacilli, and into the abdomen and thigh of the rabbit that had received tubercle bacilli in the abdomen and in the thigh. This rabbit with the very sore eye had also received a small injection of tubercle bacilli in the other eye. The culture of X was injected only into the sorer eye. I injected a drop too much of the X culture. The eye burst, part of the contents of the tuberculous anterior chamber spurting into my own eye.

On April 13th, I injected two others of the tuberculous rabbits, one in the eye and one in the abdomen, with a supposedly sterile filtrate of X culture prepared for me by Professor H. W. Conn, of Wesleyan University. In discussing the X bacillus with Dr. Egbert Lefevre, of New York, he had insisted on the desirability of learning, if possible, whether the results of my injection were due to the bacilli themselves, or to their products or enzymes. Professor Conn had already done some work for me with my X bacillus; I therefore secured his services in the preparation of the filtrate. On May 9, 1903, he sent me three small sealed bottles containing a clear amber-colored fluid with the following explanation of its preparation: "The bacilli were first cultivated at 37° C. for two weeks, and then filtered through porcelain filters, after which, to ensure sterilization," the resulting filtrate was "treated to 70° C. for one hour upon five successive days."

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* Read before the New Haven Medical Association, December 16, 1903.

Three of the tuberculous rabbits were then kept untouched by X or X filtrate, as controls. Of these, one had received tubercle bacilli in the eye, and two, in the abdomen. The eye of the rabbit that received both tubercle bacilli and X remained greatly swollen for nearly a month. The rupture, at first as large as a gold dollar, gradually diminished in size until, on Jnue 7th, it was not larger than the head of a pin. From it exuded at first a little thin fluid that was never purulent. It was now dry. The tuberculous mass in the anterior chamber seemed a little larger than at the time of the injection of X. The eye continued to assume a more normal shape and condition until the animal was killed on September 4, 1903.

On June 17th, it was evident that the liveliest rabbit of the lot was the one that had received both tubercle bacilli and X in the thigh and abdomen. The lump in the thigh was growing smaller and the thickening of the glands in the abdomen had disappeared.

At this time, June 17th, the eye of the rabbit that had received tubercle bacilli and X filtrate was now flat and suppurating; otherwise the animal seemed healthy. The rabbit that had received tubercle bacilli and X filtrate in the abdomen ate well, but was not very lively, and had many nodules in the abdomen.

As to the controls, the tuberculosis in the injected eye was spreading, and there were many thickened glands in the abdominal cavities of the other two rabbits. On August 4th, the rabbit that had received into its eye tubercle bacilli and X filtrate died. No autopsy was made. On September 4th, the other six rabbits were killed and postmortem examinations made with the following results:

I. The rabbit which had received tubercle bacilli and X in the eye. This eye was smaller than normal, and contained only a great growth of adventitious connective tissue. There was a tuberculous nodule in the other eye. There were tubercles in both lungs, in one kidney, and in the peritonæum over this kidney.

II. The rabbit into whose abdomen and thigh both tubercle bacilli and X had been injected, was found to have in the thigh an encapsulated teaspoonful of matter of the consistence and color of thick cream. In this mass were many tubercle bacilli and no X. There was one small reddish nodule in the right lung. There was no evidence of tuberculosis or any other disease in any other of the organs.

III. This rabbit treated, like the one that had died on August 4th, with tubercle bacilli and X filtrate, was found to have the most extensive tuberculization of the series. The peritonæum was full of gray tubercles. There were many in both kidneys. The pleuræ and diaphragm contained a number, and the lungs were sown thick with them. There were none in the liver or spleen. There were many petty cysts of the omentum.

IV. This was the control rabbit that received only tubercle bacilli in the eye. Besides the characteristic growth in the eye, there were a few small tubercles in the liver.

V. This control had received tubercle bacilli only, intraperitoneally and subcutaneously in the abdomen. The postmortem revealed tubercles in the lungs and peritonæum.

VI. This control, treated in the same way as No. V, had many tubercles in the lungs and peritonæum, and a few in the liver.

Now a few words as to the work that has been done by others:

A great deal has been written on the antagonism of bacteria as observed in test tubes; less on the antagonism as observed in animals; and very little on the antagonism as observed in man. Most of the experiments in the human subject have been done with the products of bacteria or with the contents of dead bacteria. Still, the idea of injecting a live harmless germ into the human economy to combat a live harmful germ, is not new. It has been known for a long while that tubercle bacilli are unable to live long in putrefying matter. It was at one time considered that the *Bacterium termo* was the active agent in the destruction of tubercle bacilli in putrefying pthisical sputa, and that, therefore, it would be a good germ to use to attack the tubercle bacillus in the human system. But I think the profession generally agrees with the conclusion that P. de Toma reaches, in his article in *Études sur la Tuberculose*, Vol. ii, 1888-9, on The Antagonism Between *Bacterium termo* and the Tubercle Bacillus, in Relation to Bacteriotherapy. He feels that he has proved that the *Bacterium termo* has no action whatever on the tubercle bacillus. "And I believe," he concludes, "that when tubercle bacilli die by contact with putrefying matter, we should attribute this result to the action of some disastase, or to leucomaines, or to special ptomaines which have been developed in the putrefying matter, probably by the great variety of microbes that exist in it. Or it may be that the death of the tubercle bacillus is caused by some microorganism; but that microorganism is certainly not *Bacterium termo*."

In an article in *Archives de Médecine expéri-*

mentale, entitled Action des Microbes sur le développement du bacille de la tuberculose, F. Ramond and P. Ravaut relate some experiments that they made in guinea pigs with tubercle bacilli and *Bacillus subtilis,* staphylococcus—white and lemon—the tetracoccus, and the *Bacterium termo,* and from which they conclude that the association of any of these bacteria with tubercle bacilli favors the development of tubercle bacilli in the animal organism.

A. Rodet, in 1898, experimented with the injection into guinea pigs of cultures, filtered and unfiltered, of the colon bacillus and the bacillus of Eberth, in an effort to cure the animals of induced tuberculosis. He reports his work in *Séances et mémoires de la Société de biologie,* II Série, Vol. i, 1899.

Dr. de Backer, of Paris, ten years ago began the hypodermic injection of live yeast cells into the human being for the treatment of tuberculosis and carcinoma. He reported many interesting cures and improvements, but the profession seems to have lost interest in his so called " Backerine " and its proprietor.

In the *American Journal of the Medical Sciences* for December, 1893, there is an abstract of a paper by Dr. Klein on the Antagonism between the *Bacillus pyocyaneus* and the Bacillus of Tuberculosis. His observations were made on rabbits and guinea pigs, and the supposedly antagonistic bacilli were killed before they were injected into tuberculous animals.

A case of recovery from tuberculosis after an attack of erysipelas was reported at the meeting of the Canadian Medical Association, in 1894, and was noted in the *Medical Record* of September 8, 1894.

In concluding this incomplete preliminary, and perhaps premature report, I should like to emphasize the following points:

I. That the X bacillus can, with absolute safety, be injected alive and in pure culture into the human system.

II. That after its injection it remains alive in the human system often for weeks, and does no other harm than occasionally, and for reasons not understood, to cause slight suppuration at the point of injection.

III. That after its injection it causes a variable febrile reaction which is never serious, and which probably varies in intensity according to the amount of its enzymes that are injected with the bacillus; or according to the amount of material the bacillus finds to feed on.

IV. That after its injection, it has been found in the urine and blood and sputa of persons injected.

V. That after its injection into the groins of persons suffering from tuberculosis there is often a subjective sense of local reaction at the site of the tuberculous lesion.

VI. That after its injection into the connective tissue about tuberculous fistulæ in ano a marked improvement, even to the closing of the fistula, has followed.

VII. That after its injection into the ear of persons suffering from tuberculous otitis media, such persons have been in nowise harmed but, on the contrary, have in several instances been cured of their otorrhœa and other symptoms.

VIII. That after its application on gauze or cotton packing to sinuses leading from carious bone, supposedly tuberculous, such sinuses and caries have healed with surprising promptness.

IX. That its hypodermic injection into patients suffering from tuberculosis of the lungs has been followed in many cases by marked relief of such symptoms as cough, fever, night sweats, wasting, anorexia, diarrhœa, and hæmorrhage.

X. That its instillation into the open tuberculous pleural cavity has caused the drying up of a purulent discharge that was resistant to ordinary methods of treatment.

XI. That its hypodermic injection into consumptive patients has, in several demonstrable cases, been followed by the apparent cure of the disease.

XII. That as a valuable scavenger of the tuberculous human system, my X bacillus claims the interest of the medical profession for the further reasons that it grows in acid or alkaline media, that its product is alkaline, that it grows in the presence or absence of air, that it feeds only on dead matter, that it grows more quickly and has more vitality than the ordinary pus-producing germs, and that its introduction into the human tissues is followed by a marked diminution of the number of ordinary pus-producing germs present anywhere in the body.

XIII. That some, as yet incomplete, investigation would seem to show that this X bacillus is not without beneficial effect on other pathological conditions than tuberculosis.

XIV. That while I realize the facts that many of my statements need confirmation by better bacteriologists, and that it is probable that some of them will fail of such confirmation, still I have felt that it was time that I invited my brother physicians to look at the vision that has been before my eyes for so long.

212 ORANGE STREET.

PUBLIC HEALTH AND FOOD PRESERVATIVES.

By R. G. ECCLES, M. D., PHAR. D.,
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(Concluded from page 163.)

In the *Annual Reports of the Agricultural Laboratory of the Botanical Garden*, at Buitenzorg in Java, the chemists of that institution have been, for nearly eight years, startling those who take interest in keeping posted in real scientific work, with their results in researches regarding the widespread distribution of this acid in nature. In the form of its methyl ester it has been found in order after order, genus after genus, species after species, of the vegetable kingdom. In every direction in which they seek they do not find it, but in so many remote orders does it appear that its presence is now deemed about as nearly universal as most plant substances. Schimmel and Co., the largest manufacturers of essential oils, in their *Semi-annual Report*, for April, 1900, declare that it "appears to be one of the most widely diffused odorous principles in the vegetable kingdom." Since this was written, the list of plants found to contain it has steadily increased. Messrs. Traphagen and Burke,[5] of the Montana Agricultural Experiment Station, have found it in strawberries and raspberries, blackberries and currants, plums and cherries, apricots and peaches, grapes and crab-apples, apples and oranges. Every American chemist has long known of its presence in wintergreen berries, which are frequently used as an article of food. Not only in articles of human food, but in the natural food supplies of all manner of animals, salicylic acid methyl ester has been under incessant consumption for millenniums of time. Surely, this must have produced some degree of tolerance, even if the amount in each plant is, as may be very properly urged, exceedingly small. If any such law obtains in physiology as in mechanics, that what is lost in power is gained in time, then the æons of ages in which such food has been in use may count for something.

But what does experiment tell us? Since bees are, of all insects, most likely to be in the closest and most continuous contact with odorous substances of flowers and fruits, they should be something of a test. Macalister and Bradshaw[6] quote Binz as authority for the statement that bees fed upon saturated solutions of free salicylic acid in syrup as a remedy against "foul brood," have been cured of the disease and that no apparent injury has occurred. That there is much more tolerance in the human body than opposing theorists are willing to admit, is seen in the experience of Professor Kolbe,[7] of Leipzig, who, for nine months, continuously took daily doses of one gramme of the free acid in wine or beer. Professor Germain See[8] tells us that "for a long time, two of my pupils took daily five to six grammes of salicylic acid, and then ten grammes of salicylate of sodium, without ever experiencing the slightest modification of either temperature or pulse." Dr. Macalister and Dr. Bradshaw[9] recently reported that one of them took five grains of pure salicylic acid "every day for a month without any ill health ensuing, and a smaller quantity given to children every day with their dinners (in food stuff known to contain it) certainly did them no harm." In a case on trial under the Food and Drugs Act, before the Great Marlow Court, on June 23, 1892, Dr. Bond,[10] lecturer to the College of Physicians, testified as follows: "I have had long and extensive experience in the use of salicylic acid, and have been in the habit, when away from home, hunting in the country, of taking ten grains of the acid a day for a month without the slightest bad effect." In the use of salicylated beverages, extending over years of time and including hundreds of thousands of people, surely someone should be able to discover ill-effects, somewhere. Court-Councilor Professor Dr. von Fehling,[11] in 1882, declared on this point: "I do not know of a single case in all Germany where injurious effects have been called forth by the use of food stuffs or beverages treated with salicylic acid. I have for several years frequently used food preserved with this acid, without feeling the slightest unpleasant sensation; I know that many people, and even entire families, continually use salicylated beer, wine, and water, and that they have followed this *régime* for a number of years." Professor Blas, of Louvain, and Dr. Rochefontaine,[12] director of the National Physiological Laboratory, in Paris, have declared that they have used salicylic acid upon themselves and others, and have never discovered any disturbances of health from its use. The amounts of the acid that have been taken experimentally far exceed the quantities likely to be used by any consumer of food stuffs preserved by it. On this point Professor Willis G. Tucker,[13] director of the Bureau of Chemistry, New York State Department of Health, says: "It (salicylic acid) is now employed in this country chiefly in the preservation of fruit and vegetable preparations, such as preserves, jams, catsups, and sauces, the quantity added to liquid preparations being about one ounce to 500 pounds, or, say, 60 gallons. Since the medicinal dose for an adult is from 10 to 40 grains, it will be seen that in an article like catsup, used as it ordinarily is, the quantity ingested would be but a most minute fraction of the minimum medicinal dose, probably not exceeding a fortieth of a grain." Children accustomed to picking and eating wintergreen berries and leaves, and children who are fond of eating wintergreen candy, would get about as much as in their catsup. In such small amounts it could only act as a stimulant to the stomach,[14] as would the rest of the ingredients of the catsup. It would, therefore, seem to be equally sensible to condemn the catsup itself, mustard, or spices. Cushny, in his *Pharmacology and Therapeutics*,[15] says: "Salicylic acid and its salts are rapidly absorbed from the stomach and intestines, and as a general rule produce no symptoms, unless when given in very large doses."

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[5] *Journal of the American Chemical Society*, March, 1903.

[6] *Lancet*, March 14, 1903, p. 719.

[7] Wagner's *Jahresbericht für chemische Technologie*, 1877, p. 451.

[8] *Medicin. Studien über Salicylsaure und Salicylate.* Leipzig, 1878, p. 16.

[9] *Lancet*, March 14, 1903, p. 719.

[10] *South Bucks Free Press*, July 1, 1892.

[11] Translation from *Revue univ. de la Brass.*, No. 466. October, 1882.

[12] *Bullet. de l'Académ. royale de méd. d. Belg.*, vol. xii, No. 9; *Journ. d'Hygiene*, vol. vi, p. 509.

The probable reason why it has such slight effect in small doses is its rapid elimination from the system. This has been given as the explanation of the frequent relapses of patients with acute rheumatism.[16] The remedy does not appear to remain long enough in the system to produce a continuous curative effect after treatment is stopped. It is eliminated through the kidneys, the skin, and all the emunctories,[17] so that, even by passing slowly through any one given channel, the many cause its complete removal in a relatively brief period. During the investigation of the British parliamentary committee, Dr. W. H. Corfield[18] said: "I think there is evidence that there is a tendency to accumulation with that drug" (salicylic acid). The same gentleman, at the same examination, said: "Salicylic acid is a slightly acrid substance, a slightly irritating substance, which is used externally for the removal of corns and warts. I have had a certain amount of practical experience in that way with it and I know it does that. I have had very little practical experience of the results of the internal administration of salicylic acid." This guess of Dr. Corfield's has since been taken up by an American writer and applied to both salicylic and boric acids. In the following quotation no reference is made to the source of inspiration from which it was drawn, but the Corfield statement is most probably its original: "Recognized experiments show them (boric and salicylic acids, etc.) to be antidigestive and accumulative."[19] The evidence to the contrary is overwhelming, and not a particle of experimental evidence in support of this has yet been seen by us, after a careful search through the available literature upon the subject. If it had been cumulative, the fact that nearly everybody has been absorbing the methyl ester during their entire natural lives, in fruits, in candies, in dentrifices, in preserves, in many articles of food, while multitudes have been taking it in immense doses as a medicament for pains of every kind, for diabetes and for other affections, the evidence by this time should be so overwhelming against it that no one would dare contradict the statement. This, however, is much like Dr. Ridéal's[20] quotation of the French diet interdicting the use of salicylic acid, that was passed on February 7, 1881. Ridéal does not tell his readers that when the edict was fought in the Appellate Court, at Bordeaux, August 20, 1884, the State lost its case and the decree was practically removed. Neither does he tell them that immediately after the interdict was issued, twenty-one of the leading medical college professors and hospital directors published under their signatures a protest that, in translation, reads as follows: "We are of the unbiased opinion that the present widespread and growing use of salicylated foods and beverages may not only be tolerated without hesitation by the government, but that this same use may even, in many respects, be considered as denoting an *actual progress*."[21] Neither does Dr. Ridéal tell his readers that on January 7, 1882, the Faculty of Medicine of Bordeaux, at the conclusion of an exhaustive *Consultative Circular*, issued under the signature of Professor Denuce, the dean, made the following statement: "The salicylation of wine, in the proportion of not more than 10 to 40 grammes (1-3 to 1 1-3 oz.) of acid per hectolitre (26 gals.) is *an excellent means* of preserving, and even improving, inferior wines; it is *in no way deleterious to the public health*, and its use may be justly adopted, as much *in the interests of the consumer*, as in those of the dealer." With wines strong in alcohol there is no need of salicylic acid or any other preservative. When enough alcohol is present that is sufficient protection. A number of authorities have written against the use of the acid in wines, presumably, because they deem such wines unfit to drink. They are called *inferior* wines, even if produced from the best of grapes. The fact that they are lacking in alcoholic strength and do not possess the flavor of aged wine, is to them adequate reason for condemning them. Here, however, there is room for an honest difference of opinion. Those whose hearts are in the temperance cause, while they would much prefer to have a community consume no wine at all, decidedly prefer those who will imbibe to use a wine low in alcohol rather than one that is high in the same. If parents and guardians will persist in giving wine to children it is much better that it should be weak in alcohol. Strong wine will make drunkards with much greater certainty and with much greater speed than weak wine. Unfermented grape juice is still safer for them to use. Fruit juices of all kinds with little or no fermentation will not establish a longing desire that is irresistible, nor lead men and women into drunkards' dishonored graves. All sorts of non-alcoholic temperance drinks require protecting in warm weather. By sterilization they may be put up and kept indefinitely while unopened. As soon as opened decomposition sets in. If everybody could afford to throw away all not consumed immediately, the ideal reform of the theoretic dreamer might be realized. But as long as the community cannot, or will not, tolerate wholesale waste of valuable goods which they have paid money for, so long must weak wines, fruit juices, and temperance drinks be protected by a preservative, or they will be the cause of injured health, downright sickness, or even death. What is true of these is equally true of fish and meats, game and fowl, preserves and vegetables, to a lesser or greater extent according to the article considered. In the matter of wines and light summer drinks disease lurks in two of the three horns of the trilemma. Strong alcoholic beverages lead through intemperance to sickness and poverty, crime and death. Absence of preservatives leads to the abandonment of the use of saving drinks or to the sickness due to putrid drinks. No one will willingly use putrid drinks, multitudes will not do without some kind of social drink with which to treat their thirsty friends on warm days. But one escape from the temptation of strong drinks lies before such people and that is protected, pleasant, and wholesome temperance drinks. Every effort to protect such drinks, by other means than antiseptics, means great loss, increased cost, and a discouragement to their use by, to many, a prohibitive price. The rich and well to do can buy soda water from expensive fountains where sterilized fruit juices are used, but even they are not protected from the danger that lurks in the fresh crushed fruit they so much prefer. So long as garden fruits and vegetables are cared for as they now are, on truck farms near large cities, so long will it be wise for everybody to prefer antiseptic protection to the condition of no protection. Ceresole and others have pointed out that the products of truck gardens are often sprinkled or irrigated with the contents of privy vaults, sewers, etc. Ceresole took a large number of different kinds of vegetables that are usually eaten raw, thoroughly washed them, and then cut them up into fine shreds with sterilized scissors. These were then placed in freshly distilled water that was perfectly sterile. After a thorough soaking in this water it was examined microscopically and bacteriologically. The microscope showed in this water *Amœba coli, Balantidium coli, Isotrica prostoma, Anguillala stercoralis,* and along with these microbes, eggs of tænia, oxyuris, ascaris, and ankylostoma. Cultures made from the water developed a host of unidentifiable bacteria, *Bacillus coli, Bacillus septicus, Bacillus tetani,* and a form that in every known respect was indistinguishable from the typhoid bacillus, and probably was that bacillus. Animals were inoculated from the washings and all suffered. Severe abcesses occurred among those least injured, *and fever and death among the greatest sufferers. Most of them died.*[22] Strawberries, radishes, tomatoes, celery, string beans, cucumbers, lettuce, and other such produce receive that kind of treatment at the hands of gardeners. If such garden products were treated to strong salicylic acid by the gardener, the grocer, or the house maid, before being used, and just prior to serving were to receive a thorough washing with water, they would be sterilized and much sickness and suffering saved. That this kind of protection has not been adopted long ago is due to the lack of knowledge of so imminent a danger on the one hand, and to the meddlesomeness of the antiseptic theorist on the other. The latter's guesses at what he thinks science should teach has frightened the public where there is little or no cause for fear, and lulled it into repose where the awakening of fear would be merciful.

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[13] *Medical Review of Reviews*, February, 1903.

[14] Butler's *Text-Book of Materia Medica*, 1898, p. 316.

[15] Edition of 1903, p. 414.

[16] Bartholow's *Materia Medica*, 1903, p. 399.

[17] Butler's *Materia Medica*, 1898, p. 317.

[18] *Report of the Department Committee*, pp. 176, 177.

[19] *Ky. Exper. Station.* Bull. No. 100, p. 101.

[20] *Disinfection and Disinfectants*, 1898, p. 203.

[21] *Le Progrès vinicole*, Paris, February 28, 1884.

In tropical regions, whither our perishable products are being shipped, ice is very expensive and refrigerators exceedingly scarce. In most such places neither can be found. Sterilized goods must be consumed immediately on being exposed to the air or they must be thrown away soon after being so exposed. If such goods had contained a little salicylic acid, far more could be sold, because they could be used with vastly greater economy and safety, and more people could thereby afford to use them. The very poor in our own land have neither ice nor refrigerators, and can ill afford to throw away certain provisions that they would buy. Salicylizing such food would enable these poor people to secure it. Without such protection it is beyond their power of purchase. Theory is their most bitter foe. Sailors in sailing ships on the high seas are frequently subjected to scurvy because they cannot get proper food. Their meat being preserved in the old way with salt is far less wholesome than if some modern antiseptic was used. Salicylic acid does not injure meat as salt does. Wagner[23] says: "Salt, however, not only withdraws water from meat, but also as has been proved by Dr. Liebig's researches, some of the very best and essential portion of the juices of the meat, including albumen, lactic and phosphoric acids, magnesia, potash, kreatin, and kreatinin. Hence it is clear that unless these substances are in some way or other added to the salted meat, its use as food for a lengthened period cannot fail to become injurious to the system, and it is surmised that scurvy is due to this condition of salt meat." Fruit in favorable seasons ripens faster than it can be cared for, shipped, and sold. Should it be allowed to rot? The catches of fish are often larger than can be disposed of at once. Should they be permitted to spoil or change enough to produce poisonous ptomaines? Should the public be endangered from decayed game, shipped from remote country places, when a little salicylic acid will keep them fresh till they reach the market where all but an infinitesimal amount can be washed off? It is beyond the power of law to stop the placing upon the market of decomposed and putrid food products when antiseptics are not permitted. The changes occur in defiance of care, in defiance of penalties, and in defiance of theories. Is it not much better to have uncorrupted food with antiseptics in it, of properly regulated strength, than to have corrupted food without such antiseptics? If antiseptics are injurious to any appreciable amount let the opponents bring forth a single, well authenticated case of such injury. There is no trouble in discovering scores of cases of injury and death from food permitted to decay because of the absence of antiseptics. Are there not degrees of danger from such decay, and will not every argument ever devised against antiseptics apply, with equal force, to the poisonous products of decomposition? If, for argument's sake, it should be conceded as a possibility that every charge ever made, as to the injury and danger of antisepticised food, might be true, it then only follows that in using them we are but choosing the least of two evils. Decomposing food in its poisonousness is, by the suppositional argument, as bad as the antiseptics up to the point where it produces obscure and unprovable injury. But decomposition poisons go beyond this and are frequently so bad that they kill and maim in ways that are unquestionable and undeniable. It therefore follows that, if we concede every claim of the impractical theorists, the gain would still be immense, in dollars, in comfort, in health, in life, by ignoring their opposition and following the dictates of common sense and experience in the matter.

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[22] *Journal of the American Medical Association,* January 5, 1901, p. 38; *American Medicine,* May 17, 1902, p. 832; *American Year-Book of Medicine and Surgery,* 1898, p. 1004.

Proceedings of Societies.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Ninety-eighth Annual Meeting, held at Albany, January 26, 27, and 28, 1904.

(*Editorial Correspondence.*)

This meeting will live, not only in the history of the Medical Society of the State of New York, but also in that of American medicine, as the one in which the breach which has now divided the profession of medicine in this State into two sections for twenty-two years has been to all intents and purposes practically healed. The attendance is full and fully impressed by the importance of the subject before it; namely, the consolidation of the historic Medical Society of the State of New York, with the New York State Medical Association. At 10.15 on Tuesday morning, January 26, the executive session was opened with prayer by the Rev. Dr. Whittaker, of Albany, the President, Dr. Algernon T. Bristow, of Brooklyn, being in the chair, after which Dr. Bristow delivered his presidential inaugural address, which will be found printed in another column.

The address evoked considerable applause, and in accordance with the custom of the society was referred to a committee consisting of Dr. Eugene Beach, of Gloversville; Dr. G. A. Bradbury, of Troy, and Dr. G. H. Parkes, of New York. This was followed by the all important report of the committee on conference, the substance of which was published in outline in our columns recently in an open letter addressed to the medical profession of the State of New York. The report, which was very lengthy, was read in its entirety by Dr. Henry L. Elsner, of Syracuse. After detailing the correspondence between the Medical Society of the State of New York and the New York State Medical Association, beginning with the letter to Dr. F. H. Wiggin, dated Syracuse, May 28, 1903, the contents of which are now well known, and which was signed by Dr. Henry L. Elsner, Dr. A. Jacobi, Dr. A. Vanderveer, and Dr. George R. Fowler, and the reply thereto received by Dr. Elsner under date of June 10, 1903, signed by Dr. Frederick Holme Wiggin, President of the New York State Medical Association, the report relates that

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[23] *Chemical Technology*, Crookes and Fischer, First American edition, pp. 795, 796.

On the 1st of October, 1903, at a special meeting of the council and fellows of the New York State Medical Association, held in the New York Academy of Medicine, the following preambles and resolutions were unanimously adopted:

"*Whereas,* The members of the New York State Medical Association desire a union of the medical profession of the State of New York, and

"*Whereas,* It is deemed expedient for the attainment of this purpose to make further effort to bring together the New York State Medical Association and the Medical Society of the State of New York under the name of the Medical Society of the State of New York;

"*Resolved,* That a committee of five be appointed by the chair, and the said committee is hereby empowered to do whatever is necessary and expedient to bring about such a union in a just and equitable manner; and

"*Resolved,* That the committee so empowered may confer, cooperate, and unite with the committee of the Medical Society of the State of New York, for the purpose of forming the said union of the two medical organizations; and

"*Resolved,* That a copy of these resolutions be transmitted to the secretary of the Medical Society of the State of New York with the request that its conference committee be granted similar powers."

The foregoing preambles and resolutions were received by the secretary of the Medical Society of the State of New York. The chairman of your committee was notified of the appointment of the following committee of conference by the New York State Medical Association: E. Eliot Harris, chairman; Julius C. Bierwierth, Alexander Lambert, Parker Syms, and Wisner R. Townsend.

By order of the comitia minora, a special meeting of the Medical Society of the State of New York was called for Tuesday evening, October 13, 1903, at the Academy of Medicine in New York city, for the purpose of taking action on the communication received from the New York State Medical Association. At a special meeting of the Medical Society of the State of New York, held on Tuesday evening, October 13, 1903, the following preamble and resolutions were unanimously adopted:

"*Whereas,* The New York State Medical Association, at a recent special meeting, duly assembled, has by unanimous vote, appointed a committee with full power to meet with a similar committee of the Medical Society of the State of New York, to arrange for the unification of the two organizations, under the corporate name of the Medical Society of the State of New York; therefore, be it

"*Resolved,* That the committee of conference of the Medical Society of the State of New York, already appointed, be given powers equal to, and commensurate with, the powers recently granted the committee created by the New York State Medical Association, for the purpose of unifying the two State medical bodies into the Medical Society of the State of New York."

On the 30th of October, 1903, there was a meeting of the joint conference committee at the Academy of Medicine in the city of New York. At this meeting Dr. Abraham Jacobi was unanimously elected chairman, and Dr. Wisner R. Townsend, secretary, of the committee of ten, which, by common consent, was to be known as the Joint Conference Committee. At this meeting methods were considered intending to serve as the basis for the unification of the two State bodies and a bill was drafted, which was referred to a subcommittee, composed of Drs. Jacobi, Harris, and Fowler, who in their turn were given authority to select and employ legal counsel. It was also decided to vote at this meeting that all expenses of the conference committee be borne equally by the two societies seeking consolidation. The subcommittee selected Mr. Howard Van Sinderen, an attorney already favorably known to the profession, because of his connection as counsel with the New York Academy of Medicine. It soon became clear to the counsel that the bill drafted by the joint conference committee was inadequate, and failed to meet the necessary legal requirements.

At a meeting of the joint conference committee, held in the city of New York on the 5th day of January, 1904, Counsel Van Sinderen submitted a permissive act, which was published in our issue for January 16th, page 119.

This act received the approval of the joint conference committee, and was duly introduced into the Senate and Assembly of the State, promptly passed, and was signed by the Governor, on the 21st day of January, 1904. At this meeting it was agreed that all questions upon which the joint conference committee could not agree, or upon which there were material and important differences, should be submitted by referendum to the members of the consolidated society. It was further agreed that the *Journal and Directory* should be published during the year 1904. The fate of these publications thereafter must be decided by the vote of the reorganized society. At the same meeting an agreement was entered upon to be signed by the individual members of the joint conference committee after reference to the counsel. The joint conference committee believed that the profession of the State should be informed of the progress made by the committee, and therefore decided to submit an abstract of the agreement with the plan of consolidation of the Medical Society of the State of New York, and the New York State Medical Association to the profession. The entire committee signed the original communication, which, slightly changed by counsel, was finally published in the leading medical journals of this State, and in *American Medicine* over the signatures of the subcommittee.

[This communication was published in our issue for January 16th, page 119.]

The constitution and by-laws to be recommended to and finally adopted by the separate State bodies, upon the passage of the permissive act included above, were considered and adopted, subject to the approval of our counsel. On the 22d day of January, 1904, at a meeting of the joint conference committee, held in the Academy of Medicine in the city of New York, the following agreement, constitution, and by-laws were returned with the counsel's approval and it was voted to recommend them to the separate State bodies for adoption:

AGREEMENT.

WHEREAS, The Medical Society of the State of New York, hereinafter called the Society, and The New York State Medical Association, hereinafter called the Association, desire to consolidate and become one corporation under the name "Medical Society of the State of New York," pursuant to the terms of the Act, Chapter I, of the Laws of 1904, entitled "An Act to authorize the consolidation of the Medical Society of the State of New York and The New York State Medical Association," of which said act a copy is hereto annexed marked Exhibit "A."

Now, THEREFORE, the Society and the Association hereby agree as follows:

First: It is mutually covenanted and agreed that from and after the entry of an order of the Supreme Court for the consolidation of the Society and the Association, pursuant to the terms of said act, the Constitution and By-Laws, of which copies are hereto annexed, marked "Exhibit B," forming a part of this agreement, shall be the Constitution and By-Laws of the Society; subject, however, to amendment or repeal as therein or as by the laws of this State may be authorized; provided that for the purpose of inaugurating and completing the organization of the membership of the consolidated corporations in conformity with the requirements of such Constitution and By-Laws and for transacting the business of the Society, the officers of the society and the chairmen of standing committees in office at the date of the entry of the order for consolidation, and the members of the Joint Committee of Conference heretofore appointed to bring about the consolidation, namely, Dr. Henry L. Elsner, Dr. A.

Jacobi, Dr. A. Van Der Veer, Dr. George Ryerson Fowler, Dr. Frank Van Fleet, Dr. E. Eliot Harris, Dr. Julius C. Bierwirth, Dr. Alexander Lambert, Dr. Parker Syms, and Dr. Wisner R. Townsend, shall be deemed to be severally or collectively, in accordance with the purpose and intent of this agreement, ad interim the officers, the chairmen of standing committees, the House of Delegates, and the Council of the Society, with the power and authority conferred upon the officers, House of Delegates, Council, and chairmen of standing committees by said Constitution and By-Laws, and with the further power when sitting as the House of Delegates of appointing presidents of district branches from among their own number, or from the membership of the Society at large; and from and after the date of the entry of an order consolidating the corporations, the said officers, House of Delegates, Council, and chairmen of standing committees so constituted shall have and may exercise their respective powers and authority for the organization of the members of the consolidated corporation and the management of its affairs until the annual meeting of the Society, which will take place on the last Tuesday of January, 1905, and for such further time as their powers and authority may be extended and continued by the vote of a majority of the members present and voting at any general or special meeting of the Society after the consolidation; and provided further, that in determining the eligibility of members of the Society for office in the Society after the consolidation, the period during which such members shall have been members of the Association continually at the date of the consolidation, shall be equivalent to membership in the Society for the same period.

Second: The Society and the Association each for itself covenants and agrees that it will employ expert accountants to determine accurately the amount of its assets and liabilities, and that their reports shall be submitted with this agreement upon an application for an order consolidating the corporations, and the Association agrees that upon the entry of such an order the property of the Association specified in the report of its experts shall be duly transferred to the Society; and the Society agrees that upon receiving the same it will assume and pay and discharge the liabilities of the Association specified in the said report.

Third: All members of the Society and all members of the Association in good standing at the time of the consolidation shall be entitled to membership in the county medical societies in the counties in which they may reside, without the payment of any initiation fee or other cost to them, except that the members of the Society who, at the time of consolidation, shall not be members of any county society, may be required to pay the initiation fee regularly charged by the society which they may join. If there shall be no county society in the county in which a member of the Society resides, he shall be entitled to membership in the county society of an adjoining county, or else to membership in a society to be organized and chartered by the House of Delegates. Members of the Association shall be entitled to membership in county societies upon the certificate of the president and secretary of the New York State Medical Association at the time of the consolidation that they are in fact such members, or upon the like certificate of the presidents and secretaries of their respective district branches or county associations; and such members shall not be subject to the payment of dues or assessments to the respective county societies or district branches, except from the date to which they shall have paid their dues in full to their respective county associations, after which date dues to the respective county societies or district branches may be imposed or assessed upon them and they may be collected, at the rate imposed or assessed upon all other members of their respective county societies or district branches. Members of the Society who shall not be members of a county society at the time of consolidation shall be admitted to membership in the respective county societies upon the like certificate signed by the president or secretary of the Society. In counties in which there shall be a county medical association, but in which there shall be no county society in affiliation with the Society at the date of the consolidation, the said county medical association shall be deemed to be a county medical society in affiliation with the Society, subject to the Constitution and By-Laws hereto annexed: provided that all members of county societies residing in such counties and all members of the Society residing in such counties shall be admitted to membership in such county associations upon the like certificates of their membership in the Society or in their county societies, and upon the like terms with regard to initiation fees and dues as are hereinabove prescribed with respect to the admission of members of the Association to membership in county societies and the dues which may be imposed or assessed upon them; and provided further that the names of all such county associations shall be changed to the County Medical Society of their respective counties in conformity with the nomenclature of county societies in affiliation with the Society; and it is hereby further expressly declared and agreed that upon the entry of an order for the consolidation of the corporations, all members of county medical societies in affiliation with this Society or which by virtue of the provisions of this agreement shall be deemed to be in affiliation with this Society, and all persons who shall upon consolidation or thereafter be or become members of county medical societies in affiliation with this Society, or which shall be deemed to be in affiliation with this Society, and all members of societies thereafter organized and chartered by the House of Delegates, shall, by virtue of such membership, be members of the Medical Society of the State of New York.

Fourth: The Association agrees that upon the admission of its members to membership in the respective county societies to which they will become entitled under this agreement, the property and assets of the respective county associations in affiliation with the Association shall be transferred to the county society for the same county.

Fifth: The Society and the Association mutually agree that before the entry of an order for the consolidation of the corporations, notice of an application for the order shall be given to every county society and association. Such notice may be given by the Society or by the Association. Service of such notice upon any officer of a county society or association shall be deemed to be sufficient and shall bind the societies and associations, provided that the length of time of the notice and manner of serving it may be determined by the order of the Court upon the presentation of the petition for consolidation.

If the Court shall decline to order the consolidation pursuant to the terms of this agreement, or if for any other reason the joint Committee of Conference heretofore appointed shall deem it to be expedient to submit this agreement, or any question in connection therewith, for ratification or determination to their respective county societies and county associations, it shall order such submission. In that case the agreement shall not be binding upon the corporations parties hereto, until the same shall have been ratified by all such county societies and associations; and a certificate of the ratification of the agreement by any county society or association signed by the president and secretary of the meeting shall be conclusive evidence thereof in any court or place; provided that for the purposes of this agreement no county society or association shall be deemed to be in existence which shall not have held a meeting since January first, nineteen hundred and one.

Sixth: The Society and the Association each for itself agrees that in order to facilitate the due execution of this agreement according to the terms thereof, it will prepare or cause to be prepared and delivered to the Society, a roster containing the names and addresses of all its members in good standing at the date of the consolidation, and the Society agrees that as soon as practicable after the consolidation, meetings of the county societies shall be called on due notice to all their members, including all members of the Association in good standing at the date of the consolidation, residing in the counties in which the meetings shall be held, respectively, for the purpose of effectuating the plan of organization under the Constitution and By-Laws hereto annexed, and for the transaction of such other business as may come before the meeting.

Seventh: It is further covenanted and agreed by the parties hereto that as soon as practicable after the entry of an order for the consolidation of the corporations, the following proposition shall be submitted by referendum to the vote of the members of the Society, namely:

> "The principles of medical ethics of the American Medical Association, being suggestive and advisory, shall be the guide of members in their relations to each other and to the public."

Eighth: The Society agrees that it will petition the Legislature for the passage of such further act or acts as may be necessary, if any, to carry this agreement into effect.

Ninth: Neither the Society nor the Association shall be deemed to have incurred any liability under this agreement if the Court shall decline to order the consolidation of the corporations as herein provided.

Tenth: It is further mutually covenanted and agreed that whenever the Chairman and Secretary of the joint Committee of Conference shall certify that the conditions precedent to an application to the Court have been fully complied with, the Presidents of the respective corporations shall, and they are hereby authorized and required in the name and behalf of their respective corporations to, petition the Supreme Court for an order to consolidate the corporations in acordance with the terms hereof, and the certificate hereinabove provided for shall be conclusive evidence of the fact stated therein in any court or place.

IN WITNESS WHEREOF, the Medical Society of the State of New York has caused these presents to be signed by its President and its corporate seal to be hereunto affixed, at the City of Albany, in the State of New York, on this day of January, one thousand nine hundred and four, and The New York State Medical Association has caused these presents to be signed by its President and its corporate seal to be hereunto affixed at on the day of , one thousand nine hundred and four.

MEDICAL SOCIETY OF THE STATE OF NEW YORK,
By——————————
THE NEW YORK STATE MEDICAL ASSOCIATION,
By——————————

Time may prove the necessity of changing some of the provisions of the constitution and by-laws after thorough trial during the period which we are about to enter, which may be characterized as evolutionary; at present, however, the committee feels that these are the best that can be recommended for adoption.

Your committee takes pride in recommending the unification of the profession of the State of New York upon the plan which it considers dignified and in keeping with the history and tradition of this society. Not unmindful for a single moment of the weight of responsibility under which the committee has labored, it has had for its object unification without interruption of the life of our old society, and this without a change in its name. At the same time, it has been ready to recognize the claims of the association and has been willing to meet these in a conciliatory spirit, prompted by a thorough understanding of the benefits, which must of necessity follow the reorganization of the most powerful State society in the grand galaxy of States; this union will be blessed, not only by the profession of the State and country, but by the public, for the security which it presages in future possibilities.

Your committee recommends:

First: That at this meeting, the Medical Society of the State of New York shall become a party to and shall accept the agreement as presented in this report and that the president and secretary of this society be empowered to carry out its provisions as soon as the New York State Medical Association shall have taken similar action. The agreement has been prepared after much thought and study, and has seemed to the joint committee and to its counsel to be eminently fair to both sides seeking unification.

Second: That the Medical Society of the State of New York at this meeting adopt the constitution and by-laws presented in this report. These are not to become operative until the adoption of the same constitution and by-laws by the New York State Medical Association, and upon an order from the court, legally sealing the union of the Medical Society of the State of New York and the New York State Medical Association, in accordance with the act passed by the legislature at its session in 1904, and signed by the Governor of the State on the 21st day of January, 1904.

Third: That further time and power be given to the committee of conference of the Medical Society of the State of New York, that the many matters of detail in connection with the unification of the two State bodies remaining unsettled may be satisfactorily and finally adjusted.

All of which is respectfully submitted,

HENRY L. ELSNER, Chairman,
A. JACOBI,
A. VAN DER VEER,
GEORGE RYERSON FOWLER,
FRANK VAN FLEET.

FINANCIAL STATUS OF THE TWO ORGANIZATIONS.

In the course of the report, certificates were read from licensed actuaries to the following effect: On behalf of the New York State Medical Association, the report of Townshend & Co., of New York, showed assets as follows: Cash, $413.68; Bond and Mortgage, $3,250.00; Office Furniture and Card Catalogues, etc., $1,075.50. This takes no account of the library, the original cost of which is estimated at $30,000. The Association's liabilities, consisting of unpaid bills for the January publication of the *Journal,* insurance premiums, etc., amount of $207.64, leave a balance credit of $4,531.54.

The certificate of John E. Pladwell, of Albany, shows the following as the financial state of the Medical Society of the State of New York: Balance on hand, as shown by treasurer's report, $2,744.25; the Merrit H. Cush fund was examined and found correct, with a total of $683.93, being $500 capital and $183.93 accrued interest.

After the reading of the report, which, notwithstanding its length, was listened to with the most intense interest without the least sign of weariness, Dr. ABRAHAM JACOBI expressed his intense gratification in proposing the adoption of the report. He had never assisted at a committee in which the members were more engrossed in their labors. At first all seemed plain sailing, though, of course, much detail work was expected, but difficulties had cropped up which required the greatest patience to overcome. However, all had worked in perfect harmony and there had been no reference to past difficulties. The bill had passed through the Senate within a week, and it showed that when the medical profession was united in its demands, there would be little difficulty in securing cooperation from the legislators. Dr. Jacobi made an eloquent appeal, as one of the oldest members who had stood by the Society in times of distress and welfare, in war and peace, to support the agreement now before them, and he moved the following resolutions:

Resolved, That the report of the joint committee of conference be accepted, and that the proposed agreement for the consolidation of the Medical Society of the State of New York and the New York State Medical Association be, and the same is, hereby approved; and the president of the society is hereby authorized and directed to execute the same, in the name and behalf of the society, and the secretary is hereby authorized and directed to affix the corporation seal thereto; and, be it further

Resolved, That the committee of the society heretofore appointed for the purpose of bringing about the consolidation, namely, Dr. Henry L. Elsner, Dr. J. A. Jacobi, Dr. A. Van Der Veer, Dr. George Ryerson Fowler, and Dr. Frank Van Fleet be, and they are hereby, continued as such committee, with full power and authority to do whatever may be necessary to carry the agreement into effect.

The resolutions were seconded by Dr. B. St. John Roosa, of New York; Dr. W. Warren Potter, of Buffalo; Dr. MacDonald, of Albany, and Dr. Roswell Park, of Buffalo. There was no debate, and the resolutions were passed unanimously amid great applause. It was then moved and carried that the report of the committee be sent to every member of both societies.

Dr. Herman Bendell, of Albany, presented the report of the committee on arrangements, and Dr. H. D. Wey, of Elmira, that of the committee on by-laws.

The report of the committee on hygiene was presented by Dr. John L. Heffron, of Syracuse, and was of such exceeding interest and value that it was moved and seconded and carried unanimously that it be printed and sent to all the members.

Dr. Frank Van Fleet, of New York, presented the report of the committee on legislation, which showed that thirty-three bills had been introduced, of which sixteen had died in committee and ten had become law; seven failed to obtain the Governor's signature. In the Assembly, forty-six had been introduced, of which thirty-eight died in committee, nine became law, and four failed to obtain the Governor's signature. Fifteen bills were duplicates—*i. e.*, the same bill was introduced in both houses. Sixty-four medical bills had been introduced, of which nineteen had become law. Eight bills relating to sewers; nine to insanity laws; four to board of regents; seventeen to tenement houses, of which only one—the Marshall bill—passed.

The most important bills were: Armstrong Nurses' bill; McCabe bill, exempting the library of the Medical Society of the County of Kings from taxation; Morgan bill for immediate commitment of the thoroughly insane; Senator Ambler's Pure Food bill; the Sherry bill against the careless distribution of drugs; the Goodsell-Bedell bill, and the Stewart bill, regarding sewage. The report added that the committee was now regarded as a valuable auxiliary to the legislators.

The report of the State licensing board showed that there had been 1,144 candidates, viz.: 529 for full examination; 227 for final license; 388 for partial examination. Of the total of 756 for the license, 667 had appeared before State board; 43 before the Homœopathic board, and 46 before the Eclectic board. Of this number the State board had rejected 105; the Homœopathic, 2, and the Eclectic, 16. Up to date, out of 7,790 examined for license, 1,629, or over 30 per cent., had been rejected.

The report of the treasurer, Dr. O. D. Hall, of Albany, showed that the expenses had been about $300 in excess. This had been partly due to the semiannual meeting, and partly to the fact that the Society had given gratis the last volume of the transactions.

At this point Dr. Jacobi spoke to the effect that the report of the committee on hygiene contained so many valuable points that he wished it would be made available for publication in the newspapers, lay as well as medical. After some discussion a motion to this effect was carried. We shall therefore publish it in our next issue.

Dr. de Lancey, of Rochester, moved, and Dr. Robert F. Weir seconded, a vote of thanks to the committee on conference, which was carried unanimously.

The committee on the nomination of candidates for vacancies on the State Board of Medical Examiners was appointed as follows: Dr. J. F. McCaw, of Watertown; Dr. A. Van Der Veer, of Albany; Dr. H. D. Wey, of Elmira; Dr. L. O. Roe, of Rochester, and Dr. A. Jacobi, of New York.

The President suggested that a motion be made to call on the county societies to hold a meeting early in February for the purpose of endorsing the action of the Society. Dr. Elsner suggested that Dr. Jacobi's resolutions be enclosed, asking them to pass these resolutions with any necessary alterations. These were carried unanimously. On the motion of Dr. Heffron, it was resolved that the names of the committee should not be appended to the report of the committee on hygiene when it was published in the lay press.

Thus ended what is truly an historic executive session of the Medical Society of the State of New York.

THE FIRST SCIENTIFIC SESSION

was held on Tuesday afternoon at 2.30 p. m., when the following papers were read:

Sciatica, Its Diagnosis and Treatment; a Report of 200 Cases, By Dr. Joseph Collins, of New York.
Tic-Douloureux and Other Neuralgias from Intranasal and Accessory Sinus-Processes, By Dr. Sargent F. Snow, of Syracuse.
Traumatic Hæmorrhage Over the Third Anterior Frontal Convolution; Operation, Removal, Recovery, By Dr. W. C. Krauss, of Buffalo.
Enuresis, By Dr. George E. Beilby, State Industrial School, of Rochester.
Alkaline Treatment of Recurrent Vomiting of Children, By Dr. Irving M. Snow, of Buffalo.
Dilated Urachus: Report of Case; Specimen, By Dr. C. F. Timmerman, of Amsterdam.
Insufficientia Pyloris, By Dr. Mark I. Knapp, of New York.

This was followed at 4.30 p. m. by a

SMYPOSIUM ON DIABETES.

Pathology of Diabetes, By Dr. R. M. Pearce, of Albany.
Physiologic Chemistry of Diabetes, By Dr. David Edsall, of Philadelphia, Pa.
Medical Treatment of Diabetes, By Dr. William H. Thomson, of New York.
General Management of Diabetes, By Dr. F. C. Shattuck, of Boston, Mass.
On the Synchronous Occurrence of Diabetes and Non-Diabetic Glycosuria, By Dr. Heinrich Stern, of New York.

THE ADDRESSES.

The Senate Chamber was filled, on Tuesday evening, to hear the address of Dr. Arthur D. Hadley, President of Yale University, on the Conflicting Claims of General Education and Professional Education, and also the President's address, by Dr. Bristow.

Professor Hadley pleaded for breadth of education, as represented by a "college course" prior to the purely technical training. For the last fifty years there had been a tendency to increase the number of years devoted to professional training at the expense of those allotted to general education. While this tendency had not been confined to medicine, medicine had felt it more strongly than any other calling, for a physician needed to be trained in more kinds of scientific study than almost any other man in the world. He must know something of physics and much of chemistry; he must know something of morphology and much of physiology. This vast increase of subjects of study had become an almost insupportable burden. It was not surprising, therefore, that a conflict had arisen between the claims of technical training and those of general education. What was the difference, he asked, between general and technical education? It was commonly supposed to exist in the nature of the studies. This used to be true some fifty years ago when the college curriculum consisted almost entirely of classics and mathematics. But to-day all this was changed. Within the limits of a college course the man who was destined to a professional career could master the essential principles of those sciences upon which the adequate practice of his profession depended. He whose tastes led him to the study of medicine could master not only the principles, but the practice of chemistry, and could familiarize himself with anatomy, physiology, and physics, and all those various sciences which formed the foundation of successful medical study. The difference between the two educations, Professor Hadley held, lay not in the studies themselves, but in the surroundings under which they were pursued. The distinction was not in the things taught, but in the ethical atmosphere in which they were learned. The college student pursued his investigations under circumstances that brought him into contact with non-professional life on as many sides as possible; while the student in the professional school worked in an atmosphere favoring concentration, which reduced outside influences to a minimum and encouraged him to narrow his efforts on the work immediately in hand. In short, the college course gave a man breadth of sympathy, but with all but the best men this breadth necessarily was accompanied by a sacrifice of intensity. The professional course secured this intensity, but at the expense of the sacrifice of breadth. The tendency lately had been to regard intensity of application as the thing of vital importance and to look with distrust, even with absolute dislike, on scientific attainments obtained in the broader collegiate atmosphere. Professor Hadley wished to utter the warning that the gain in this method involved also serious dangers, not only to the students, but to scientific progress and the influence of the medical profession as a whole. The first danger resulting from this method was that of commercialism. It was right and proper to have an ambition to make a living, but in the professional ideal, and particularly in that of the profession of medicine, when that aim became the main object, its effects reacted evilly on the profession as a whole. Moreover, the effect of this course reacted adversely on the political and moral influence of the profession in the community, it tended to make physicians a guild or trades union apart from the rest of society. The remedy Dr. Hadley believed to lie in encouraging men to do the preliminary work of preparation for their several callings while they were yet in the broader atmosphere of the college, rather than in the narrower atmosphere of the professional schools. He would abate nothing of the strictness of our requirement of scientific knowledge as a preliminary and professional study, but he would welcome that knowledge no matter where it was acquired. If the man really had the necessary training he would encourage a man to begin his scientific specialization at as early a period as possible, but to defer his ethical specialization to as later a period as possible. The sooner a man's brain began to turn to his life's work the better; but the later a man's horizon tended to be narrowed to the sphere of his life work, the better also. He believed that the true policy lay, not in the shortening of the college course and the attempt to make it a time of intellectual electicism, if not of intellectual dissipation, but in an inclusion within that college course of all the scientific studies that it could be made to contain, and in the fullest recognition by our various professions and professional schools of the results of such study when obtained in the college atmosphere.

Professor Hadley's address was listened to with great attention and its conclusion was marked with prolonged applause.

Dr. B. St. John Roosa then introduced the President, Dr. Bristow, who delivered a long but supremely interesting address.

Dr. Bristow's address was so full of interesting and important material and so absolutely devoid of anything approaching padding, that it is practically impossible to do it justice in any kind of an abstract. He referred to the general aspersions cast by the legal fraternity upon the medical profession in the character of expert witnesses, but retorted by asserting that the fault lay not with the members of the medical profession, but with the system evolved and maintained by the legal profession in the mode of obtaining expert evidence. He dealt in succession with the change in the character of juries; with the qualifications required to establish the right of a man to be considered an expert witness; with the question of personal bias in favor of the side on which a witness is retained; and, finally, with that monstrosity of legal absurdity, the hypothetical question. As regarded juries, he pointed out that in these days they were composed no longer of skilled craftsmen, with a breadth of intelligence that enabled them to grasp principles as well as details, but very largely of mere tenders of machines, whose minds were trained to concentrated application on only one side of a subject. Regarding the qualification of an expert witness, he pointed out the anomaly of permitting all men, irrespective of their special training or length of experience, to be regarded equally as experts in medicine merely because they were on the register of practising physicians. In relation to the question of bias, he quoted from the dicta of many celebrated judges, both American and English, the trend of which was the assertion that, given sufficient money, it would be possible to secure in any city half a dozen competent physicians who, in answer to any hypothetical question, would give exactly opposite statements. Dr. Bristow asked whether it was true that, as these aspersions seemed to indicate, the ranks of the medical profession were filled with liars and perjurers, and that all the good men followed the profession of law? He referred as testimony to the contrary to the self sacrificing labors of the profession in many fields, and especially to the heroic work of the members of the yellow fever commission, at their own risk, and even at the cost of life itself. If a jury was to be selected by six of them, being chosen by the district attorney and six by the counsel for the defense, would not the result be open to the same objections and be emphatically denounced by the legal profession? Yet this was practically the case under the present selection of medical experts, and medical experts were practically in the position of judgment. Regarding the hypothetical question, he said that it was calculated to confuse, not to enlighten, and almost inevitably led to logical fallacy by the deliberate *suppressio veri*. He cited instances in which hypothetical questions were so long that they took almost an hour to state. How could any jury be expected rightly to gauge the value of a categorical answer to a question of such a character? He cited, further, a conflict of legal authorities as to whether the hypothetical question should be a recital of facts or not. As a matter of fact the legal authorities were no whit more at unity on the all important points relating to medical experts, than were the physicians in their opinions given under such impossible conditions.

After scoring unmercifully the large number of unscrupulous members of the bar, who by what was known as "ambulance chasing," by the dishonest use of legal methods to rob corporations of thousands of dollars yearly, and by other nefarious practices, of which the medical profession did not hold any monopoly as the lawyers would have us believe, he continued: "The medical profession is weary of being told that the fault is with it; weary of the ready and cheap denunciations of the bench, and the ill considered jibes of bar and press. Men of the law we indict your system, we indict it for its inconsistencies, we indict it as inviting the chaos that you are so fond of condemning."

Dr. Bristow's address notwithstanding the fact that it occupied a full hour in delivery, was listened to with rapt attention, and at its conclusion was marked by the emphatic approval of the audience.

KENNETH W. MILLICAN.

(*To be continued.*)

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Therapeutical Notes.

Leucorrhœa.—*Nouveaux remèdes*, for December 24, 1903, gives Lutaud's prescription:

℞ Creolin ....2 grammes (½ drachm);
Extract of hydrastis canadensis..........10 grammes ($^{1}/_{3}$ ounce);
Water ....200 grammes ($6^{2}/_{3}$ ounces).

M. Two tablespoonfuls in a pint of tepid water for an injection.

For gonorrhœa in the male, combine as follows:

℞ Extract of hydrastis canadensis...........2 grammes (½ drachm);
Creoline ....10 grammes ($^{1}/_{3}$ ounce);
Water ....250 grammes ($8^{1}/_{3}$ ounces).

M. Use undiluted.

Ulcer of Stomach.—*Gazzetta medica Lombarda*, for January 4, 1904, quoting *Concours médical*, for October 17, 1903, advises, when food cannot be given *per orem*, to use:

℞ Tepid water............200 grammes ($6^{2}/_{3}$ ounces);
Powdered pepsin............30 grammes (1 ounce);
Yolks of egg.......................................2.

M. For three enemata.

In the second month of treatment, when convalescence is established, Levy, in the same journal, advises the following artificial Carlsbad water:

℞ Water ....1,000 grammes ($33^{1}/_{3}$ ounces);
Sodium sulphate............3 grammes (45 grains);
Sodium bicarbonate.....2½ grammes (37½ grains);
Sodium chloride.............1 gramme (15 grains).

M. Dose, ½ pint to 1 pint, daily.

Sycosis.—After the pustules have been opened, says *Bulletin médical de Québec*, for December, 1903, Leistikow's prescription should be used:

℞ Olive oil....................10 grammes ($^{1}/_{3}$ ounce);
Distilled water.............20 grammes ($^{2}/_{3}$ ounce);
Lanoline, Zinc oxide, Infusorial earth } of each....5 grammes (75 grains).

M. For a paste.

Furuncles.—A. Robin, according to *Bulletin médical de Québec*, for December, 1903, recommends the introduction into a furuncle which is slow in healing of:

℞ Sublimated sulphur, Powdered camphor } of each...........10 grammes ($^{1}/_{3}$ ounce);
Glycerin........................a sufficient quantity.

M. For a semiliquid paste.

Internally, Robin advises:

℞ Sublimated sulphur...10 centigrammes (1½ grains);
Powdered camphor.....2 centigrammes ($^{3}/_{10}$ grain).

M. For one capsule; give three daily.

Lupus.—*Médecine moderne*, for January 6, 1904, quotes Plicque as stating that he has had excellent results in chronic lupus with the following mixture. The fuchsin is added to give a flesh color to the otherwise unsightly paste:

℞ Sodium silicate............10 grammes ($^{1}/_{3}$ ounce);
Sterilized water..........80 grammes ($2^{1}/_{3}$ ounces);
Fuchsin...........................enough to color.

M. Paint affected part, morning and evening.

Pain in Mumps.—Raguzzi, according to *Médecine moderne*, for January 6, 1904, advises:

℞ Guiacol ....1 gramme (15 grains);
Vaseline, Lanolin } of each..........10 grammes ($^{1}/_{3}$ ounce).

M. For an ointment; use morning and evening.

Coryza.—Dr. Genglaire, of Coucy-le-château, writes to *Médecine moderne*, for January 6, 1904, to the effect that he has found of value the practice of painting the nasal fossæ with a pencil of absorbent cotton steeped in hydrogen peroxide five or six times daily. He states that a cure generally results within the twenty-four hours.

Depilatory.—Physicians who do not appreciate the beauty or advantages of a heavy beard, may find valuable the following prescription from the *Hospital Formulary* of the New York Department of Public Charities, etc.:

℞ Barium sulphide..........................25 parts;
Powdered soap...............................5 parts;
Venetian talc, Flour } of each....................35 parts;
Benzaldehyde..................a sufficient quantity.

M. Add 1 teaspoonful to 3 teaspoonfuls of water; apply to face with a shaving brush in an even layer. After five minutes, moisten with a sponge; five minutes later, the hair can be removed by careful washing.

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The Baltimore Medical and Surgical Association, at its meeting on January 11th, elected the following officers: President, Dr. James W. Craighill; first vice-president, Dr. W. B. Perry; second vice-president, Dr. John T. King; secretary, Dr. Eugene Lee Crutchfield; treasurer, Dr. Nathan Winslow.

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THE ALBANY MEETING.

The long looked for Albany meeting of the Medical Society of the State of New York has come and gone; and, with it, the schism that for twenty-two years has rent in twain the medical profession of the State of New York, is practically a thing of the past. We say practically because, although there still remain certain formalities to be complied with, it is altogether inconceivable that they should fail of completion.

This meeting will take rank as an historic one in the annals of medicine. But not only that; it has also been an exceptionally fruitful one, both scientifically and ethically. Scientifically, the papers have been good and have attracted good audiences. They have been read in many instances by men of wide reputation and listened to with striking interest by many others of like calibre. Particularly valuable were the three symposia on Diabetes, on Abdominal Pain, and on Nephritis, respectively. While all are subjects of great interest to the general practitioner, that on abdominal pain afforded, perhaps, the most and greatest opportunities of any for conveying practical instruction, though that on nephritis, probably, added most to the spirit of scientific research.

But it is in considerations altogether outside the scientific aspect of the meeting that we see the strongest cause for congratulation. President Hadley, in his address on general and professional education, asserted that it was not in the subjects taught, but in the circumstances under which they were learned, that the chief difference between the college education and the training of the purely professional schools consisted. In like manner we may say that even more gratifying, even more valuable, than the actual results achieved in the direction of unification, was the spirit of fixedness of purpose, of broad sympathy, of generous emulation and single heartedness, and of earnest loyalty to the highest ideals of our profession, that pervaded the moral atmosphere of the council chamber during this most momentous session. There was no trace of acrimony, not a sign of exultation over points gained or of smouldering resentment over sacrifices entailed, visible in any single corner of the room. In the very nature of things, the reading of such a lengthy report as that of the committee on conference, with all its included documents, was apt to prove wearisome; yet so intent did every one seem, with his eyes on the goal of the course, that nowhere was a single symptom of impatience or boredness perceptible. That speaks volumes more for the depth of realization by all of the absolute need of professional solidarity, alike for the good of mankind, of the profession, and of the individual practitioner, than anything else could possibly do.

Another more than gratifying lesson is that so clearly demonstrated in the fact of the extraordinary rapidity with which medical legislation in this matter was effected, the moment it became clear to the legislators that what was asked for was desired by a united and harmonious profession. What a promise does this hold out, and at the same time what a warning does it convey to us concerning our responsibilities, in regard to all measures for the public weal with which an ever enlightening profession may deem it necessary in the future to approach the legislature. Even when we seem most to be acting in our own interests as a profession, if our desires are truly in those interests they are most truly then in the interests of humanity at large. No spectacle could impress this fact more vividly on those who, while it is theirs to act, must in the nature of things look to us for guidance, than that of a professional opinion firm and immovable because founded upon the solid base of professional solidarity.

RECENT PROGRESS IN THE STATE CARE OF CRIPPLED AND DEFORMED CHILDREN.

On various occasions during the past few years attention has been called in these columns to the advantages, not to say the necessity, of the State care of chronically diseased children among the poor. The rapid progress of the movement in this country is shown by the fact that Dr. A. J. Gillette's paper on The State Care for Indigent Crippled Children was read before the American Orthopædic Association in June, 1899,[1] and Dr. Shaffer's appeal for this neglected class was read before the National Conference of Charities and Correction (on the Care of Crippled and Deformed Children[2]) in May, 1898, without being aware of the fact that the legislature of Minnesota had appropriated $5,000 for the relief of indigent crippled children in 1897.

The appearance of the *Third Annual Report of the New York State Hospital for the Care of Crippled and Deformed Children,* recently issued, seems a proper occasion to call attention to the subject again. In the report it is shown that over 350 applications for admission have been received during the year from various parts of the State. The greatest number of applications have come from New York county, as might be expected. As the present small hospital building at Tarrytown can accommodate only twenty-five patients, the need of a much larger hospital is evident. The State has already anticipated this demand by appropriating $50,000 to buy a suitable site, and it is expected that before long further appropriations will be made to build and equip a large hospital to accommodate 500 patients. Among the many sites which have been examined by the commission appointed by Governor Odell, there are two or three which are appropriate, and which meet with their approval. It is expected that one of these sites will be secured in the immediate future.

The average residence of the discharged patients in the State hospital since it was organized, in 1900, is one year and 3.6 months. The residence of many of the tuberculous hip joint and spinal disease patients now in the hospital will be, in some instances, several years. Quite a number of the present inmates of the hospital, previous to their admission, had been under treatment in some of the general or special hospitals. Much benefited by treatment for a few months, they speedily relapsed after a return to tenement house life or to their isolated homes in the country.

We understand that it is the intention of the managers of the State hospital to keep the patients admitted to their care, under treatment long enough to effect a permanent cure in all cases where the environment of the patient is unsatisfactory at home; and this means, among the class it is intended to reach, a long time. It would seem to be a misdirected economy on the part of the State to treat a child with hip joint disease, for example, for a few months and prematurely discharge it with the certainty that the disease would relapse, with an accompanying increase in the deformity. The various excellent and much to be commended day schools which have been established in New York for the education of the crippled and deformed children, who are not received in the public schools, present distressing evidences of prematurely discharged hospital patients, and many of these scholars should be, to-day, receiving hospital care.

The ideal hospital for the treatment of the deformities of childhood, among the poor, should aim at both care and treatment until a cure is effected—or, at least, until the best attainable result is secured. This means education as well as surgical and mechanical treatment, but it does not mean inefficient and perfunctory care at home, in connection with an irregular dispensary treatment, as so often happens with the widowed mother earning bread and butter for a crippled child, unable to care for itself.

The Governor of Ohio recently appointed a commission composed of prominent citizens "to report on the feasibility and desirability of caring for, treating, and educating crippled and deformed children." The commission has reported to the legislature of Ohio and has recommended the expenditure of $200,000 for the establishment of a hospital for the care and education of crippled and deformed children, to be erected on a plot of ground not less than fifty acres in extent. A gentleman prominent in this movement writes to one of the board of managers of the New York State hospital that the facts and figures, and the example furnished by the State hospital for crippled and deformed children in New York carried the day in favor of the Ohio project. From other States there come inquiries and requests for information and advice, and in Minnesota, under Dr. Gillette's guidance, the work is progressing most favorably. Even from abroad the philanthropist is seeking to follow New York's example in providing suitably for its dependent crippled and deformed children. But there is still lacking in this particular field of work an organized and equipped hospital building to be especially used for the treatment and education of this class of patients. The patients are treated " in some hospital or hospitals within ten miles of the State university " at Minneapolis. It is hoped that Minnesota will soon have its own fully equipped hospital building. New York and Ohio are in line with Minnesota in this important work. It may not be a very long time before the example of these States will be followed by many others.

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[1] Transactions of the American Orthopædic Association, Vol. XII, 1899.

[2] *New York Medical Journal,* July 9, 1898.

FOOD AND TUBERCULOSIS.

Among the many valuable data concerning tuberculosis prepared by Miss Lilian Brandt, the statistician of the Charity Organization Society, are two maps of the lower portion of Manhattan Island. These maps, as Carlyle might have put it, are indicative of much. The first shows various districts in which the density of the respective populations is represented. Where the shading is quite black the population is densest. Then these shadings progress from very dark to no shading at all, representing populations less and less dense. The darkest shading of all is put over the region on the lower East Side through which Grand Street runs. This region is occupied by the Jews, to the practical exclusion of all other races. In New York there are upward of 700,000 Jews—from one fifteenth to one twelfth of all the Jews in the world; and the vast preponderance of the Jews in New York is to be found in the region just noted, the most densely populated region, I believe, in the whole world, certainly in either Europe or America.

Now, with regard to the second map. Here the districts are outlined exactly as before. But the one among all of them which has no shading at all is this same Jewish quarter—that is to say: the Jews are more closely crowded than any other community; yet tuberculosis is least rife among them.

What does this overcrowding among the Jews connote? Practically every factor which is considered causative of tuberculosis, save one exception, upon which I shall presently dilate.

The very poor Jews are not cleanly in their personal habits, at least according as I have had occasion, in my own dispensary experience, to note. The proper disposition of sputum, such as present day prophylaxis requires, is not practised by them. The air in the crowded tenements in which they live, is in the last degree vitiated and unwholesome; it is saturated, not only with human exhalations, but also with smells emanating from ill kept back yard closets. Such air, according to the tenet of the vesicular inhalation of the tubercle bacillus, would surely be conducive to tuberculous infection. Out in the streets the air is also much vitiated. Dr. Woodbury, our street cleaning commissioner, has most strikingly demonstrated this by means of pairs of plates which were exposed for an equal number of minutes in various parts of this city. Dr. James Ewing, of the Cornell Medical School, prepared some sixteen of these plates for him. Of two such plates one would represent atmospheric conditions in densely crowded districts, the other in a very clean part of the town. Among these plates are some which were exposed in the Jewish quarter. One of these, for instance, which was exposed at the corner of Hester and Ridge Streets, at market time, is saturated with bacteria, moulds, fungi, etc.; its fellow, which was exposed for the same number of minutes, at Madison Avenue and Sixty-sixth Street, is almost wholly free from impurity.

They work very hard, indeed, do these poor Jews, most of them, I believe, in " sweat shops." The New York *Sun* states that, in violation of the laws, children, as soon as they are old enough to thread a needle, are set to work. From early morning to very late at night, in these wretchedly ventilated rooms, do they bend over their machines. Their lungs expand but poorly; " they have no chests."

Thus, if inhalation were the prime manner of propagation, there would be in this Jewish quarter ideal conditions for the spread of tuberculosis. Yet, as we have observed, these Jews but rarely contract the disease.

The exception among ætiological factors, to which I have referred, is the character of the food consumed by the Jews. While other peoples have comparatively little regard to what they eat and drink, I am very positively assured that, with the rarest exceptions, the Jews, no matter how poor they may be, obey with the utmost strictness the Mosiac laws concerning food and drink. Oftentimes the meat which their religious officials reject as unsuitable for Jews to eat, is sold to Christians and eaten by the latter without thought of its possible impurity or of its effects upon metabolism. The Reverend Madison C. Peters, in his book, *Justice to the Jew*, states that nearly half the meat is thus rejected and thus sold for Christian consumption.

Here appears to me to be evidence strongly corroborative of the present day scientific opinion that the alimentary canal is the region most concerned in the spread of tuberculosis within the organism; that even pulmonary tuberculosis results generally from infection, often latent, by means of bacillus-containing food-stuffs, the lacteals and the lymphatics carrying the bacilli from the intestines through the thoracic duct, the vena cava, the right heart and finally to the pulmonary parenchyma.

Besides this food factor, others may occur to one. The Jews are generally temperate as regards alcohol, so that the absence of this cause might further explain the rarity of tuberculosis among them. Again, the Jewish race may through many centuries have gradually acquired an immunity to the disease. However, such propositions as these I believe to be subordinate to the one set forth. JOHN B. HUBER.

TO OUR READERS AND CONTRIBUTORS.

Our readers will, we are sure, be very sorry to learn of the protracted illness, now of several weeks' duration, of our editor in chief, Dr. Frank P. Foster, which has deprived us entirely of his services for the time being. Two important parts of the *Journal* work, therefore—the passing upon original communications submitted to us for consideration, and the awards in the matter of our Subscribers' Discussions—have fallen, unfortunately, somewhat into arrears. We are happy to state that Dr. Foster is progressing satisfactorily; and that in the course of a few weeks we hope to welcome him once more at his post. In the meantime, we ask for the forbearance of those of our contributors particularly affected by the inevitable lack of expedition in dealing with these portions of the *Journal's* work.

IS EPILEPSY A FUNCTIONAL DISEASE?

At a meeting of the New York Neurological Society, held on December 1, 1903, Dr. M. Allen Starr read a paper with this title. In our issue for January 2nd we published a signed editorial by Dr. Alfred Gordon on the subject of Dr. Starr's paper. In the current issue we publish a letter by Dr. Ambrose L. Ranney, unfortunately crowded out by the mass of material in our hands, up to the present. We have thought it desirable, therefore, considering the interest aroused, to publish this week an abstract of Dr. Starr's paper, with the discussion thereon, under society proceedings.

POE'S MALADY.

The *Arena*, for January, contains a suggestive article by Dr. William Lee Howard, in which it is affirmed that Edgar Allan Poe was not a drunkard, but a dipsomaniac, subject to periodical nervous outbursts, assuaged by alcohol, but caring nothing for the taste of liquor. What Poe sought in whiskey was oblivion to his nervous crises. Physicians who may not have grasped the genuine distinction between dipsomania and drunkeness will read this article with profit, while it cannot fail to have a special interest for neurologists.

A PORTRAIT OF DR. JOSEPH LEIDY.

We are indebted to the publisher, William J. Campbell, of Philadelphia, for a handsome etching, bearing the autograph of the artist, James S. King, of the late Dr. Joseph Leidy, for many years professor of anatomy at the University of Pennsylvania. The picture is an admirable example of the delicate art of etching, and will no doubt be highly prized, not only by his friends and former students, but by others who are familiar with his valuable contributions to our knowledge of anatomy.

News Items.

Society Meetings for the Coming Week:

Monday, *February 1st.*—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society.

Tuesday, *February 2nd.*—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

Wednesday, *February 3rd.*—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; New York Genitourinary Society; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

Thursday, *February 4th.*—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis, Mo.; Atlanta Society of Medicine.

Friday, *February 5th.*—Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; the Manhattan Clinical Society.

Saturday, *February 6th.*—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending January 23, 1904:

	Week end'g Jan. 16.		Week end'g Jan. 23.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	878	21	741	23
Diphtheria and croup	425	59	395	35
Scarlet fever	365	21	427	30
Smallpox	..	..	5	1
Chickenpox	181	..	155	..
Tuberculosis	348	186	298	138
Typhoid fever	29	8	29	5
Cerebrospinal meningitis	..	7	..	7
Totals	2,226	302	2,050	239

Sanitary Inspector, Borough of Queens.—Dr. John P. Moore, of Astoria, has been appointed to this position, to succeed Dr. Samuel Hendrickson, of Jamaica.

An Office Building for Physicians.—It is stated that a project is on foot to convert the old Madison Avenue Hotel, at the corner of Fifty-eighth Street, into an office building solely for the use of physicians.

The Williamsburgh Hospital Society has purchased three buildings at the corner of Bedford Avenue and South Third Street, Brooklyn, at a cost of $25,000, and will expend $10,000 more in turning them into a thoroughly modern hospital.

Presents to Dr. Lederle.—Ernst J. Lederle, Ph. D., former health commissioner, has been made the recipient of a solid silver tea service, a gold matchbox, and half a dozen porcelain cups and saucers, from the employees of the health department.

The New York Orthopædic Dispensary and Hospital announced at its recent annual meeting that the institution received a gift of $500,000 about a year ago. The industrial school and hospital, for the building of which this money was intended, are now nearly completed at White Plains.

Spitting on Sidewalks.—Commissioner of Health Darlington has communicated with Commissioner of Police McAdoo, requesting the latter to aid the board of health in enforcing the ordinance against spitting on the city sidewalks. The police will hereafter arrest any offender who persists in the practice after one warning.

The Alumni Association of the College of Physicians and Surgeons, New York, will hold a smoking concert at Sherry's, Fifth Avenue and Forty-fourth Street, on Monday evening, February 8th, at 8.30 o'clock. There will be a vaudeville entertainment and a supper. Tickets may be obtained by sending $2.00 to E. T. Boag, registrar, 437 West Fifty-ninth Street, on or before Friday, February 5th.

The Eastern Dispensary and Hospital Association, of Brooklyn, at its annual meeting on January 17th, elected the following officers: President, James F. Bendernagel; vice-presidents, Casimir Tag, C. W. Wilson; secretary, M. Fackenthal; treasurer, Otto F. Struse. The president appointed the hospital and dispensary staff of physicians and surgeons, as follows: Consultants—G. Ryerson Fowler, M. D.; Jacob Fuchs, M. D.; J. H. Winfield, M. D.; W. Browning, M. D.; Charles Zellhoefer, M. D.; Peter V. Burnett, M. D.; H. R. Price, M. D.; W. G. Russel, M. D.; Ezra Wilson M. D. Hospital staff—S. C. Blaisdell, M. D.; George McNaughton, M. D.; Arthur E. Saylio, M. D. Hospital staff assistants—J. Horni, M. D.; H. V. Duggan, M. D.; C. H. Tag, M. D.; A. W. Lawrence, M. D.; G. W. Kessler, M. D. Dispensary staff—A. Arbona, M. D.; E. C. Bernauer, M. D.; J. F. Halpin, M. D.; J. Cole Hancock, M. D.; A. F. Konther, M. D.; Stephen Latz, M. D.; E. S. Morton, M. D.; Ferdinand Siegel, M. D.; G. W. Vandegrift, M. D.; Adolph Wieber, M. D.; G. F. Weygandt, M. D. House staff—House surgeons, G. S. Mothersill, M. D.; F. Rochford, M. D.; ambulance surgeon, Charles Shanks, M. D.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g Jan. 16.		Week end'g Jan. 23.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	58	24	106	13
Diphtheria	81	14	65	15
Scarlet fever	124	9	96	11
Typhoid fever	89	13	88	9
Consumption	..	85	..	68
Cerebrospinal fever	..	..	..	..

The Roman Catholic Hospitals, of Philadelphia, have benefited to the extent of $10,000 by the will of the late Harriet Richards.

Druggists Arrested.—Two druggists in Philadelphia have been arrested, charged with forging the signatures of the proprietors of a proprietary article.

The Students' Ward, at the University Hospital, of Philadelphia, has been closed for disinfection, on account of a case of scarlet fever, contracted by a student of the university.

The Episcopal Hospital, of Philadelphia, will come into possession of the estate, valued at $500,000, of the late Henry B. Ashmead, by the will of the latter, at the death of his widow and daughter.

University Hospital, of Philadelphia.—For the third consecutive term, Mr. John Sailer has been elected president of the board of managers of this institution; Dr. James S. Tyson is vice-president, and Miss Marion E. Smith superintendent.

Herb Doctor Refused a New Trial.—Applications for a new trial for George F. Hossey, convicted of murder in the first degree, as accessory before the fact in the poisoning of William G. Danz, and who was known as an "herb doctor," was refused last week in Philadelphia.

Dr. Francis Rudderow, of Philadelphia, was found dead last week on the stairway of his home. He had been ill for some time. He was forty-two years of age, and graduated from the University of Pennsylvania in 1884, where he had been very prominent in athletics. He was connected with several hospitals.

The County Medical Society, of Philadelphia, at its meeting on January 20th, elected as officers: President, Dr. Roland G. Curtin; first vice-president, Dr. B. Franklin Stahl; second vice-president, Dr. Charles P. Noble; secretary, Dr. William S. Wray; assistant secretary, Dr. R. H. Skillern; treasurer, Dr. Collier L. Bower.

Considerable Increase in Smallpox.—The week ending January 23rd showed that hardly a ward in Philadelphia is exempt from smallpox, of which 106 new cases were reported. The mortality appears to be moderate, although it must be remembered that the report of the number of deaths cannot be applied to the number of new cases for the corresponding week.

Officers of the Pædiatric Society, of Philadelphia, for 1904.—President, Dr. John H. Jopson; vice-presidents, Dr. Alfred Hand, Jr., Dr. J. H. McKee, Dr. Charles W. Burr; recorder, Dr. David L. Edsall; secretary, Dr. Charles H. Weber; treasurer, Dr. Herbert B. Carpenter. Executive committee, Dr. D. J. Milton Miller, Dr. Thompson S. Westcott, Dr. Samuel McC. Hamill, Dr. Charles F. Judson, and Dr. A. P. Francine.

New Building for St. Agnes Hospital.—A four story stone building, is to be erected for St. Agnes Hospital, of Philadelphia. It will be one hundred and twenty-five by fifty feet, and over two hundred thousand dollars will be expended in construction and equipment. The basement will consist of the out-patient departments, the first and second floors will contain the private rooms for patients, the third floor, the rooms for nurses, and the children's wards, while the operating rooms and additional wards will comprise the fourth floor.

The Pathological Society of Philadelphia held a regular meeting on Thursday, January 28th, at which the following was the programme: Dr. B. M. Anspach, Tuberculosis of the Breast; Dr. J. M. Swan, A Human Embryonic Vesicle, Showing Early Placenta Formation; Dr. Joseph Sailer, Some Recent Contributions to the Subject of the Pathology of the Liver; Dr. M. Behrend, *(a)* Ruptured Tubal Pregnancy; *(b)* Tumor of the Brain; Dr. W. M. L. Coplin, Changes in the Intercostal Muscles in Pneumonia and Inflammations of the Pleura. D. J. McCarthy, M. D., secretary.

GENERAL

Statement of Mortality in Chicago, Ill., for the Week Ending January 23, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on estimated mid-year populations of 1,950,000 for 1904, and of 1,885,000 for 1903:

	Jan. 23, 1904.	Jan. 16. 1904.	Jan. 24, 1903.
Total deaths, all causes	517	566	551
Important causes of death:			
Acute intestinal diseases	24	19	14
Apoplexy	13	15	14
Bright's disease	32	45	29
Bronchitis	24	27	25
Consumption	66	64	69
Cancer	18	19	14
Convulsions	10	9	8
Diphtheria	7	9	9
Heart diseases	47	50	42
Influenza	4	4	2
Measles	..	..	9
Nervous diseases	29	18	27
Pneumonia	106	117	106
Scarlet fever	3	4	7
Suicide	8	6	6
Typhoid fever	9	9	27
Violence (other than suicide)	16	30	27
Whooping cough	..	1	7

The Craig Colony for Epileptics, at Sonyea, N. Y.—Dr. Donald G. Ross, of Willard, has been appointed assistant physician to the colony at a salary of $150.00 a month.

The Valdosta, Ga., Medical Society was organized on January 12th with the following officers: President, Dr. T. M. Talbot; vice-president, Dr. L. A. Carter; secretary and treasurer, Dr. Steve Harris.

Dr. James W. Van Dusen, of Norwalk, O., who has been assistant surgeon at the Columbus barracks for two years, has been ordered to West Point, where he will undertake medical duty at the military academy.

The New Medical Society of the State of New York.—Onondaga county will have the honor of being the first county to vote on the resolutions proposed by Dr. Jacobi to accomplish the amalgamation of the two societies, and to adopt the new constitution and by-laws, for it has already fixed Friday night, January 29th, for this purpose. At this meeting, also, an address on the subject of Appendicitis will be given by Dr. Howard Kelly, of Johns Hopkins Hospital, Baltimore. Dr. Kelly will be entertained at dinner by the society.

Consolidation of Medical Papers.—The *Northwestern Lancet* announces in its current issue its coming consolidation with the *Medical Dial.*

The Louisville Society of Physicians and Surgeons held its annual banquet on January 21st, after which the following officers were elected: President, Dr. A. M. Barnett; vice-president, Dr. P. J. Yeager; secretary, Dr. Dunning Wilson.

The Michael Reese Hospital, of Chicago, is to have a new $300,000 fireproof building. The recent disaster at the Iroquois Theatre has made the trustees suspicious of the safety of the present structure.

The Jefferson County, N. Y., Medical Association, at its meeting in Watertown on January 12th, elected the following officers: President, Dr. F. E. Lettice; vice-president, Dr. A. J. Dick; secretary, Dr. Wilmer Pinsonneault; treasurer, Dr. C. C. Kimball.

The Milwaukee, Wis., Medical Society elected the following officers on January 13th: President, Dr. Leopold Schiller; first vice-president, Dr. D. J. Hayes; second vice-president, Dr. W. F. Nichols; secretary, Dr. H. E. Dearholt; treasurer, Dr. A. W. Myers.

Faculty Forced to Grant a Diploma.—A student of Barnes Medical College, St. Louis, Mo., to whom was denied his diploma on account of misconduct outside the college, has obtained a writ of mandamus compelling the faculty to grant his certificate of graduation.

The Jefferson County, N. Y., Medical Society, at its meeting on January 12th at Watertown, elected the following officers: President, Dr. R. L. Gray, of Clayton; vice-president, Dr. E. S. Willard, of Moline; treasurer, Dr. C. M. Rexford, of Moline; secretary, Dr. F. R. Calkins.

The Southwestern Minnesota Medical Association, at its sixteenth annual meeting at Luverne, on January 15th, elected as officers: President, Dr. F. Y. Weiser, of Windom; vice-president, Dr. C. O. Wright, of Luverne; secretary and treasurer, Dr. H. D. Jencks, of Pipestone.

The Wyoming County, N. Y., Medical Association, at its annual meeting on January 14th, elected the following officers: President, Dr. Lyman C. Broughton, of Castile; vice-president, Dr. Z. J. Lusk, of Warsaw; secretary and treasurer, Dr. L. H. Humphrey, of Silver Springs.

The Chenango County, N. Y., Medical Society, at its annual meeting on January 15th, elected the following officers: President, Dr. Homer E. Smith, of Norwich; vice-president, Dr. L. B. Palmiter, of Mt. Upton; secretary, Dr. F. O. Spooner, of Sherburne; treasurer, Dr. S. M. Hand, of Norwich.

The Fox River Valley, Wis., Medical Society, at its meeting on January 19th, elected the following officers: President, Dr. J. R. Minahan, of Green Bay; first vice-president, Dr. A. C. Mailer, of Depere; second vice-president, Dr. Edward Sawbridge, of Stephenson, Mich.; secretary and treasurer, J. S. Reeves, of Appleton; censor, Dr. W. R. Hicks, of Menominee, Mich.

Wisconsin State Board of Health.—Governor La Follette has appointed Dr. Haso Mellike, of Clintonville, a member of this body to succeed Dr. J. W. Harrison, of Ashland, whose term has expired. The appointment is for a term ending in February, 1910.

The Branch County, Mich., Medical Society, at its recent meeting in Coldwater, elected the following officers: President, Dr. S. H. Clizbe, of Coldwater; vice-president, Dr. W. H. Whittemore, of Quincy; secretary and treasurer, Dr. Samuel Shultz, of Coldwater.

The Chatham County, Ga., Medical Society, at its meeting in Savannah on January 6th, elected the following officers: President, Dr. J. Lawton Hiers; first vice-president, Dr. George R. White; second vice-president, Dr. Ralph M. Thomson; recording secretary, Dr. Ralston Lattimore; corresponding secretary, Dr. J. O. Baker; treasurer, Dr. W. J. Williams.

The Consolidation of the New York State Medical Society with the New York State Medical Association was the subject of the first bill signed by Governor Odell in 1904. The bill, presented by Senator Elsberg, provides that a majority vote of the two societies shall be necessary before consolidation shall be complete.

The Kentucky Midland Medical Society held its regular quarterly meeting at Georgetown on January 15th and elected the following officers: President, Dr. John A. Lewis, of Georgetown; vice-president, Dr. H. H. Roberts, of Lexington; secretary and treasurer, Dr. D. B. Knox, of Georgetown.

The Upper Mississippi Valley Medical Association, at its meeting at Little Falls, Minn., on January 15th, elected the following officers: President, Dr. J. J. McKinnon, of Wadena; vice-president, Dr. J. G. Millspaugh, of Little Falls; secretary, Dr. J. A. Thabes, of Brainerd; treasurer, Dr. O. J. Batcheller, of Brainerd.

The Kalamazoo, Mich., Medical Academy elected the following officers on January 12th: President, Dr. L. G. Rhodes, of South Haven; first vice-president, Dr. Paul G. Butler, of Alamo; second vice-president, Dr. M. P. White, of Dowagiac; secretary, Dr. Della P. Pierce, of Kalamazoo; treasurer, Dr. O. B. Ranney, of Kalamazoo.

The Dutchess County, N. Y., Medical Society, at its meeting in Vassar Institute, Poughkeepsie, on January 13th, elected the following officers: President, Dr. H. L. Cookingham, of Red Hook; vice-president, Dr. J. H. Cotter, of Poughkeepsie; secretary, Dr. Robert M. Andrews, of Poughkeepsie; treasurer, Dr. D. B. Ward, of Poughkeepsie.

Dr. Grinnell Wins Suit.—Dr. Ashbel P. Grinnell, of Burlington, Vt., former dean of the medical faculty of the University of Vermont, who was arrested some time ago at the instance of a man who had been swindled and took the physician for the swindler, has recovered damages in the sum of $12,000. Mrs. Grinnell, who was arrested along with the doctor, will bring a similar suit.

Dr. Edward B. Dana, of Metuchen, N. J., died at his home on January 21st, at the age of 43 years, from an attack of pneumonia, having been ill but a few days. Dr. Dana was a native of Metuchen; a graduate of Rutger's College class of 1881, and of the College of Physicians and Surgeons, New York city, class of 1889. He was a member of the Middlesex County and New Jersey State Medical Societies, serving the former as its vice-president in 1891 and as its president in 1892. He leaves a widow and one son.

Mortality of Michigan During December, 1903.—There were 2,942 deaths returned to the department of State for the month of December, or 319 more than reported for the previous month. The death rate was 14.1 per 1,000 population, as compared with 12.9 for November. There were 490 deaths of infants under one year, 191 deaths of children aged one to four years, and 944 deaths of elderly persons aged sixty-five years and over. Important causes of death were as follows: Tuberculosis of the lungs, 158; other forms of tuberculosis, 33; typhoid fever, 48; diphtheria and croup, 96; scarlet fever, 17; measles, 16; whooping cough, 23; pneumonia, 376; influenza, 49; cancer, 151; accidents and violence, 182. There was a decrease in the number of deaths reported from typhoid fever, and the usual seasonal increase in deaths from pneumonia and influenza. There were no deaths from smallpox during the month. One death from chickenpox was reported from Highland township, Osceola county.

The District Medical Society for the County of Middlesex, State of New Jersey, held a regular meeting in South Amboy, on January 20th, at the residence of Dr. E. E. Haines. The business transacted included action to harmonize its constitution with that of the State society; the exhibition of the new charter granted by the State society, and resolutions to support action by the legislative committee of the State society, in opposing any legislation that will recognize osteopathy as the practice of medicine. In the scientific section, a report, by Dr. H. M. Bruce, of Perth Amboy, on the progress of obstetrics and gynæcology during the year caused much discussion of its particular points, and, because of its value, was made the principal subject of discussion for the next meeting. The present officers of the society are: President, W. E. Ramsay, of Perth Amboy; vice-president, F. M. Donahue, of New Brunswick; secretary, W. M. Moore, of New Brunswick; treasurer, D. C. English, of New Brunswick.

Changes in American Electrotherapeutic Association.—The requirements for membership in this association are now as follows: A candidate for election to ordinary fellowship in the American Electrotherapeutic Association must be a graduate of a recognized medical college, and a member in good standing of his regular county and State medical societies. He must fill out and sign the regular application blank, secure the endorsements of two members of the association in the spaces provided upon the back of the application, and forward the same to the secretary, accompanied by five dollars, which constitutes the first year's dues. If the applicant is not elected, the five dollars will be returned to him; if he is, he will be admitted to full membership and a certificate of membership forwarded to him inside of thirty days after the receipt of his application. The officers are: President, Alfonso David Rockwell, A. M., M. D., of New York; first vice-president, Willis Parsons Spring, A. B., M. D., of Minneapolis, Minn.; second vice-president; William Winslow Eaton, A. M., M. D., of Danvers, Mass.; treasurer, Richard Joseph Nunn, M. D., of Savannah, Ga.; secretary, Clarence Edward Skinner, M. D., LL. D., of New Haven, Conn. The admission fee has been dropped, the executive committee has been empowered to elect candidates to full fellowship immediately after investigation as to eligibility, a certificate of membership suitable for framing will hereafter be issued to all members, and manufacturers' exhibits of instruments will hereafter be a feature of the conventions. The next (fourteenth) annual convention will be held at St. Louis, Mo., on September 13, 14, 15, and 16, 1904, when the scientific sessions will be held in the mornings only, to allow the members to visit the exposition during the afternoons.

Seventh International Congress of Otology.—This congress will meet at Bordeaux, France, August 1 to 4, 1904, under the patronage of the Minister of Public Instruction, the official languages being French, English, German, and Italian. A museum of instruments, and anatomical and pathological specimens of diseases of the ear, nasal fossæ, and nasopharynx will be a feature, and the address to which such are to be sent will be furnished later. Those who intend to go to the congress are requested to send their names before May 1st, while physicians who wish to favor the meeting with addresses will please, after becoming members of the congress, send a summary of the paper they desire to read. Papers intended for the congress must not exceed fifteen minutes in the reading, or else must be read as a summary. The following reports are in the order of business: A Simple and Practical Acoumetric Formula; Diagnosis and Treatment of Suppurations of the Labyrinth; Technics of the Opening and Subsequent Treatment of Otogenous Cerebral Abscess. The subscription, which will entitle the member to a copy of the proceedings, is 25 francs ($5.00), which must be paid to the treasurer, Dr. Lannois, 14 Rue Emile Zola, Lyons, France. The general secretary, Dr. Lermoyez, 20½ Rue La Boétie, Paris, will be glad to know if intending visitors will be alone, or accompanied by their wives and children or other relatives.

The Lenval Prize, amounting to the interest for two years on 3,000 francs, will be given to the author, showing the greatest progress in the practical treatment of diseases of the ear, or who has invented the most useful portable instrument for the treatment of such diseases during that time. Among the judges of this contest is Dr. St. John Roosa, of New York. Contestants must send their names before July 1, 1904, to Dr. E. J. Moure, 25 Cours du Jardin Public, Bordeaux, France.

Pith of Current Literature.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT.

December 22, 1903.

1. Premature Separation of the Normally Located Placenta, By G. SCHICKELE.
2. Cause of Human Actinomycosis, By KARL DŒPKE.
3. Are Rest Cures Necessary? By K. BORNSTEIN.
4. Juvenile Tabes and Hereditary Syphilis, By C. HARTMANN.
5. Unusual Cause of Dystocia, By J. SAKS.
6. Sterilizable Insufflator and Tongue Depressor, By DREHER.
7. Rapid Fixing and Imbedding, By MAX BEHR.
8. New Apparatus for Simultaneous Lavage and Distention of the Stomach, By ROSENAU.
9. Structure and Significance of Bacteria, By PAUL ERNST.

1. **Premature Separation of Placenta.**—Schickele narrates ten cases of this accident and enlarges upon the symptoms and pathology. He believes that in those cases in which external bleeding appears suddenly and abundantly, there has been a previous separation of the placenta from the uterine wall with a hæmorrhage, the blood slowly working outward. He states that internal or external hæmorrhage alone never takes place, but that they are simultaneous or the external appears later than the internal. It does not necessarily follow that in such a case the placenta must be born immediately after the child, but the third stage of labor may run its normal and usual course.

2. **Human Actinomycosis.**—Dœpke sums up his conclusions by saying that the mould of actinomycosis grows on all media, best on glycerin agar at the bodily temperature. The development of the mould starts with the nuclei which grow lengthwise and divide into two. These divisions grow in pairs until they appear like threads, which grow gradually thinner toward the periphery and assume a club shape; in a few days the threads have the same calibre throughout with many branchings; they finally segment and become rods. The actinomyces derived from fresh human pus differ from those obtained by culture by being thinner, by the manner of their attachment to the mould-threads and by not being stained by Gram's method. It has been proven that actinomyces have been found in carious teeth, and it is essential therefore to insist upon dentists sterilizing their instruments after each use.

3. **Are Rest Cures Necessary?**—Bornstein insists that in cases of emaciation and of neurasthenia, the Weir-Mitchell rest cure may be of service, as well as in cases of movable kidney, where it is desired to get all the fat necessary for the support of the displaced organ. Instead, he gives albumen in large quantities—not meat, on account of its extractives—to produce an excess of proteids which cause the cells to overwork and thus to rid themselves of their vicious contents. Iron is given at the same time, preferably in the form of iron and quinine. He says that isolation, nurses, hydrotherapy, mechanotherapy, and electrical treatment are all unnecessary, and that without them certain and lasting results can be obtained.

5. **Unusual Cause of Dystocia.**—Saks reports a case of a primipara who presented herself at the clinic in labor. Examination was exceedingly difficult, but the diagnosis was made of an ovarian cyst pressed downward by the labor pains closing the vagina and pressing the uterus upward. The abdomen was opened and the tumor was found to be a volvulus with gangrenous intestine. The woman was delivered by Cæsarian section, but died on the following morning.

DEUTSCHE MEDIZINISCHE WOCHENSCHRIFT.

December 25, 1903.

1. Technics of Disinfection of the Hands, By E. BRAATZ.
2. The Arsenic Habit, By W. HAUSMANN.
3. Exanthemata Following the Injection of Diphtheria Antitoxine, By OBERWINTER.
4. Tabetic Osteoarthropathy of the Spinal Column, By GRÆTZER.
5. Prosthesis by Vaseline or Hard Paraffine, By H. ECKSTEIN.
6. "Hard, Traumatic Œdema" of the Dorsum of the Hand, By R. GRUENBAUM.
7. Action of Mesatan, By SEMBRITZKI.

1. **Disinfection of Hands.**—Braatz uses a running solution of alcoholic bichloride, controlled by foot pressure, and fluid soap. For each washing, he uses a new, freshly boiled brush and brushes off the fingernail file after each use, on a sterilized cotton sponge.

2. **Arsenic Habit.**—Hausmann found on experiment only a moderate tolerance of arsenic on the part of human beings, immune chickens and dogs, with very decided individual differences. On withdrawal of the drug, there seems to be no particularly bad influence objectively or subjectively.

3. **Exanthemata Following Diphtheria Antitoxine.**—Oberwinter, in 200 injections of diphtheria antitoxine, frequently saw transitory exanthemata. In five instances, the eruption was general, simulating measles, rötheln or exudative erythema. In twenty-three cases, a scarlatiniform rash was noticed. As to the differential diagnosis, the author says that the first appearance of the eruption at the site of injection does not militate against the disease being scarlet fever. If the exanthem appears within five days after the injection, the likelihood of scarlatina is increased; a genuine double infection of scarlet and diphtheria is not uncommon.

BERLINER KLINISCHE WOCHENSCHRIFT

December 28, 1903.

1. Syphilitic Inoculation of an Anthropoid Ape, By O. LASSAR.
2. Indications for Extirpation of the Spleen, By JORDAN.
3. Tuberculosis and Pregnancy, By W. HAHN.
4. Bismutose as an Intestinal Astringent, By P. COHNHEIM.

1. **Syphilitic Inoculation of an Ape.**—Lassar

excised a primary chancre from a man and inoculated it into a chimpanzee. Ulcers appeared on the brows and the forehead, and condylomata appeared about the anus. Efflorescent eruptions were noted in the arms and legs, and microscopical examination of superficial blood vessels showed the same form of endarteritis as is seen in human syphilis. Lassar believes the inoculation to have been successful. The photographs accompanying the article show well the nature of the lesions.

2. **Indications for Splenectomy.**—Jordan says that simple splenic hyperplasia is regarded as a disease entity and in ten cases reported, all were cured by removal of the organ. In Banti's disease, a combination of hepatic cirrhosis and splenic hyperplasia, an indication exists for splenectomy. Of seventeen cases so operated on, fourteen were cured. Splenectomy is also indicated in cases of wandering spleen in which the organ is diseased. If it is healthy, however, splenopexy is to be preferred. A rare indication for the extirpation of the spleen is found in cases of splenic necrosis with perisplenetic suppuration such as is seen after injuries, and the operation is also justified in cases of intrarenal suppuration as a result of hæmatogenous infection. The seven cases thus far operated for these reasons have all recovered.

3. **Tuberculosis and Pregnancy.**—Hahn concludes that tuberculosis is unfavorably affected by pregnancy, the more so the more frequent the pregnancy. The prevention of conception by tuberculous women is one of the duties of sanitarians and physicians. If pregnancy takes place, however, the woman must be carefully watched, and if she becomes worse, the question of the induction of labor must be considered on the ground that the mother's life is more valuable than that of the unborn child. In the later months of pregnancy, however, the induction of labor may be a serious thing for the mother and as she may give birth to a healthy child, she may be allowed to go to full term or as long as necessary to preserve the life of the child. Pregnant tuberculous women should come first in the public care of the tuberculous poor, for they are under special stress and strain.

ZENTRALBLATT FUER GYNAEKOLOGIE.

December 26, 1903.

1. Eclampsia and Vaginal Cæsarean Section, By F. Ahlfeld.
2. Permanent Cure of Uterine Cancer, By N. Flaischten.
3. Disinfection of Obstetric Instruments, By C. J. Gauss.
4. Illumination of the Pelvis and Vagina During Operations. By V. Frommer.

1. **Eclampsia and Vaginal Cæsarean Section.**—Ahlfeld opposes the vaginal method of Cæsarean section for eclamptic patients and argues that medical measures are more satisfactory and less likely to injure the patient. He narrates a number of cases which went to a successful termination by the use of hot packs, stimulation, and morphine, at the same time stimulating uterine contraction by means of rubber bags. He is opposed, also, to the use of Bossi's steel dilator in this class of case, preferring the slower but safer method of employing Champetier-de-Ribes's bags.

2. **Cure of Uterine Cancer.**—Flaischten is an ardent advocate of vaginal extirpation of the cancerous uterus, affirming with Winter that early operation is preferable to and accomplishes more than extensive operation. He emphasizes the necessity of early recognition of the disease and prefers the vaginal to the abdominal route. He reports cases operated by himself and by Ruge in which the patients have remained well from seven to eighteen years. Of the seventeen permanently cured women, twelve remained well over ten years and nine more than thirteen years. Nine of the patients had a cancer of the cervix, six of the uterine body and in two the cervix and endometrium were both involved.

4. **Illuminating Specula.**—Frommer has devised four specula with electric light attachments for illuminating the pelvis during laparotomy operations and the vagina when that is invaded surgically. They are intended respectively for the anterior and posterior vaginal walls, for the abdominal wound, and for the incision in the anterior or posterior vaginal wall.

PRESSE MEDICALE.

December 19, 1903.

Sleeping Sickness, By C. Jarvis.

Sleeping Sickness.—Jarvis studied personally three negroes from the French Congo. His conclusions are: The disease is due to the introduction into the blood and cerebrospinal fluid of a variety of trypanosoma, the febrile trypanosomiasis of the western coast of Africa being probably its initial stage. Monkeys catch the disease easily, dogs and rats with difficulty, asses, oxen, goats, sheep, and guinea pigs not at all. The trypanosoma is transmitted from the invalid to a healthy subject by the tsetse fly, *Glossina palpalis*, and in no other manner, the distribution of the insect coinciding with that of the disease.

December 23, 1903.

1. History of a Nail and a Prune Stone Caught in the Bronchi, By Marcel Lermoyez, and Jean Guisez.
2. A Case of Amœbic Dysentery, By H. Vincent.

1. **Foreign Bodies in the Bronchi.**—Lermoyez and Guisez speak of their helplessness, a few years ago, in the case of a girl who inhaled a fruit stone, both diagnostically and therapeutically; and of their success during the past year in removing a nail from the bronchus of a carpet layer. They located the nail by means of the x rays and Killian's bronchoscope and withdrew it per tracheam with a specially constructed magnet passed through the bronchoscope. The technical use of the latter is simpler than that of the laryngoscope; its use is superior to bronchotomy by exactly 100 per cent. (!) The bronchoscope will probably revolutionize treatment of the bronchi. The authors, speaking of the opposition to its use, recall the similar fight against laryngoscopy, and deprecate *a priori* reasoning in science, stating that all surgical advance is due to novel technics.

REVISTA DE MEDICINA Y CIRUGIA PRATICAS.

1. The Thyreoid and Paralysis Agitans, By D. JOSÉ CODINA CASTELVI.

1. **Paralysis Agitans.**—Castelvi draws the following conclusions as to the relation of the thyreoid gland to paralysis agitans: (1) There are points of resemblance and clinical facts which justify the consideration of paralysis agitans as a toxic affection. The predominance of symptoms of nervous origin, especially tremor, constitutes a point of resemblance between paralysis agitans and other intoxications (alcohol, mercury, lead, etc.): variability and uncertainty in the lesions found in the nervous system are clinical facts. (2) The constancy with which there is lacking in the ætiology of the affection an exogenous poison to which it might be ascribed is a powerful reason for supposing that it is due to a toxic substance developed within the organism. (3) The tremor and sensations of heat, common to Basedow's disease and paralysis agitans, justify the supposition that the autointoxication depends upon some disturbance of the thyreoid body. (4) The association of myxœdema and exophthalmus with paralysis agitans lends support to the hypothesis that Parkinson's disease depends upon an autointoxication of thyreoid origin. (5) The two autopsies performed by us in paralysis agitans contribute confirmation to this hypothesis; lesions of the thyreoid being striking; in one case a sclerotic condition having reduced the gland to nine grammes and a colloid cystic condition being found in the other. (6) Additional confirmation of this hypothesis was seen in the effect of administration of thyreoidine: consisting in disappearance of sweating, marked diminution of tremor, especially that which accompanied voluntary movements, noticeable improvement in the gait, and increase in the arterial tension. (7) From these personal observations, it may be affirmed that paralysis agitans is of thyreoidal origin of autotoxic nature. (8) The idea of its autotoxic nature is the most rational, and is based upon two findings in pathological anatomy; constancy of lesions in the thyreoid and diversity and uncertainty of pathological localization in the central nervous system

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

November 1, 1903.

1. Note Concerning Some Cases of Scarlet Fever, By GUIDO BERGHINZ.
2. The Value of the "Neck Sign" in Chloroform Narcosis, By G. FRATTI.
3. The Treatment of Anæmia, By LUIGI CAMUZZI.
4. Autoserumtherapy in Exudative Pleurisies, By G. DONZELLO.
5. A New Complication of Parotiditis, By FRANCESCO ORTA.
6. A Case of Comatose Pernicious Anæmia, By FERRUCCIO BINDI.

1. **Scarlet Fever.**—Berghinz reports his observation in an epidemic of ninety cases of scarlet fever. In the majority of these cases there was acute hæmorrhagic nephritis. In many of these cases the other symptoms of scarlet fever were very mild, e. g., the angina—and the diagnosis was rendered difficult in a whole series by the absence or faintness of the eruption. In a large number of cases hæmorrhage nephritis came on without any preceding disturbances whatever. In other cases the chief symptom was an adenitis, without any or with only a very faint eruption. In some cases the eruption was morbilliform, but in all, the bacteriological examination of the blood was negative. Acute hæmorrhagic nephritis was found in all these. In one case there was this form of nephritis with suppurative mastoiditis, without any eruption, but other cases of scarlet fever in the family revealed the nature of the disease.

2. **Value of the "Neck Sign" in Chloroform Anæsthesia.**—Fratti says that the value of the so-called "neck sign" of Bonneau in giving chloroform anæsthesia has been overestimated by the last named author. This sign consists in observing the tonicity of the neck muscles in narcosis. These are at first in a state of contraction, then they pass into a state of contracture which is reflex, induced by the operation or the preliminaries thereto: next the muscles are in a state of tonicity and finally they become relaxed in extreme anæsthesia. The anæsthetist must keep the neck muscles in a state between the rigid tonicity and the absolute flaccidity mentioned. Fratti, however, points out that the contraction or flaccidity of the neck muscles in chloroform anæsthesia is a matter of individual peculiarity, and by no means in constant relation to the depth of the anæsthesia. He therefore considers the well-known signs of the pulse and respiration, the pupil and corneal reflexes, as much more reliable than the so-called neck sign.

4. **Autoserumtherapy in Pleurisies with Effusion.**—Donzello injected from 1.5 to 3 c. c. of serum taken from the pleural cavity into the skin of the same patient in five cases of pleurisy with effusion, the amount of serum withdrawn in each case from the pleura being five c. c. Gilbert, in 1894, was the first to try this mode of autoserumtherapy in animals, and obtained a rapid absorption of the exudate. Recently Tschigoyeff used this method in eight cases and obtained very rapid absorption, although in some cases, especially in the tuberculous pleurisies, the injections were followed by a slight rise of temperature. Donzello did not observe this fever in any of his patients, but obtained a prompt disappearance of the exudate after the injections of a small portion under the skin. He noted that in all his cases there was a considerable increase in the amount of urine eliminated by these patients after the injections. He does not pretend to interpret the mechanism of autoserumtherapy. Probably, however, the serum contains all the antitoxic elements that have developed during the inflammatory process in the pleura, and when these are injected into the system they impede the action of the germs causing the pleurisy.

RIFORMA MEDICA.

November 18, 1903.

1. Contribution to the Study of Musical Endocardial Murmurs, By C. Cavazzeni.
2. Remarks on the Bacteriological Examination of the Fluid in Strangulated Herniæ, By A. Rodella.
3. Two Cases of Ulcus Rodens, By V. Caspli.
4. A Contribution to the Elimination of Formaldehyde, By E. Gianelli.

1. **Musical Heart Murmurs.**—Gavazzeni discusses the origin of the musical heart murmurs. There are two elements necessary for the production of a musical murmur—the vibration of the column of blood and that of the valvular tissue. The simplest case of a musical murmur is when the valve ruptures partly, as the result of emotion, physical strain, etc. If the rupture is regular in outline, a musical sound is produced, and this has been experimentally proved in animals by Rosenbach. The ruptured part becomes thickened or calcified and acts similarly to the lamina of a reed in producing a musical sound which is often appreciated by the patient himself. Another source of musical murmurs, and a more frequent one, are small, regular, foramina occurring in the valvular membrane. If these are irregular, the murmur is not musical in character. A diastolic musical murmur is also heard in cases of pure aortic insufficiency without any valvular lesions, i. e., due to an atheroma of the aorta beginning just at the insertion of the valve (Hoydson's disease). This is explained by the fact that when a stream of fluid passes from a wide into a narrow tube and there is a dilated portion at the point of transition, there is formed a retrograde current. The latter impinges upon the atheromatous rigid walls of the aorta, which is dilated and produces the sound. Polypoid growths on the valves, also, may give rise to musical aortic diastolic murmurs. Mitral diastolic musical murmurs may be due to abnormal tendinous fibres running across the ventricle, although some deny this possibility. The fact that these sounds last through the systole shows that the tendinous fibres have nothing to do with them, as, in that case, the moment the systole began, the cords would be relaxed and the sound abolished. In some cases, however, the tendinous cords may play a rôle in the production of musical sounds, i. e., when one end of the cord is inserted into a valve flap. The cords gradually become contracted as the connective tissue increases in their structure, and they draw the valve flap on with them, so that the orifice becomes insufficient. The result is that the valve at that point becomes tense and readily vibrates.

2. **Bacteria in the Hernia Fluid of Strangulated Herniæ.**—Rodella has found that, even in hernias that have been incarcerated for a long time, the fluid may remain sterile. The author used both anaerobic and aerobic cultures, so as to exclude all possible germs. As the intestinal walls are permeable to bacteria, this sterility of the hernial fluid has been attributed by most authors to a bactericidal power in this fluid. This power was found *in vitro* to be very weak, and the fact remains that, in some cases of strangulated hernia, the fluid contains bacteria and in others it does not. The best explanation of this, according to Rodella, is to be found in the investigations of Kohlenbrugger, who found that the small intestine in fasting animals was sterile, and that wherever there was food there were bacteria. This question has been experimentally studied on animals, but the importance of the subject demands its thorough study in man as well.

4. **The Elimination of Formaldehyde.**—Gianelli's communication is of interest in connection with the recently introduced drugs that act through their formalin element, which is supposed to be eliminated as such. Gianelli says that the elimination of formaldehyde as such has never been demonstrated. Thus, Perrando found that unchanged formalin could not be shown to be present in the urine, the expired air, or the tissues. Filippi and Motolese found, on the other hand, that formalin was eliminated in the tears and the internal organs as such, but they used Polacci's new reagent for formaldehyde (a solution of sulphuric acid and codeine), which, as Gianelli has shown in a previous paper, is not trustworthy. Gianelli's present investigations lead him to conclude that formaldehyde is not eliminated as such from the organism, but probably undergoes oxidation in the tissues. Polacci's reagent gives, as Gianelli found, the same reaction with mucin and mucinogen as with formaldehyde, and this was the source of error in the previous investigations.

December 2, 1903.

1. Artificially Reconstructed Joints with Metallic Supports (Neoarthroses) (*To be continued*), By G. Pascale.
2. —Psoriasis and Incipient Desquamative Dermatitis. Prurigo and Pruriginous Affections from the Modern Viewpoint, By R. Campana.
3. A Case of Aneurysm of the Superior Mesenteric Artery, By M. Foa.
4. Cerebrospinal Meningitis in Central African Negroes, By M. Levy-Bianchini.
5. Symmetrical Infectious Cryptogenic Phlebitis with a Severe Prephlebitic Pulmonary Syndrome. By A. Campani.

2. **Psoriasis and Pruritic Affections.**—Campana says that, in psoriasis with desquamation, eczema, and prurigo, the lesions depend upon a modification in the nervous system. In true prurigo, however, the itching should be considered as a direct symptom of the disease which is derived from the nervous changes, just as that other symptom of prurigo, the cutaneous dystrophism is. On the other hand, in eczema, and in psoriasis, when it has become malignant, the itching is the result of anatomical conditions in the skin.

3. **Aneurysm of the Superior Mesenteric Artery.**—Foa reports the case of a man, aged thirty-seven years, who had noticed two years previously a pulsating growth in his abdomen. This increased and gradually gave rise to pains in the loins and the thighs on the left side, impeding walking. The growth was situated in the left epigastric region, was smooth and rounded, and pulsated synchronously with the systole. It was too movable to permit a diagnosis of aneu-

rysm of the abdominal aorta. Aneurysms of branches of the aorta are rare. On laparotomy it was found, however, that there was an aneurysm of the superior mesenteric artery. The sac was filled with suture wire of an alloy of three metals, as used in the author's hospital, the wire being passed in through a trocar. The patient recovered from the operation and the tumor became more fixed and harder after this procedure.

4. **Cerebrospinal Meningitis in Central Africa.**—Levy-Bianchini gives a vivid account of the case of cerebrospinal meningitis which he diagnosticated postmortem in a negro girl in Central Africa. In July, 1901, he was the official physician of Congo Free State, at Lusambo, the capital of the district Lualaba-Kassai, the sanitary supervision of which was intrusted to him. A girl aged twelve years had died suddenly after a violent illness, with vomiting, convulsions, etc., and her family suspected poisoning by some enemy, as is frequently the case in the Congo. The author, called as an expert by the magistrate, could not find any external evidences of poisoning, but obtained permission for an autopsy, which is contrary to the civil code of the State. He found the characteristic lesions of cerebrospinal meningitis, and injected some of the pus from the cranial cavity into monkeys and dogs, producing rapid death from septicæmia. He had no microscope and his armamentarium consisted of a few drugs and a pocket-case of instruments.

December 9, 1903.

1. The Protective Effect of the Leucocytes Against Bacterial Poisons, By S. Capellani.
2. Aneurysm of the Splenic Artery. Elastoma of the Tunic, By G. Tarozzi.
3. The Antitoxic Action of Iodine Against Tuberculin, By O. Spadoni.

1. **The Protective Action of Leucocytes.**—Capellani proceeded as follows in order to test the protective effect of leucocytes against bacterial toxines. He induced a local infection in an animal and knowing that there is a leucocytosis at the point of infection, injected at or near that point a definite dose of toxine, observing the result as compared to that obtained without any leucocytosis with the injection of the same toxine. The poison which he selected was the diphtheria toxine, because this can be so accurately dosed. The controls in which there was no previous inflammatory leucocytosis died soon after the toxine was injected, showing at autopsy all the signs of diphtheritic infection. On the other hand, the other animals died of streptococcus infection, showing that the diphtheria toxine although injected in doses twice as large as in the controls, had not taken effect. This shows that the leucocytosis induced a resistance against the diphtheria toxine. Other experiments were conducted with leucocytosis induced by the injection of turpentine, or of lactic acid, and then of diphtheria toxine, the results being the same as in the first series. The question arises whether the injection of these substances or of streptococcus cultures protects against the diphtheria poison in virtue of the leucocytosis or in virtue of a general state induced by the first injections. Non-bacterial substances, such as ricin, are capable of inducing states of comparative immunity, and it is possible that turpentine and lactic acid also possess this same property. But the time that had elapsed in these experiments between the injections of turpentine, lactic acid, and streptococcus cultures and the test injections of diphtheria toxine was so short, that the development of an artificial immunity against the diphtheria toxine may be excluded. Other experiments, too numerous to mention here, convinced the author that a substance generated in the leucocytes protects against the bacterial poisons.

3. **Action of Iodine in Tuberculosis.**—Spadoni reminds us that, in 1901, Cavazzani suggested that the action of iodine in tuberculosis, when administered in the form of inhalations, is not merely that of a pulmonary antiseptic, but, that probably iodine has an antitoxic action similar to that which has been demonstrated for it by Brunazzi and Luccesini in typhoid fever. The author, in this preliminary communication, is able to announce that experiments have shown that iodine exhibits an antitoxic action toward tuberculin. He injected a series of guinea pigs on successive days with a solution of Koch's old tuberculin, and at the same time injected into some of these animals, but into different parts of the body, a solution of iodine. Other guinea pigs received the solution of iodine alone and were kept as controls. He found that the guinea pigs injected with tuberculin alone lost weight much more rapidly than those which received the iodine in addition to the tuberculin. Iodine itself has a toxic action and causes loss of weight, as was proven by the controls.

LANCET.

January 9, 1904.

1. The Future of Electrotherapeusis, By Sir I. Owen.
2. Sterility, By P. Horrocks.
3. Seven Cases of Cæsarean Section, By J. B. Hellier.
4. Kelly's Method of Cystoscopy in the Female, By T. Wilson.
5. Glandular Fever, By J. W. Byers.
6. Pathogenesis of Deafness Due to Chronic Non-suppurative Middle Ear Disease. (Synonyms: Sclerosis of the Middle Ear, Dry Middle Ear Catarrh, Otosclerosis, Fixation of the Stapes, Otitis Media Insidiosa, Chronic Progressive Deafness, etc.), By D. C. Watson.
7. The Operative Treatment of Hernia in Infants and Young Children. Illustrated by One Hundred and Fourteen Consecutive Cases, By R. Campbell.
8. Tuberculosis of the Tonsils in Children, By L. Kingsford.
9. Preliminary Note on the Prophylactic Action of Garlic Against Tuberculous Diseases, By G. Carazzani.

2. **Sterility.**—Horrocks states that for the successful production of a child, it is necessary that there should be: (1) a living ovum; (2) one or more living spermatozoids; (3) that these two should meet and coalesce; (4) that the meeting place should be a suitable one; (5) that the ovum after impregnation should anchor inside the uter-

ine cavity; (6) that the human nest (endometrium) should be healthy; and (7) that there should be nothing to prevent the uterus from developing to term, or, at all events, to such a time that the child is viable. Now anything interfering with any of the above conditions is capable of causing sterility. Fat women are apt to be sterile, as obesity seems to connote imperfect action of the ovaries. Too much and too rich food, anæmia, interbreeding, are all apt to cause sterility through interference with the proper maturation of the ova. In about one out of ten cases sterility is the fault of the husband, living spermatozoids being either absent from his semen or feeble and scanty in number. But probably ninety-nine per cent. of all cases of sterility are due to some cause which prevents the spermatozoid and ova from meeting. A double salpingitis causes sterility in this way; prostitutes are sterile largely through gonorrhœal mischief in the tubes. The power of travelling on the part of the spermatozoid is also of great importance. Coitus is by no means synonymous with conception; probably the best time for a successful coitus is a day or two before the " menstrual aura." The Fallopian tubes may be bent, distended with fluid, or even after the ovum reaches the uterus, there may be present a gonorrhœal endometritis which will kill it. In imperforate hymen and absence or occlusion of the vagina, the spermatozoids are also prevented from reaching the ovum. Vaginismus or dyspareunia may result in the entire ejection of the semen. Chronic vaginitis, either simple or gonorrhœal, is a prolific cause of sterility, acting by killing the spermatozoids. Routine vaginal syringing often prevents conception, even when performed hours after coitus and for cleanliness alone. The endometrium must be healthy; where its surface has been destroyed by curetting, it may be incapable of performing its function. Fibroids and other growths in or near the uterus frequently cause sterility. *Treatment.*—Where a woman is healthy and no cause for the sterility can be ascertained and she has not been married for a full three years she should be let alone. A spare diet and plenty of work or exercise are of service. Drugs and alcohol should be let alone, but tonics are often of service. A change of environment is often a cure for sterility; as a rule, a warmer climate is best. When the husband has had syphilis, a course of specific treatment of the wife may be of service. Local treatment depends on the findings of the examination: cure vaginitis, remove tumors, dilate the vagina in vaginismus, curette the uterus for chronic endocervicitis or endometritis, etc. Inflammatory or other troubles of the tubes and ovaritis are hard to get at, and there is little to do (outside of operation) but look after the general health of the patient. And finally advise as to proper coitus and regulate the habits of the woman (use of douches, etc.).

5. **Glandular Fever.**—Byers states that since November, 1903, an epidemic of glandular fever has been prevailing in Belfast. His knowledge of the disease is based on the observation of thirty-three cases. It occurs chiefly among children, the youngest patient being thirteen months, the oldest twenty-five years. The onset is sudden; by the following morning there is sharp fever and pain in the side of the neck; within twelve hours more there is distinct enlargement of the glands beneath and in front of the sternomastoid. In most cases the glands are affected on both sides of the neck. The throat is slightly congested. The glands do not suppurate, and the swelling subsides in a week or two. There is no rash and the disease is never fatal. The poison of glandular fever is probably microbial. The author states that there were no coincident cases of influenza, with which it has been suggested that glandular fever is identical.

6. **Chronic Otitis.**—Watson holds that a closer and more systematic study of cases of deafness due to chronic non-suppurative middle ear disease shows that clinical indications of catarrh can always be found. The different conditions described (sclerosis of the middle ear, atrophic catarrh, otosclerosis, etc.) can be adequately explained as varicants of one morbid process. In his opinion in all cases of chronic nonsuppurative middle ear disease we have to deal with a local reaction to bacterial invasion via the Eustachian tube. Yet the possibility of the coexistence of an infection by the blood stream is admitted, particularly in those cases usually designated as rheumatic or gouty.

8. **Tonsillar Tuberculosis.**—Kingsford has examined the tonsils removed from seventeen children and in seven found evidences of tuberculosis. His conclusions are: (1) that tuberculosis of the tonsils, especially in cases with tubercle elsewhere, is fairly common, though the disease is usually latent; (2) that tonsil tuberculosis may be primary and, indeed, the only seat of the disease in the system, though this is rarely the case; (3) that the usual method of infection is by the blood stream in children from an older focus elsewhere; (4) that infection also may occur by the sputum in children; (5) that when the tonsils are tuberculous the corresponding cervical glands become affected; and (6) that sometimes where it is probable that the infection entered through the tonsils they are quite healthy but the adjacent cervical glands are tuberculous.

9. **Garlic in Tuberculosis.**—Carazzani, who has met with success in treating tuberculosis by means of garlic, states that by feeding guinea pigs with one gramme of garlic daily he was able to render them immune against infection with tubercle bacilli. Control animals showed numerous lesions, while the garlic-fed guinea pigs showed either a few scattered tubercles, or none at all.

BRITISH MEDICAL JOURNAL.

January 9, 1904.

1. Operative and Expectant Treatment in Ectopic Pregnancy, By G. E. Herman.
2. Abdominal Operations During Pregnancy, By E. T. Thring.
3. On the Operative Treatment of Uterine Myomata, By R. Maclaren.

4. Forcible Dilatation of the Cervix in "Accouchement Forcé," more especially by means of the Bossi and Frommer Dilators, By J. M. M. Kerr.
5. Observations on the Pathogenesis of Gout, By C. Watson.
6. Glandular Fever, By J. W. Byers.
7. Notes on the Distribution of Cancer in the Freebridge Lynn Rural District, By C. B. Plowright.
8. Note on Dr. Primrose's Paper on Filariasis, By Sir P. Manson.
9. The Life-Span of the Guinea Worm, By A. Powell.

1. **Ectopic Pregnancy.**—Herman discusses the indications for operative versus expectant treatment in ectopic pregnancy. If the diagnosis can be made in the very earliest stage before hæmorrhage has taken place, undoubtedly the pregnancy should be removed by abdominal section. But owing to the great difficulty of accurate diagnosis, this operation is and will continue to be, rarely performed. In the next stage, where the chorionic villi have perforated the tube on its peritoneal aspect, and profuse hæmorrhage into the peritoneal cavity occurs, the abdomen should be at once opened and the ruptured tube removed. The operation is one of the simplest and easiest in surgery. In many cases the bleeding takes place into the chorion or the tube, the bleeding soon ceases, and a "tubal mole" results. While nearly all such tubal moles are absorbed, yet the patient is in some danger of death, and in considerable danger of long illness. Perforation or suppuration may occur or a pelvic hæmatocele may form; so that the author advises the removal of the tumor in every case. In cases of pelvic hæmatocele in Douglas's pouch, expectant treatment should be adopted for the first few weeks; in many cases the symptoms will disappear and the tumor decrease markedly in size. When no change takes place recovery will be hastened and made more sure by operation. If the uterus is much displaced and there are other evidences of the effusion being shut in and encysted, the blood can be let out through a vaginal incision. But where the fœtus is still living or the case is complicated, abdominal section may be advisable. In the second half of ectopic pregnancy any untoward event is a very rare thing. Spurious labor, though disagreeable, is not dangerous. The child dies, the liquor amnii is absorbed, and after about six months suppuration begins. It may be prolonged beyond this period, or it may never occur. The removal of an ectopic pregnancy during its second half, while the child is alive, is a very dangerous operation, and should not be performed until after spurious labor has occurred. As soon as symptoms of suppuration appear (fever, etc.) the child should be removed. In certain cases, where the intervening tissues are thin and one pole of the fœtus is downward, it is possible to remove the fœtus per vaginam, thus avoiding the risk of infection of the peritonæum. The placenta need not be removed, as it will gradually come away if the cavity is frequently irrigated.

2. **Operations During Pregnancy.**—Thring holds that all cases of acute infective disease during pregnancy, involving either the appendix vermiformis, the Falloppian tubes, or the gall bladder and bile ducts, should be treated as though the pregnancy did not exist. In support of his views he reports three illustrative cases, one each of appendicitis, demoid cysts, and tubal disease.

4. **Forcible Cervical Dilatation.**—Kerr's views as regards Bossi's or Frommer's dilator are as follows: 1. When the cervix is obliterated and the os will admit the dilator without difficulty, dilatation can be carried out in about twenty-five minutes, and there will be little or no laceration. 2. In cases where the pregnancy has advanced to or near term, even although the cervix is not obliterated, dilatation may be accomplished with comparative safety to the cervix, provided care, time, and patience are expended in the operation. 3. In cases of early pregnancy with the cervix unobliterated there is a decided risk of extensive lacerations, even although the greatest care is taken.

5. **Gout.**—Watson is of the opinion that the clinical features of gout—regular or irregular, acute or chronic—are more adequately explained by the light of our present knowledge of infections, relapses, and immunity than by any other theory. The distinctive features of the infection in gout is that the toxine or toxines have the special property of disturbing nitrogenous metabolism in a manner favorable to the deposit of uric acid in certain tissues. The addition of a bacterial factor to our conception of the disease in no way minimizes the importance of dietetics in its treatment.

AMERICAN MEDICINE.

January 23, 1904.

1. Acute Lobar Pneumonia: An Analysis of 486 Cases, and of 100 Autopsies, By John McCrae, and J. C. Fyshe, and W. E. Ainley.
2. The Blood in Acute Leucæmia, By Louis V. Hamman.
3. A Comparative Study of Fractures of the Extremities, By M. I. Wilbert.
4. Fracture-Dislocation of the Spine, By J. Shelton Horsley.
5. Physical Overexertion, and Its Effects on Health, By John Knott.
6. The Modern Treatment of Wounds, By Walter Lathrop.
7. A Bacteriological Study of the Intestines of Fish, By Edith Loeber.

1. **Acute Lobar Pneumonia.**—McCrae, Fyshe, and Ainley analyze 486 cases of acute lobar pneumonia, and 100 autopsies. The autopsy report is not a continuation of the clinical observations, but a distinct paper in itself. The authors' studies bring out the following points of special interest: (1) Immigrants are specially liable to pneumonia. (2) Outdoor occupations seem to predispose toward an attack. (3) The rigor of onset is infrequent. (4) The spleen is not frequently enlarged.

2. **Acute Leucæmia.**—Hamman reports three cases of acute leucæmia. He has collected from the literature 111 cases, and from the blood pictures, as reported, he divides into four groups: (1) Cases in which the blood picture cor-

responds to that formulated by Fraenkel. (2) Cases in which the small lymphoid cell (the typical lymphocyte) is the predominating element. (3) Cases in which the blood description is too meagre to allow of any classification. (4) Cases with a very irregular blood picture. The blood pictures of each of these groups of cases are discussed at length. The author concludes: There are 3 types of leucæmia, each associated with a typical clinical picture. Between the blood pictures and the clinical pictures there is every grade of transition. Leucæmia running an acute course is nearly always associated with the blood picture described by Fraenkel. When the blood picture described by Fraenkel is observed, it is almost certain that the case will run an acute course. The presence of either of the other typical blood pictures is an assurance—however, not absolute—that the disease will run a chronic course.

4. **Fracture-Dislocation of the Spine.**—Horsley reviews the history of laminectomy. His own opinion as to the advisability of the operation is this: Every case of fracture-dislocation of the spine does not call for operation. At times laminectomy is of the greatest value. McCosh's plan seems excellent. He operates in all cases of complete paralysis below the injury unless there is improvement within twenty-four hours after the injury; when the trauma is specially marked he operates sooner. The author reports six cases of spinal injury.

6. **The Treatment of Wounds.**—Lathrop, in his capacity of railway surgeon, has had to treat 2,000 wounds in the past four years. He details in the paper the methods of treatment that have given him the best results.

MEDICAL RECORD.

January 23, 1904.

1. On Cytodiagnosis in Nervous Diseases, by Charles L. Dana. With a Description of the Technics of Cell Diagnosis, By F. W. Hastings.
2. Lymphocytosis of the Cerebrospinal Fluid, By Joseph Fraenkel.
3. Thorium: A Radioactive Substance with Therapeutical Possibilities, By Samuel G. Tracy.
4. A New and Simple Phototherapeutic Lamp, By Henry G. Piffard.
5. Early Operations in Abdominal Troubles, By Edmund M. Pond.
6. Two Cases of Abdominal Traumatism, By A. B. Atherton.
7. Common Duct Stone without Characteristic Symptoms, By George Emerson Brewer.

1. **Cytodiagnosis.**—Dana reviews the history of lumbar puncture both for diagnostic and therapeutic purposes, and describes quite minutely the normal and pathological constituents of cerebrospinal fluid. The technics of lumbar puncture is discussed. Cytodiagnosis is the study of the cellular elements of the various body fluids. The author is quite enthusiastic as to its possibilities. He has performed lumbar puncture, successfully, upon 22 patients, and now reports the results of microscopical examination of the fluid withdrawn. The author concludes that cytodiagnosis seems, occasionally, likely to be of great help in diagnosticating doubtful cases of paresis and tabes, also in determining whether or not a person has had syphilis and whether symptoms which are supposed to be due to the invasion of the central nervous system by the poisons of syphilis are in reality due thereto. The second part of the paper is by Hastings, and deals exclusively with the technics of cell diagnosis. It is chiefly of interest to the laboratory worker.

3. **Thorium.**—Tracy's paper treats of the therapeutic possibilities of thorium, which is one of the four radioactive substances known. Its radioactivity is many thousand times less than the radioactivity of radium. So is its price. Experiments have shown that thorium emanations are antiseptic, antifermentative, and inimical to germ life. The author describes the method of using thorium emanations in the treatment of tuberculosis. The lung tissue is said to become radioactive, and remain so for about two days after each inhalation. The author does not state what the results on the tuberculous process have been shown to be.

5. **Early Operations.**—Pond makes a plea for early diagnosis and early operation in abdominal troubles. The high mortality in abdominal surgery is due more to delay in operating than to the seriousness of such operations. The author quotes a number of cases in order to show how serious delay may be.

6. **Two Cases of Abdominal Traumatism.**—Atherton reports in detail the following two cases: Case I.—A man, forty-eight years of age, had his small intestine ruptured by being hit in the abdomen by the recoil of a loaded gun. Operation, 16 hours after the injury, was followed by recovery. Case II.—A man, forty-five years of age, was shot through the stomach. Operation was performed twenty-eight hours later and the patient made a good recovery.

MEDICAL NEWS.

January 23, 1904.

1. Interscapulothoracic Amputation for Sarcoma, By Charles A. Powers.
2. Prevention of the Spread of Ringworm, By F. H. Beadles.
3. Cryoscopy of Urine. The Method of Claude and Balthazard, By F. Burthe.
4. The Pathology and Treatment of Osteoarthritis, By Edward M. Merrins.
5. Bovine Tuberculosis, By J. W. Kime.
6. Neurasthenia, By Joseph N. Study.

1. **Interscapulothoracic Amputation for Sarcoma.**—Powers reports his only case of interscapulothoracic amputation for sarcoma. He describes the operation in detail and calls attention to some of the principal difficulties connected with it. His patient recovered. The mortality from this operation is universally acknowledged to be very low. Of 19 cases collected by Barling, and recorded since 1890, all recovered.

2. **Ringworm.**—Beadles makes a plea for more systematic efforts in our attempts to stamp out ringworm. One may acquire the disease from

animals as well as from human beings. Mangy animals should always be looked upon with suspicion. Prophylaxis should extend beyond the home. The author advises the establishment of special schools for children suffering from this disease, such as exist in several European countries.

3. **Cryoscopy.**—Burthe describes the method of Claude and Balthazard for making cryoscopic examinations of the urine. The author does not discuss the value of cryoscopy nor its practical application to physiological studies. It has been stated that the method of Claude and Balthazard is based on an undemonstrated hypothesis. This, according to the author, is not correct. The method itself is founded on observed facts, the interpretation of these facts requiring Koranyi's hypothesis.

5. **Bovine Tuberculosis.**—Kime admits that the exact relationship between bovine and human tuberculosis has not yet been made out. Personally he believes that the milk of tuberculous cows is just as dangerous as the sputum of the consumptive patient, and that it produces fully as many cases of tuberculosis in man as come from bacilli of human origin. The cow is, in the author's opinion, the natural habitat of the tubercle bacillus. Public apathy with regard to bovine tuberculosis is destined to render almost hopeless the fight being waged against the disease.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 23, 1904.

1. The Doctor in Politics, By A. L. REED.
2. A Contribution to the Study of Visual Disturbances in Brain Injury, By WILLIAM E. GAMBLE.
3. A Case of Perforating Wound of Both Cerebral Hemispheres, By W. S. LINDSAY.
4. A Clinical Study of Epilepsy, By J. G. BILLER.
5. Relationship of Epilepsy to Chronic Gastrointestinal Disease, By G. W. MCCASKEY.
6. Echinococcus Cyst of the Liver, with Report of a Case with Operation and Recovery, By BAYARD HOLMES.
7. The Prophylaxis of Plague (*Concluded*), By J. J. KINYOUN.
8. The History and Ætiology of "Migraine" (*Concluded*), By GEORGE M. GOULD.
9. Lipoma Arborescens Tuberculosum of the Kneejoint, By CHARLES G. LEVISON.

2. **Visual Disturbances in Brain Injury.**—Gamble reports in great detail the history of a man who was shot in the head and lived for many years after the injury. All the patient's symptoms are given for a period of four years. The bullet in the head was located by means of the x ray. By using the scar of the wound of entrance and the located bullet as determining points, the author assumes the course of the bullet. With the direction of the bullet thus established a presumably corresponding injury was produced in the brain of a cadaver by plunging a steel rod through the brain in the general direction of the bullet. The author then studies the injuries artificially produced, and attempts to explain the symptoms in the patient by a study of the brain of the cadaver. On such a basis as this the author announces a number of conclusions in cerebral localization.

3. **Perforating Wound of Both Cerebral Hemispheres.**—Lindsay reports the case of a man who shot himself in the head. The bullet passed through the skull. The remarkable thing about the case was that the patient showed no losses of function.

4. **Epilepsy.**—Biller considers epilepsy from the clinical viewpoint. He has had better success by treating his patients on general lines than by pushing the bromides. He asserts that it is important to recognize cases of epilepsy early and to attend strictly to the gastrointestinal condition.

8. **Migraine.**—Gould concludes in this number a long article on migraine. The conclusion he reaches is that migraine is nothing more or less than an expression of eye strain and can be cured by glasses and in no other way.

BOSTON MEDICAL AND SURGICAL JOURNAL.

January 21, 1904.

1. Clinical Lecture on Epithelioma at Massachusetts General Hospital, By J. COLLINS WARREN.
2. The Prevailing Conception of Degeneracy and Degenerate, with a Plea for Introducing the Supplementary Terms Deviation and Deviate, By G. L. WALTON.
3. Cancer of the Rectum: Combined Abdominal and Perineal Operation, By CHARLES A. POWERS.

1. **Epithelioma.**—Warren divides cancers on the surface of the body into two classes: (1) The very superficial type, commonly known as the rodent ulcer, and (2) the polymorphous celled type, of which cancers of the lip and penis are good examples. This distinction is important, as the treatment of these two types varies materially. The author reports a number of cases. He advises that rodent ulcer, in the early stages, be treated by the x ray when the ulcer is so situated that excision will be followed by a deforming scar. In all other cases the knife will give the most rapid and most satisfactory results. Polymorphous celled epitheliomata should be treated by excision of the tumor, as well as of the nearest lymphatic glands.

2. **Degeneracy.**—Walton deplores the confusion that has been caused by calling all deviations from the normal, degeneracy. His paper is a long argument in favor of adding the terms deviation and deviate to our present nomenclature for the purpose of recording actual observed facts without the implied assumption of a definite ætiology or tendency.

3. **Cancer of the Rectum.**—Powers reports in detail one case of cancer of the rectum. He performed complete excision of the rectum and the patient recovered. He advises that two incisions be made. Through the first incision (abdominal) the colon or rectum is divided, its mesentery sutured, and its proximal end passed through an incision in the groin, so that an artificial anus is obtained. This wound is then closed. The excision is then completed by way of the perinæum.

Letters to the Editor.

IS EPILEPSY AN ORGANIC DISEASE?

345 Madison Avenue,
New York, *January* 4, 1904.

To the Editor,

Sir: In your issue of January 2nd an editorial on this subject, signed by Alfred Gordon, reviews a statement made by Dr. M. Allen Starr that epilepsy can be no longer considered as a functional neurosis. The burden of this editorial seems to be simply an endeavor to prove that cerebral toxæmia is an important factor in the causation of epilepsy.

Strange as it may seem to those who are familiar with the literature on this subject (that is one of vital interest to several million epileptics as well as to the doctors who are called upon to treat them), no mention is made either by Dr. Starr or Dr. Gordon of the vast amount of literature that has been contributed within the past decade by medical men of acknowledged reputation relating to the *reflex* causes of epilepsy.

An issue of your *Journal* of exactly seven years ago (January 2, 1897) contained an article written by myself as a reply to Dr. Frederick Peterson, of New York, entitled Eye Strain as a Cause of Epilepsy and the Results of Eye Treatment. This article was called forth by some remarkable statements (published by the chief of Dr. Starr's clinic at that time and presumably with Dr. Starr's cognizance and approval) which are practically identical with those which Dr. Starr to-day reasserts. In my reply, I published for the first time in medical literature complete and tabulated statistics regarding twenty-six cases of the so called "organic" epilepsy which had been subjected to eye treatment alone, several years prior to this complete report, with most astonishing results.

The proofs that I then advanced to support my contention, viz., *that eye strain alone was a frequent and too often unrecognized source of epilepsy*, were overwhelming; they were also apparently unanswerable, as no reply was ever attempted. They consisted of a publication of the names of the doctors who had referred these cases to my care, of letters from both the doctors and the patients testifying to the permanency of the happy results obtained by eye treatment, of documentary evidence showing that the cases reported were those of genuine epilepsy, and of much other matter which demonstrated that the prominent neurologists of that time were apparently anxious to turn professional thought from a new line of scientific work among the epileptics that gave better results to this class of sufferers than any form of medication or dietetics then or now in vogue.

I showed (in those published tables) that out of the twenty-six cases reported, four of the patients did not complete treatment; that out of the twenty-two remaining cases, seven were completely cured, three were practically cured, nine were much better after eye treatment than under any form of medication, and that in three only was there no amelioration of the fits. Eighty-seven per cent. of this set of published cases had up to that date been either cured completely or markedly benefited simply by the relief of eye strain.

Had I been at that time the only one in the medical profession to maintain "that a large proportion of epileptics suffer from an eye reflex that tends to excite epileptic seizures," such documentary evidence as I presented at that time certainly should entitled me to some recognition of this view by any candid and scientific writer upon the causation of epilepsy.

But I was not alone at that time, nor am I to-day, in this branch of scientific inquiry. The prize offered by the Royal Society of Belgium was awarded for an essay written upon this subject, and this essay was published later as a monograph by D. Appleton & Co., of New York. Hundreds of similar cases have been reported during the past ten years in various medical journals by prominent neurologists and ophthalmologists. Physiological experiments have also been published which show that epileptic seizures can be produced (in the healthy subject) by reflex causes outside of the orbit. Epileptic seizures have also been arrested by circumcision, by the removal of old scars, by the correction of pelvic anomalies, by the fixation of a floating kidney, and by the removal of other sources of reflex irritation.

With the new instruments devised for the scientific investigation of various anomalies of the eye muscles and improvements in the technics for the radical correction of such anomalies, it would be impossible to-day to check the steady growth of this line of work among the younger members of the profession. They are unbiased by prejudice, and daily see results that they could not otherwise obtain.

Epilepsy is one of the saddest of mortal afflictions. The eye problems presented by epileptics are extremely complicated and often hard to solve. Any rational hope of cure of this class of sufferers should not be discouraged or withheld from them in this era of scientific enlightenment.

A. L. Ranney.

FIRES IN THEATRES, ETC.

Glen Ridge, N. J., *January* 12, 1904.

To the Editor,

Sir: The recent disaster in Chicago has set many of us thinking as to how such holocausts may be prevented. In the first place, fireproof buildings are well enough, so far as they go, and such a thing is possible; but the feeling most of us have while sitting in a crowded auditorium is not only as to this, but are the exits sufficient and properly placed to be of most service?

The exits from galleries are usually by stairs to the ground floor, and generally to the main entrance, or by outside fire escapes. The exits from the orchestra level consist in passages leading to the main entrance or to side streets. This *ensures* crowding at the main entrances (also exits). How can it be overcome?

My idea would be to have *subways* leading from the front of the orchestra section to the street. These subways should be commodious, well ventilated, and well lighted by independent wires. The entrances to them might be near the orchestra rail.

and the exits on the street should be by ample openings. They should be fireproof, etc., strong enough to withstand falling weights, and large enough to prevent crowding. They need only be used in case of emergency, but should be inspected as to entrances, exits, and lighting, before every performance. HENRY WALLACE.

MEDICAL CLUBS.

1289 MADISON AVENUE,
NEW YORK, *January* 24, 1904.

To the Editor,

Sir: In an editorial in the issue of your valuable journal for January 23rd you advocate very strongly the formation of medical clubs by medical practitioners. Permit me to call your attention to the fact that the Eastern Medical Society of this city has taken the initiative in adding to its scientific function the promotion of social and friendly relations among its members. The society has rented, and about February 1st, will take possession of permanent quarters for a library, reading room, and restaurant in the New Clinton Hall, at No. 151-157 Clinton Street.

The building, in addition, contains billiard rooms, bowling alleys, baths, gymnasium, and roof garden, of which the members of the society may avail themselves. Yours truly,

L. J. LADINSKI,
President Eastern Medical Society.

THE DRY MOUTH OF FEVERS.

UNIVERSTY OF VIRGINIA,
January 9, 1904.

To the Editor,

Sir: About ten years ago I saw a case of typhoid fever in consulation. It was suspected, at first, that the case was one of pelvic abscess, but when I reached the patient the symptoms were unmistakable. At this time the young woman was lying in a condition of semi-consciousness with a dry mouth and sores on the tongue, which was dry and cracked. The gentleman who asked me to see the patient complained that he knew no way of preventing this distressing symptom, so often found in bad cases of continued fever. He said he had used the usual remedies, but they were unsatisfactory. Since then the treatment by the cold bath has done much to prevent, but has not entirely prevented, the dry mouth. At the time I suggested that, as the trouble arose from the weakness of the patient allowing the mouth to remain open, thus permitting evaporation from the moist surfaces of the tongue and buccal cavity, the use of an apparatus such as is customary with a fractured jaw might, by keeping the mouth closed, relieve the trouble. I had not heard from the doctor until a few days ago when writing to me he mentioned this case, and said that he had frequently made use of the suggestion, since my visit, and with unvarying success. Whenever, in such cases, the mouth became dry he used a wire cup and a bandage under the lower jaw, and in a few hours relief was always obtained.

I think it worth while to suggest this plan to gentlemen who are seeing many such cases.

A. H. BUCKMASTER.

Proceedings of Societies.

THE WESTERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

Thirteenth Annual Meeting, held at Denver, Col., December 28 and 29, 1903.

The association met at the Brown Palace Hotel, under the presidency of Dr. Alexander Hugh Ferguson, of Chicago.

Carcinoma of the Lung.—Dr. W. W. GRANT, of Denver, Col., read a paper on this subject in which he reported two cases, one of which recurred after an unusually long interval, the patient having at one time coincident tubercle bacilli. The other was recent and seemingly primary.

Pancreatic Cyst.—Dr. GRANT also gave the clinical history of a case of pancreatic cyst. He spoke of the causes of pancreatic cyst, reviewed the literature of reported cases, which showed convincingly that the disease was essentially surgical and that delay in operating was as dangerous and fatal as in appendicitis. The gangrenous cases could only be saved by promptly opening the abdomen and draining. Former cases and cases recently reported in the *Annals of Surgery*, by Woolsey, which seemed unfavorable for operation, amply attested this. The suggestion in the treatment of the sac was to dissect it out if small, but in the case of a large sac this attempt was manifestly unsafe and dangerous. The extensive adhesions made it exceedingly difficult, and extravasation of pancreatic juice or septic material would probably destroy the patient. Patients had died from this treatment; while attachment of the sac, if not already adherent, to the abdominal peritonæum and drainage, was a safe, and undoubtedly the best, treatment of a large cyst. Pancreatic juice out of its normal channel produced fat necrosis. Pancreatic disease often simulated intestinal obstruction, and the statement might be safely accepted that if the surgeon opened the abdomen and did not find obstruction or perforation of the stomach, but observed fat necrosis, the pancreas was, in all probability, the source of the trouble.

Dr. JAMES E. MOORE, of Minneapolis, had encountered but one case of pancreatic cyst, and in this the diagnosis was made post mortem.

Dr. M. L. HARRIS, of Chicago, spoke of the great value of colonic and systematic distention of the intestines. In going over the literature of pancreatic cyst he found that in 95 per cent. of the cases the transverse colon took a distinct circle below the tumor and the stomach above. There was practically no other tumor or cyst in which this relation was found.

Dr. D. W. BASHAN, of Wichita, Kan., mentioned a case he saw operated on by a distinguished surgeon in New York, in which the surgeon was unable to make a diagnosis of pancreatic cyst before opening the abdomen.

Dr. GRANT, in closing, said that several writers had considered the differential diagnostic point mentioned by Dr. Harris, but when it was remembered that cases of pancreatic cyst were more frequent in very fat subjects, and that there was quite uniform distention of the intestines, the stomach not being so much distended because of the pressure of the tumor, or, if distended, it was entirely out of its normal location, it was difficult, if not impossible, to isolate the transverse colon and the stomach. He had never succeeded in getting any benefit from artificial distention in other cases, although he did not try it in this case.

Accidental Perforations of the Uterus.—Dr. D. S. Fairchild, of Des Moines, Iowa, said that the use of the sound and the curette in gynæcological practice was probably the most frequent cause of this accident in legitimate practice. The facility with which the sound could be used in exploring the interior of the uterus and in replacing a retrodisplaced organ was no doubt responsible for some of these accidents. The curette, however, was often used in an indiscriminate manner and as a routine treatment in a great variety of uterine difficulties that could be better treated by other means with a greater prospect of permanent results. He mentioned a case that had recently come under his observation, which illustrated the ease with which a perforation of an apparently healthy uterine wall could be accomplished, and what was needed in cases of this kind.

Dr. Donald Macrea, of Council Bluffs, Iowa, mentioned a case in which the upper part of the cervix, not the fundus of the uterus, was perforated with a modified Goodell dilator by a young practitioner, and a portion of the intestine pulled through the opening and pulled off.

Dr. C. H. Wallace, of St. Joseph, Mo., spoke of a case in which a young physician perforated the uterus posteriorly with a curette at about the internal os, producing sepsis and death.

Dr. H. G. Wetherill, of Denver, Col., said that the great dangers associated with the use of the curette, not only in the hands of the inexperienced, but even in those of experts, were beginning to be appreciated, by both the profession and laity. He detailed a case which illustrated the ease with which the uterus could sometimes be perforated. He referred to the classic case of a woman who attempted to induce abortion by inserting an umbrella ring into the uterus. The ring went through the posterior vaginal wall, and, when discovered, it had perforated the liver and the diaphragm, and was found in the right pleural cavity.

Dr. W. L. Bullard, of Pawnee City, Neb., mentioned two cases of perforation of the uterus, one of which was produced by a crochet hook of the ordinary size. An attempt was made to find the hook, but without avail. The patient was left alone. Six months after this she became pregnant, and the crochet hook was discharged through the anterior abdominal wall. Two months later the product of conception was expelled in the natural way.

Dr. Fairchild, in closing, said his object was not to relate unusual cases of perforation of the uterus, but simply to give expression to an opinion that he had held for some time, namely, that the curette was a more dangerous instrument than it was generally thought to be by the general practitioner. Men of great experience would not use the curette indiscriminately or carelessly, but there were many general practitioners who thought it was essential and felt they could not do their patients justice without employing it, consequently the instrument was used very often indiscriminately.

Treatment of Gastric Ulcer.—Dr. H. D. Niles, of Salt Lake City, Utah, in a paper on this subject, presented the following conclusions: "(1) Post mortem statistics, clinical experience, and recent operating room observations all tend to confirm the belief that neither the frequency nor the grave importance of gastric ulcer is fully appreciated by the profession generally, and the majority of cases are not recognized as such in life. (2) An earlier and more positive diagnosis means greater alertness in our observation and interpretation of symptoms, and more frequent exploratory operations. (3) In the history of every benign or malignant ulceration situated in a safely accessible region, there is always a time when the pathology can be corrected or favorably modified by appropriate mechanical means. (4) Up to the present time the recognized indications for operative procedures in gastric ulcer have been the symptoms produced by the remote resultant pathology, as hæmorrhage, perforation, pyloric obstruction, cancer, etc.; but our aim in the future should be to make an earlier diagnosis and, by the timely application of a rational treatment, prevent the occurrence of these later and more serious manifestations of ulcer. (5) Taking into stricter account the local ætiological factors will undoubtedly aid us in the prevention, diagnosis, and treatment of gastric ulcer. (6) The causative pathology deserves more consideration in the surgical treatment of gastric ulcer than it has yet received. (7) Perforation always demands the promptest surgical interference. (8) Hæmorrhage from gastric ulcer is best treated by gastrojejunostomy. (9) Open or cicatrized ulcers near the pylorus always indicate rest for the parts and a sufficient outlet for the stomach contents. (10) A posterior gastrojejunostomy with sutures accomplishes these objects with the minimum risk and the most satisfactory results, and hence should usually be the operation of choice. (11) Our future advancement in the treatment of gastric ulcer must come from an earlier recognition and better understanding of the antecedent coexisting and resultant pathological processes, rather than from any further refinements in operative procedures.

(To be continued.)

THE NEW YORK NEUROLOGICAL SOCIETY.

Abstract of a Portion of a Stated Meeting, held December 1, 1903.

Dr. Pearce Bailey in the Chair.

Is Epilepsy a Functional Disease?—Dr. M. Allen Starr was the author of this paper. He said that he had come to the conclusion that epilepsy was an organic disease, and this opinion was based upon a personal study of two thousand cases of epilepsy of which he had satisfactory records. The recognition of Jacksonian epilepsy of several different types was now universal. This form was admitted to be a symptom of organic disease, though the nature of the latter might vary considerably. The character of the attack was uniform because the disease produced a uniform kind of irritation. In 38 per cent. of his cases of ordinary epilepsy the attack was preceded by an aura, which was identical in many cases with the sensation starting a Jacksonian attack; the only difference between a Jacksonian attack of the motor type and the idiopathic form was in the extent of the spasm. The Jacksonian attack might run into a general motor spasm, showing that there was no essential difference between the two. The same might be said of the sensory attack. In many cases the fit began with a cry, a discharge from the motor speech centre. If the Jacksonian attack became severe and widespread, consciousness was apt to be lost. The close resemblance in 23 per cent. of his cases between Jacksonian and ordinary epilepsy seemed to him to offer an argument that, in these cases at least, the ordinary type of epilepsy was due to organic lesions. Another argument in support of his proposition was found in a study of cases of maldevelopment of the brain. Of 400 such cases, elsewhere analyzed, 156, or 39 per cent., were subjects of epilepsy. It was not uncommon to suppose a child to be suffering from epilepsy only, and yet careful inquiry showed a previous apoplexy. Among his two thousand cases of epilepsy, 192 showed positive signs of maldevelopment of the brain. Of his cases of epilepsy, 68 per cent. developed before twenty years of age; in other words, during the period of brain development. The speaker maintained that many cases of idiopathic epilepsy were actually cases of maldevelopment of the brain, and that the epilepsy was the manifestation of this organic disease. The incurability of epilepsy afforded another argument for the organic nature of this disease. There was no question that proper care and treatment could reduce the frequency and sometimes mitigate the severity of the attacks. He had come to the conclusion that the surgical treatment of epilepsy, by exposing the brain and removing irritating foci, offered as little hope for cure as did medical treatment. He had records of about fifty cases of Jacksonian epilepsy treated by trephining, and he had yet to see a case in which such operative treatment had been followed by a permanently satisfactory result. Another argument for the organic basis of epilepsy might be found in the alleged causes of the disease. The first of these was heredity; the second in frequency was trauma of the head. That trauma of the head was a more potent cause than trauma elsewhere was well shown by the statistics of the Franco-Prussian war. These showed that out of 8,895 wounded in the head, 46 became epileptic; whereas out of 77,463 persons wounded elsewhere only 17 became epileptic. The epilepsies of advanced life could almost invariably be traced to endarteritis and atheroma. Fright was undoubtedly a cause of this disease, as 119 of his patients had the first fit after a severe fright. One great stumbling block to the adoption of the theory of the organic origin of epilepsy was the multiplicity of causes enumerated by pathologists. The epileptic attack was the symptom, not a disease; the disease was a disorder of control. It seemed to him far more reasonable to admit that epilepsy was an organic disease of the brain characterized by a lack of control of the mechanisms over motor energy. If we adopted this rule, we should more readily admit that it was incurable, and should be more willing to aid in the establishment of colonies for epileptics.

Dr. C. L. Dana said that he was surprised that the author apparently assumed that we did not believe that epilepsy was an organic disease. At least ten years ago, the speaker said, he had spoken of epilepsy as a progressive degenerative disease of the brain, but as we did not yet know always what was this degeneration, or where it was, and could not give a morphological description of the diseased cells, it was probably wise still to describe epilepsy among diseases without definite organic basis. He also doubted if the term disease was the proper one to use in connection with epilepsy. There was certainly an underlying organic degeneration, but it seemed to him that in many cases it was rather a morbid condition than a disease process—rather a teratological defect than an actual disease. So far as we knew now, it was probable that the most important factor underlying epilepsy was the tendeucy of large groups of nerve cells to undergo a rather progressive degenerative process. With regard to the argument about Jacksonian epilepsy, he would say that the author's statements were not strictly correct. Some forms of Jacksonian epilepsy were as much without known organic basis as ordinary idiopathic epilepsy. He had had a case of Jacksonian epilepsy with classical convulsions confined to one arm and one side of the face, lasting for years, and after death a modern autopsy gave absolutely negative results. With regard to the incurability of epilepsy he would say that the stand taken by Starr seemed to him, not only incorrect, but disheartening and unfortunate. He absolutely knew of cases in which epilepsy had been cured. He knew personally of a young man who, at the age of seventeen, had nocturnal epilepsy for one or two years, the attacks coming as often as two or three times a month. He had seen the attacks himself, and they were perfectly characteristic. Under the bromide treatment this man recovered, and was now forty-five years of age, and had never had an attack since. There were now none of the interconvulsive symptoms of epilepsy, and this disease should be looked upon as cured just as much as a pneumonia might be considered cured. He had another patient who had been well for twenty years, and another for fifteen years. The very theory of the disease, assuming it to be organic, would make a cure possible. We knew perfectly well that there were certain degenerative processes that we could arrest; for example, tabes and degenerative processes affecting the kidneys or liver, for degenerative processes were not always progressive.

Dr. L. Pierce Clark said that Dr. Dana's statement about the curability of epilepsy had interested him, because, in an experience of ten years with epilepsy, he had records of at least two or three dozen who had remained free from epileptic attacks for periods varying from eight to twenty years. It was true that they might run eighteen or twenty years and recur again, but in such cases he would look upon them as practically cured, although the original condition might still persist. He agreed with Dr. Starr that idiopathic disease had an organic basis. He did not believe that the mere existence of an organic disease of the brain was sufficient to account even for the epilepsies of the Jacksonian type. He believed that perversions of nutrition or toxic agents were potent factors.

Dr. William Hirsch asked Dr. Starr for a definition of what he meant by organic or functional. From a strictly biological point of view, he thought, we could not make such a distinction between organic and functional. That a disease was organic did not by any means justify us in calling it incurable. When one made a diagnosis of paranoia, one knew that it was an incurable disease, and yet it was classified all over the world as a functional disease, because no one had as yet detected any organic changes in the central nervous system. The fact that Jacksonian epilepsy was frequently due to organic changes, which we recognized as such, did not prove that general epilepsy must have a change analogous to that of Jacksonian epilepsy. As Dr. Dana had pointed out, there were cases presenting quite characteristic attacks of Jacksonian epilepsy. He had in mind cases of general paresis, and particularly one case in which death had been preceded by a very large number of these attacks, yet a careful autopsy on this patient was absolutely negative. On the other hand, there were cases of organic disease, tumors of the brain and arteriosclerosis, in which epileptiform attacks never took place. We were all familiar with eclamptic attacks, attacks due to poisoning, and dependent upon transitory changes in the brain. It was manifest that all cases of epilepsy could not be said to have an organic basis.

Dr. William H. Thomson said that the function of a lamp was to give light, and for that purpose its structure might be a glass globe, a wick, and a reservoir of oil. If any portion of that structure were damaged it might interfere with its light-giving function, but this same function could be entirely abolished without in any way interfering with its mechanism, i. e., by supplying it with water or poor oil. Similarly, he conceived functional nervous diseases as truly derangements of the source of nerve function, independently altogether of the structure of the brain—i. e., the blood. Functional disease might be so serious as to terminate life, and yet no nerve cell or fibre could be demonstrated to be diseased, the disorder perhaps having been entirely due to a toxine in the blood. He could not believe that a disease characterized so strikingly clinically by intermittency, as epilepsy was, could consist essentially in a structural lesion, nutritive or otherwise. He fully agreed with Dr. Starr that epilepsy was not curable by the surgeon, and, indeed, that a surgical operation upon the brain was apt to be followed by epilepsy. A polypus of the nose sometimes gave rise to an intermittent nervous trouble, asthma. He had had a number of cases in which the removal of a peripheral source of irritation had been followed by a permanent disappearance of epilepsy. With regard to the true pathology of epilepsy, we were often misled in regarding epilepsy as due to a discharge in the cerebral cortex. This notion he could not reconcile with the fact that every efferent impulse was always secondary to an impulse from the afferent side. His definition of epilepsy was "a *sudden* derangement of the normal inhibition of cortical centres upon one another, dependent, in the first instance, upon an abnormal afferent impression." The majority of cases of epilepsy he believed to be the result of toxæmia. That epilepsy, with such widely varying manifestations, should be dependent upon one organic disease of the brain, he could not believe.

(To be continued.)

Book Notices.

A Laboratory Guide in Uranalysis and Toxicology. By R. A. Witthaus, A. M., M. D.; Professor of Chemistry, Physics, and Toxicology in the Medical Department, Cornell University, etc. Fifth Edition. New York: William Wood & Company, 1903. Pp. v-115. (Price, $1.00 net).

This little book is practically the same as the fourth edition, that appeared five years ago. It has been enlarged by but four pages, but the text contains several new tests, among which we may mention those for cocaine, veratrine, indican, and uroxanthine, also Pellagri's test for morphine, Vitali's test for atropine, Hammarsten's reaction for bile pigment, the phenylhydrozin test for glucose, and Ehrlich's diazo reaction. The condensed manner of presenting the subject and the interleaving of the pages make the book especially useful for students.

Cancer and Precancerous Changes. Their Origin and Treatment. By G. H. Fink, M. R. C. S., L. S. A. Lond., Major, Indian Medical Service (Retired). London: H. K. Lewis, 1903. (All Rights Reserved.) Pp. 105.

This monograph cannot be considered a very valuable contribution to medical literature. The author has attempted to build up a theory of the causation of cancer, and has brought together all manner of statistics, chemical data, and well known facts in the life history of protozoa, but nothing based on experimental or scientific research or observation. It is all theory from beginning to end. It would lead us too far to enter into all the ingenious theories and statements with which the work is filled, but a few may well be mentioned.

In the first place we shall state briefly the author's views on the entire subject. He believes that cancer is caused by some germ, or parasite, which may gain entrance to the body through the skin or by means of impure food or water or by inhalation. Such a parasite may lie dormant for years without causing any serious disturbance. The predisposing causes for cancer are chiefly errors in diet, the excessive use of alcohol, and loss of nervous control. This last cause is very important, the author says, and it may excite "through the nervous system, by long continued grief, anxiety, or mental depression, a ferment which produces from morbid nutritive action a chronic disease, from dyspepsia to cancer." The author lays much stress on the occurrence of cancer at the menopause, and says the "loss of nervous control" at this time is of great moment. Atrophy and degeneration of the ovaries are now seen, "and the decaying or dead ova present might, during this change—instead of being carried away from the system in the menstrual fluid—*infect the system,* whilst their influence becomes transplanted or transported as a ferment to those portions of the female which are in strong sympathy with the ovaries, and act as a ferment on the mammary gland and uterus, which is capable of setting up a new growth in the presence of other favorable conditions that exist, etc."

The author sees an analogy between malarial disease and cancer, the one a disease tropical in nature and found chiefly in vegetarians, the other occurring more often in temperate climates among omnivorous or carnivorous people. He also believes that leucæmia has a strong influence in the causation of cancer, and that the special diathesis which causes leucæmia may excite or bring out the cancerous taint or set up precancerous formations. "The changes in the white and red corpuscles might be regarded as *precancerous primitive bodies.*" Incidentally we might state that the author refers to leucæmia and leucocythæmia as two distinct diseases.

In discussing treatment, a set of general rules, dietetic as well as hygienic, is given, which applies as well to typhoid fever and cholera as to cancer. All in all, this is a most unsatisfactory example of medical literature. We have read the monograph from cover to cover in the hope of finding something of value on the subject of cancer, but we confess our keen sense of disappointment in the task.

Surgery; Its Theory and Practice. By William Johnson Walsham, F. R. C. S. Eng., M. B. and C. M. Aberd., Surgeon, formerly Lecturer on Surgery and on Anatomy, St. Batholomew's Hospital, etc. Eighth Edition, with 622 Illustrations, including 20 Skiagram Plates. By Walter George Spencer, M. S., M. B. (Lond.), F. R. C. S. Eng., Surgeon to the Westminster Hospital. Philadelphia: P. Blakiston's Son & Co., 1903.

This is an admirable textbook, and has been found no less acceptable to American than to English students. In the chapter on appendicular inflammation, for example, where one might expect to find the widest divergence from our teachings, the author pays full tribute to the opinions of American surgeons, to which he very largely subscribes. Nor have we the right entirely to condemn his retention, with due deference to our nomenclature, of the term perityphlitis for those cases in which an appendicular origin is not demonstrable or may even be excluded. It is interesting to compare the twelve pages on appendicular disease, in this edition, with the few lines in the paragraph on perityphlitis, devoted to it in the fourth edition, published in 1895.

It is interesting, too, to note that Walsham supports the contention of Fuller, Freyer, Lilienthal, and others in favor of the suprapubic route for the removal of all but small, hard prostate glands. The only reference to the Bottini operation is brief and condemnatory.

Although still kept within the limits of a volume convenient to handle, much new matter has been added in this edition, the old material has been quite a little expanded, and in its entirety the work is comprehensive and complete. As in the previous issues, there are excellent chapters on ophthalmic and on aural surgery, revised by Mr. Jessop and Mr. Cumberbatch, respectively. The excellent skiagrams, well produced, deserve special note.

A Treatise on Diseases of the Rectum, Anus, and Sigmoid Flexure. By Joseph M. Mathews, M. D., LL. D., Professor of Surgery and Clinical Lecturer on Diseases of the Rectum, Hospital College of Medicine, Louisville, etc. With Six Chromolithographs and Numerous Illustrations. Third Edition, Revised. New York: D. Appleton and Company, 1903.

The features of novelty in this third edition are a new method of colopexy, a new operation of the author's invention for internal hæmorrhoids, consisting of a resection of the varicose area of the mucous membrane followed by suture of the same with the shoemaker's stitch, and a plastic operation for prolapse of the rectum of lesser degree. The mooted question as to the existence of valves of the rectum is also discussed and is decided negatively by the author. We note a decided improvement in this edition in the attention given to detail.

The Microscopical Examination of Foods and Drugs. A Practical Introduction to the Methods Adopted in the Microscopical Examination of Foods and Drugs, in the Entire, Crushed, and Powdered States. By Henry George Greenish, F. I. C., F. L. S., Professor of Pharmaceutics to the Pharmaceutical Society of Great Britain and Director of the Pharmacy Research Laboratory; Author of *An Introduction to the Study of Materia Medica.* With 168 Illustrations. Philadelphia: P. Blakiston's Son & Co. 1903. Pp. xxiv-321. (Price, $3.50).

It is not so very long ago that the ash yield of a given vegetable drug in the powdered state was regarded as a sufficient means of determining the purity, or even of establishing the identity, of the original substance. The methods of chemical analysis are still employed to some extent, but the result arrived at by these means are not now considered determinative unless confirmed by a microscopical examination.

The literature pertaining to the microscopical examination of vegetable drugs has been enriched during the past few years by several notable works, none of which in our opinion exceeds in practical utility to the pharmacognosist the work before us, which is destined, we are sure, to take its place among the standard textbooks on the subject to which it relates, and we look confidently to its adoption as a text and reference book in the schools.

Die Altersveränderungen und ihre Behandlung. Grundriss einer Lehre on der Altersinvolution in ihren Beziehungen zur Physiologie, Pathologie und Therapie von Dr. FRIEDERICH FRIEDMANN in Wien. Berlin: Urban & Schwarzenberg.

The author of this interesting monograph has taken up a new phase of medical study, that of an inquiry into the causes and effects of involution of the body as a whole, and as it concerns the individual organs. Each organ and group of organs is separately considered, and the changes wrought by years are graphically portrayed. In many instances, in which the material permitted such use, microscopical alterations are also described.

It is somewhat difficult for the reviewer to see just what the author hopes to accomplish in the line of prophylaxis of the changes due to age. But certainly if his hygienic rules as to diet, methods of life, reading, and sleep—in fine, the leading of a sound physical mental and moral life—are followed, perhaps longer life and better organs may result. We need no scientific statistical study to tell us this. Yet Friedmann's monograph is interesting, scientific, and exceedingly instructive.

BOOKS, PAMPHLETS, ETC., RECEIVED.

The Blues (Splanchnic Neurasthenia). Causes and Cure. By ALBERT ABRAMS, A. M., M. D. (Heidelberg), F. R. M. S., Consulting Physician, Denver National Hospital for Consumptives, the Mount Zion and the French Hospitals, San Francisco, etc. Illustrated. New York: E. B. Treat & Co., 241-243 West Twenty-third Street. 1904. Pp. 230. [Price $1.50].

Portfolio of Dermochromes. By Professor JACOBI, of Freiburg im Breisgau. English Adaptation of Text by J. J. PRINGLE, M. B., F. R. C. P., Physician to the Department for Diseases of the Skin at the Middlesex Hospital, London. New York: Rebman Company, 10 West Twenty-third Street, corner Fifth Avenue. London Agents: Rebman, Limited, 129 Shaftesbury Avenue, Cambridge Circus, London, W. C. 1903. Pp. ix-191.

A Chart of the Sympathetic Nerve. By BYRON ROBINSON, of Chicago. From Original Dissections. Life Size. Chicago: E. H. Colegrove, 65 Randolph Street. [Price $0.50].

Miscellany.

Community.—*Puck* states that the Stork and the Doctor met at the door. "We should be friends," said the Doctor. "We have much in common." "It is true we are both bipeds," admitted the Stork, guardedly. Here the Doctor showed his bill. "One hundred dollars!" exclaimed the Stork. "Well, you are a bird!"

Future of the Horse.—According to *Médecine moderne* for December 16, 1903, the horse has no longer anything to fear from the automobile, its future being assured in another direction. Whereas in 1892 only 17,000 horses were slaughtered in Paris for food, 30,000 were disposed of in 1902. A new "hippophagic" slaughter house is to be established by the side of the regular establishments at Vaugirard.

The Choice of a General Anæsthetic in Ophthalmology.—Jackson (*Pennsylvania Medical Journal*, September, 1903) observes that the general indications as to choice of an anæsthetic are the same in ophthalmology as in other branches of surgery, but there are also special indications. An anæsthetic which acts quickly and from which recovery is rapid, is of especial advantage, since most ophthalmic operations are brief, so also is an anæsthetic which is least favorable to venous congestion, for the region of the orbit is extremely vascular. Nitrous oxide is too brief and too uncertain in its influence, and is accompanied by too much venous congestion for general use; local anæsthesia is preferable to it in most cases. Ether is most desirable, on account of its relative safety, but the bronchial and renal irritation, and the vomiting and coughing which are associated with it often make it objectionable. Chloroform is more dangerous than ether, but the quantity required is usually small, and so also is the degree of bronchial irritation which it may cause. Ethyl bromide is the most rapid and manageable of general anæsthetics. It may favor arterial bleeding, but does not increase venous oozing. It does not induce relaxation of the muscles, and it is not without danger. Anæsthesia may be produced by it within a minute, and recovery takes place within one or two minutes. It is not suitable for long operations nor operations in which the eyeball is opened; subsequent vomiting and coughing must be avoided, if possible. Nitrous oxide and bromide of ethyl are unsuitable for such operations. For enucleation of the eyeball or removal of orbital tumors ether is preferable; but in cases in which deep dissections in the orbit are required, ether causes too much venous congestion. If the cautery is to be used chloroform should be preferred. Corneal ulcers can generally be cauterized without a general anæsthetic. For strabismus operations on young children ethyl bromide is appropriate, but it is not without danger and should be given even more cautiously than chloroform.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending January 22, 1904:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
California—San Francisco	Jan. 3-10	3	
Dist. of Columbia—Washington	Jan. 9-16	1	
Georgia—Darien	Jan. 15	2	
Illinois—Chicago	Jan. 9-16	5	
Illinois—Danville	Jan. 9-16	7	
Illinois—Freeport	Jan. 9-16	1 imported	
Indiana—Evansville	Jan. 9-16	4	
Massachusetts—Lawrence	Jan. 9-16	1	
Michigan—Grand Rapids	Jan. 9-16	1	
New Hampshire—Nashua	Jan. 9-16	1	
New Jersey—Trenton	Jan. 9-16	7	
Ohio—Cincinnati	Jan. 8-15	3	
Ohio—Cleveland	Jan. 8-15	1	
Ohio—Dayton	Jan. 9-16	1	
Pennsylvania—Johnstown	Jan. 9-16	1	
Pennsylvania—Philadelphia	Jan. 9-16	58	24
Pennsylvania—Pittsburgh	Jan. 9-16	8	3
Pennsylvania—Reading	Dec. 11-18	1	
Pennsylvania—Williamsport	Jan. 2-16	2	1
South Carolina—Charleston	Jan. 9-16	4	
Tennessee—Memphis	Jan. 9-16	19	
Tennessee—Nashville	Jan. 9-16	2	
Wisconsin—Milwaukee	Jan. 9-16	34	

	Smallpox—Foreign.		
Austria-Hungary—Prague	Dec. 26-Jan. 2	6	1
Brazil—Pernambuco	Nov. 15-30		33
Brazil—Rio de Janeiro	Dec. 6-20	124	63
Canada, New Brunswick—McAdam	Jan. 9	1	
Great Britain—Birmingham	Dec. 26-Jan. 2	1	
Great Britain—Bradford	Nov. 21-Dec. 5	1	
Great Britain—Edinburgh	Dec. 26-Jan. 2	3	
Great Britain—Glasgow	Dec. 27-Jan. 8	92	9
Great Britain—London	Dec. 26-Jan. 2	4	
Great Britain—Manchester	Dec. 26-Jan. 2	3	
Gt. Britain—Newcastle-on-Tyne	Dec. 26-Jan. 2	1	
Netherlands—Amsterdam	Jan. 2-9	4	
Russia—Moscow	Dec. 5-12		1
Russia—St. Petersburg	Dec. 12-26	58	1
	Yellow Fever.		
Brazil—Rio de Janeiro	Dec. 6-20	1	1
Jamaica—Kingston	Dec. 26-Jan. 2	1	1
Panama—Panama	Jan. 2-10	1	1
	Plague—Foreign.		
Brazil—Rio de Janeiro	Dec. 6-20	38	28
India—Calcutta	Dec. 12-19		15
	Cholera.		
India—Calcutta	Dec. 12-19		28
Turkey in Asia—Kerbela	Dec. 12	50 cases daily.	

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending January 23, 1904:

BISHOP, L. W., Assistant Surgeon. Detached from the Naval Hospital, Yokohama, Japan, and ordered to the *Annapolis.*

CRANDALL, R. P., Surgeon. Detached from the *Wisconsin* and ordered to the *Oregon.*

GARDNER, J. E., Surgeon. Ordered to the *Wabash.*

GUEST, M. S., Passed Assistant Surgeon. Detached from the *Oregon* and ordered to the *Albany.*

LUMSDEN, G. P., Surgeon. Detached from the naval torpedo station, Narragansett Bay, R. I., and ordered to the naval and marine recruiting stations, Chicago, Ill.

McCLANAHAN, R. K., Assistant Surgeon. Ordered to the Asiatic Station, via steamer sailing from San Francisco, Cal., about February 1, 1904.

MOORE, A. M., Surgeon, retired. Detached from the naval recruiting station, Chicago, Ill., and ordered home.

WEBB, U. R., Assistant Surgeon. Detached from the *Annapolis* and ordered to the naval station, Cavite, P. I.

WENTWORTH, A. R., Surgeon. Detached from the *Albany* and ordered to the *Solace.*

WILSON, G. B., Surgeon. Detached from the *Wabash* and ordered to the naval torpedo station, Newport, R. I., and to additional duty in attendance upon the naval and marine officers.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending January 23, 1904:

BEVANS, JAMES L., First Lieutenant and Assistant Surgeon. Relieved from duty at Morro Castle, Santiago, Cuba, on withdrawal of troops and ordered to Fort Barrancas, Fla., for duty.

FARR, CHARLES W., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Reno, Okla. Ter., and ordered to Fort Mason, Cal., for duty.

HANSELL, H. S., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Monroe, Va., and ordered to Manila, P. I., for duty.

KIRBY-SMITH, R. M., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Barrancas, Fla., and ordered to Manila, P. I., for duty.

PATTON, I. W., First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence.

SHOCKLEY, M. A. W., First Lieutenant and Assistant Surgeon. Assigned to temporary duty at the Presidio of San Francisco until February 1st, when he will stand relieved and proceed to Manila on the transport sailing on that date.

WOODSON, ROBERT S., Captain and Assistant Surgeon. Granted two months' leave of absence, to take effect on or about February 1, 1904.

The following named officers will report in person to Major WILLIAM H. ARTHUR, Surgeon, president of the examining board, convened at the Army Medical Museum Building, Washington, D. C., on March 14, 1904, for examination for promotion: Captain and Assistant Surgeons C. C. MCCULLOCH, JR., FRED P. REYNOLDS, ROBERT S. WOODSON, H. M. HALLOCK, GEORGE J. NEWGARDEN, PAUL F. STRAUB, ALEXANDER N. STARK, CHARLES LYNCH, and JOHN S. KULP.

Births, Marriages, and Deaths.

Married.

ALLEN—WARREN.—In Philadelphia, Pennsylvania, on Thursday, January 21st, Dr. Alfred Reginald Allen and Miss Helen Warren.

EDWARDS—URBANSKY.—In St. Marys, Kansas, on Wednesday, January 6th, Dr. Samuel L. Edwards, of Memphis, Tennessee, and Miss Lillian Urbansky.

LEWIS—BLACKSHERE.—In Baltimore, Maryland, on Thursday, January 14th, Dr. Howard Davis Lewis and Miss Katharine Gray Blackshere.

MCARDLE—WELCHE.—In New York, N. Y., on Wednesday, January 20th, Dr. John H. McArdle and Miss Marguerite T. Welche.

VANDERSMISSEN—TRAUD.—In New York, N. Y., on Thursday, January 7th, Dr. Gilbert Vandersmissen and Miss Christine Traud.

Died.

ANDREWS.—In Chicago, Illinois, on Friday, January 22nd, Dr. Edmund Andrews.

BOVEE.—In Philadelphia, Pennsylvania, on Monday, January 18th, Dr. C. N. Bovee, of New York, in the eighty-fourth year of his age.

BROWNING.—In Owingsville, Kentucky, on Friday, January 15th, Dr. C. P. Browning, in the seventy-sixth year of his age.

COMSTOCK.—In Ilion, N. Y., on Monday, January 11th, Dr. Frederick Follett Comstock, in the fifty-fifth year of his age.

DANA.—In Metuchen, New Jersey, on Thursday, January 21st, Dr. Edward B. Dana, Jr., in the forty-fourth year of his age.

ELLIOTT.—In Kansas City, Kansas, on Saturday, January 16th, Dr. Schuyler C. Elliott, in the fortieth year of his age.

FRAKER.—In Columbus, Ohio, on Saturday, January 9th, Dr. Harvey C. Fraker, in the fifty-fourth year of his age.

HANNA.—In East Orange, New Jersey, on Sunday, January 17th, Dr. Edmund S. Hanna, in the seventy-sixth year of his age.

HARRELL.—In New York, N. Y., on Tuesday, January 19th, Dr. Francis Woodley Harrell, in the forty-fifth year of his age.

HENRY.—In Independence, Missouri, on Wednesday, January 13th, Dr. James Porter Henry, in the eighty-fifth year of his age.

HOTTENSTEIN.—In Washington, D. C., on Wednesday, January 13th, Dr. H. P. Hottenstein, in the seventy-ninth year of his age.

MARCY.—In Cape May, New Jersey, on Thursday, January 21st, Dr. Virgil M. D. Marcy, in the eighty-second year of his age.

MARSHALL.—In Abbeville, South Carolina, on Wednesday, January 6th, Dr. Joseph W. Marshall, in the eighty-fourth year of his age.

PATTERSON.—In Philadelphia, Pennsylvania, on Thursday, January 14th, Dr. John Kinnier Patterson, in the sixty-third year of his age.

PIERCE.—In Middletown, Indiana, on Saturday, January 9th, Dr. J. E. Pierce, in the forty-first year of his age.

RIDINGS.—In Kansas City, Missouri, on Friday, January 15th, Dr. J. C. Ridings, of Cairo.

ROY.—In Wilsey, Kansas, on Thursday, January 7th, Dr. Robert B. Roy, in the seventy-fifth year of his age.

SCHULTZ.—In San Francisco, California, on Monday, January 11th, Dr. N. J. B. Schultz.

SPOONER.—In Beverly, New Jersey, on Monday, January 18th, Dr. Alban Spooner.

TRESFON.—In Rochester, N. Y., on Friday, January 15th, Dr. Jose H. Tresfon, in the sixty-sixth year of his age.

New York Medical Journal

AND

Philadelphia Medical Journal.

CONSOLIDATED.

A Weekly Review of Medicine

VOL. LXXIX, NO. 6. SATURDAY, FEBRUARY 6, 1904 WHOLE NO. 1314.

Lectures and Addresses.

A BRIEF REVIEW OF THE ÆTIOLOGY OF YELLOW FEVER.

AN ADDRESS BEFORE THE AMERICAN SOCIETY OF TROPICAL MEDICINE.*

BY JAMES CARROLL, M. D.,

HONORARY MEMBER OF THE AMERICAN SOCIETY OF TROPICAL MEDICINE; MEMBER OF THE SOCIETY OF AMERICAN BACTERIOLOGISTS; OF THE AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS; OF THE WASHINGTON ACADEMY OF SCIENCES; OF THE AMERICAN PUBLIC HEALTH ASSOCIATION, ETC.; FIRST LIEUTENANT AND ASSISTANT SURGEON, U. S. ARMY.

Mr. Chairman, and Gentlemen:

When I received the honor of an invitation to address you on the subject of the ætiology of yellow fever, I felt that the time at my disposal was much too short at this busy season to permit me to do justice to so vast a subject. Nevertheless, I shall endeavor to take up, seriatim, the various lines of thought and the succeeding steps in the investigations that have led to our present belief that natural, or non-experimental, yellow fever can be contracted only through the bite of the mosquito, and that filthy environment and intimate personal contact with yellow fever patients, their garments, secretions, ejecta and dejecta, can be wholly ignored in our attempts to suppress or control this disease, the mosquito being the only factor that it is necessary to consider.

Yellow fever is strictly an American plague from which no country has suffered so severely as the United States, and few cities more often and more fearfully than Philadelphia. Her experiences are written indelibly in the pages of history by the hand of such men as Carey, Currie, Caldwell, the immortal Rush, and the classic La Roche, whose treatise on yellow fever is a monumental compendium of facts with the deductions of a briliant mind.

At the present day when so much is known of the minute bodies (bacteria) that are the actual causes of many pathological conditions, a discussion of the ætiology of a disease necessarily involves consideration of the specific causative factor, when it can be demonstrated. Unfortunately, we are unable to specify or describe the causative agent in yellow fever, but the sole transmitting agent is now well known and acknowledged, and measures based upon this knowledge have been found sufficient for all practical purposes in preventing, controlling, and suppressing the disease.

In former times the occurrence of pestilential diseases was attributed to a "malignant constitution of the atmosphere," and this belief was shared by Sydenham and taught by his follower, Rush. Malarial fevers and yellow fever presented many points of similarity that led to their being atributed to a common cause. Both were believed to originate in the vicinity of standing water, especially about wharves, stagnant pools, and marshes, for in such locations the cases were found to be most numerous. It was a matter of common observation that the severest epidemics of yellow fever usually followed heavy falls of rain that had been succeeded by an unusually high range of atmospheric temperature. This naturally led to the belief that the epidemics resulted from the condition of the atmosphere, which was assumed to be heavily charged with poisonous effluvia from decomposing vegetable or animal matter, and the disease was therefore believed to be of endemic origin. This theory was strongly opposed by many who were able to bring forward ample proof that, in some instances at least, epidemics resulted from importation of the disease. Similar differences of opinion arose upon the subject of its contagiousness or non-contagiousness and were the cause of many bitter controversies. The rapidity with which the disease spread on ship-board and in certain houses and localities, together with the fact that persons visiting infected vessels or houses frequently contracted the disease, indicated that it was directly contagious. On the other hand, there was equally good evidence to show that it was not contagious, for patients who were treated in the country or in hospitals located upon high ground seldom or never communicated the disease to others. By some it was concluded that yellow fever was not actually contagious, but that it might acquire that property under certain conditions. The disease continued to be surrounded by the same mystery and perplexity until about three years ago, when the demonstration of the part played by the mosquito in its transmission placed it in the list of easily controllable and preventible diseases. The unusual prevalence of mosquitoes during an epidemic of yellow fever has been recorded a number of times; among the earliest to make this observation were Dr. Benjamin Rush, of Philadelphia, in 1797; Dr. John Vaughan,[1] of Wilmington, Del., in 1802, and later Dr. Weightman,[2] of the U. S. army, at St. Augustine, Fla., in 1839; Dr. Wood,[3] at Centreville, Mass., and Dr. Barton,[4] at Clinton, La., in 1853. Dr. Rush remarked that "*mosquitoes abounded, as usual, in sickly seasons.*"[5] Dr. Vaughan, in his excellent, though brief, description of the epidemic outbreak at Wilmington, in the year 1802,[6] wrote in regard to the season and the prevalence of mosquitoes as follows: "The season became tropical in the middle of August. The weather, from being uncommonly cool, suddenly became extremely hot, varying from 80 to 90 degrees, with frequent gusts of rain and lightning. In the evenings of the 29th, 30th, and 31st, there were excessively violent thunder storms from the westward with torrents of rain. . . . Myriads of mosquitoes infested the lower parts of the town from July until frost, having gradually diffused themselves over the borough in September. The eldest of our inhabitants do not recollect this insect's being troublesome here *in any previous season;* while the unanimous report of persons from the fenny counties of Kent and Sussex, the annual haunts of these winged pests, was that they were unusually free from them." Please note the occurrence of heavy rains which were followed by unusually high temperature, making conditions most favorable for the propagation of mosquitoes. Similar conditions of moisture accompanied or followed by unusually high temperature have been recorded as preceding epidemics of yellow fever by scores of American writers, some of whom observed also that these conditions were not necessarily accompanied by epidemics. Observe, also, that mosquitoes infested the lower parts of the town until frost; that these insects had not been troublesome before within the recollection of the oldest inhabitants, and that adjacent marshy counties were unusually free from them. This would seem to render the inference justifiable that mosquitoes of the genus *Stegomyia* had been imported upon a vessel, and finding the conditions favorable they multiplied rapidly and diffused themselves throughout the lower parts of the town. Dr. Vaughan noted, also, that the progress of the infection was terminated by a single frost, and that the disease was not communicated to the attendants upon the sick, *when out of the original sphere of infection.*

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* Delivered at the University of Pennsylvania, Philadelphia, January 11, 1904.

I ask permission to refer briefly to the memorable epidemic of 1793, in this city, at the time when it was the capital of the nation. Its population then is said to have been forty thousand, of whom twelve thousand, or thirty per cent., fled to other places, and four thousand, or ten per cent. of the total population, died. The conditions are said to have rivaled those of European cities during the prevalence of the bubonic plague. The streets were deserted, friends no longer shook hands in greeting, and it was almost impossible to secure burial for the dead. Husbands deserted their wives and wives their husbands; parents forsook their children; masters turned their servants adrift or consigned them to the hospital; servants abandoned humane masters in their hour of greatest need, and, in some instances, those of affluent fortune who had given employment and sustenance to hundreds, were turned over to the care of a mercenary negro, after their wives, children, friends, and servants had fled and left them to their fate.[7] On the other hand, there were innumerable instances of noble, self-sacrificing devotion to humanity. This was especially noted among the physicians, who, with few exceptions, remained at their posts and ministered to the sick. Within five or six weeks no less than ten physicians were carried away by the disease, and at one time, according to Dr. Rush, there were but three able to do duty out of their houses.[8] In the following year the city was again afflicted, and in writing of this epidemic, Dr. Rush says:[9] "As I considered the filth of the gutters, and the stagnating water in the neighborhood of the city to be the remote causes of this fever, I advised the committee to have them both removed, and thereby to prevent the spreading of the disorder." It is evident from this that he had observed a close relationship between the prevalence of the fever and the presence of standing water; we know also that he afterwards remarked upon the presence of an unusual number of mosquitoes. To-day we have only gone a single step further in proving that the aerial connection between the stagnant water and the disease is by means of the mosquito instead of through the products of decomposition.

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[1] *Medical Repository,* New York, Vol vi, 1803, p. 301.

[2] *An Essay on Yellow Fever,* B. B. Strobel, M. D., Charleston, S. C., 1840, p. 162.

[3] and [4] *Report of Sanitary Condition of New Orleans on the Epidemic of Yellow Fever of* 1853. New Orleans, 1854, Vol. i, pp. 266, 278, 540.

[5] *Medical Inquiries and Observations.* Benjamin Rush, M. D., Philadelphia, 1805, Vol. iv, p. 77.

[6] *Medical Repository,* New York, Vol. vi, 1803, p. 301.

[7] La Roche, *Yellow Fever,* Vol. i. p. 72.

[8] La Roche, *Yellow Fever,* Vol. i. p. 73.

[9] *Medical Inquiries and Observations,* by Benjamin Rush, M. D., Philadelphia, 1796, Vol iv, p. 8.

After publication of the brilliant results of Koch and Pasteur, bacteriologists naturally looked upon yellow fever as affording a promising field for investigation. The first to enter the field was Dr. Domingos Freire, of Rio de Janeiro, who, in 1883, concluded that he had discovered the specific cause in an organism which he named the *Cryptococcus xanthogenicus*. He proceeded to inoculate human beings with attenuated cultures for the purpose of conferring immunity, and reported such favorable results, that in the same year he received a grant from the State to aid him in his work. He continued to report remarkably successful results in the way of protection conferred, and his inoculations were kept up until 1897. The work of Freire attracted considerable attention and, in 1887, Dr. Sternberg, of the United States army, was sent to Rio de Janeiro, for the purpose of investigating into and reporting upon the merits of these inoculations. The report of Sternberg was not favorable, for he found that a culture handed him by Dr. Freire did not agree with that investigator's description of his organism, and proved to be a common white staphylococcus.[10] Nevertheless, in Volume xx of the *Twentieth Century Practice of Medicine*, published in 1900,[11] we find no less than nine pages devoted to a consideration of Freire's work.

Dr. Carmona y Valle, of Mexico, published, in 1885, a description of an organism that he regarded as the cause of yellow fever; and Dr. Carlos Finlay, in Havana, attributed the same rôle to a *Micrococcus tetragenus*, with which he experimented on animals for some time, and to which, judging from his conversation, he was still inclined to attach some importance as late as 1901. Both these claims were disposed of by Sternberg, who showed that the bacteria described were common organisms that could be obtained from various sources. In 1889, Sternberg began a laborious study of the blood and organs from yellow fever cases in Havana. His examination included the intestinal contents and in his final report he stated that the specific infectious agent had not been demonstrated. There is good reason to believe that if the organism were capable of demonstration he would have found it, for his studies of the blood, tissues, and cultures obtained were of the most painstaking character and the methods employed by him were but little inferior to those in use to-day.

In 1897, Dr. Sanarelli, a well known bacteriologist, announced his discovery of the specific agent of yellow fever in the form of a small bacillus, which he named *Bacillus icteroides*. After making a large number of experimental inoculations in animals, he announced that the clinical course of the infection produced by it was similar to that of yellow fever, and the lesions found *post mortem* were those of that disease. He also performed inoculations upon human beings and asserted that the clinical course and symptoms that followed were those of yellow fever. Sanarelli obtained his bacillus from about fifty per cent. of his cases, and stated[12] that he had never met with *Bacillus icteroides* alone; it was at least associated with the colon bacillus, staphylococcus, or streptococcus. Sanarelli's bacillus, however, differs in no respect from the paratyphoid or paracolon bacillus, the bacillus of hog cholera, Gaertner's *Bacillus enteritidis*, *Bacillus typhi murium*, and many others of the same group, except that it was obtained from a different source. If Sanarelli had been familiar with the hog cholera bacillus he would have had no difficulty in identifying his *Bacillus icteroides*, for in all their characteristics, both morphological and biological, these organisms are identical. In 1897, at the instigation of Surgeon-General G. M. Sternberg, U. S. army, Dr. Reed and the writer began their work with bacillus X and *Bacillus icteroides*.[13] We succeeded later in producing all the lesions and symptoms of acute hog cholera in young hogs by feeding them with pure cultures of Sanarelli's bacillus. We found that cultures of *Bacillus icteroides*, when injected into rabbits, guinea pigs, mice, dogs, and pigeons, produced similar infections and the same pathological lesions as the bacillus of hog cholera, and further, that the blood of dogs rendered immune against either of these organisms gave reciprocal agglutinative reactions.[14] In a recent publication of the U. S. Department of Agriculture, Mohler and Buckley[15] give an excellent description of an organism of this group obtained from cattle during an outbreak of septicæmia. When given to hogs it produced the symptoms and lesions of acute hog cholera. They proved its close relationship to *Bacillus paracolon*, and it is apparent that it could with equal propriety be designated the bacillus of Gaertner, paracolon, or, hog cholera bacillus. It is now well established that bacilli of this group have a wide range of pathogenicity, having been isolated under various names from cattle, hogs, ferrets, mice, birds, and human beings. Obtained from the latter source they are known as Gaertner's bacillus, paratyphoid or paracolon bacillus, and *Bacillus icteroides*. As an illustration of their close relationship and probable identity I can cite the testimony of Dr. Joseph McFarland, the secretary of this society, who, during the early period of our work, wrote to Dr. Reed for a culture of *Bacillus icteroides*, which was sent to him. A few weeks later he again wrote to Dr. Reed accusing him of playing a joke and of sending a culture of the hog cholera bacillus instead of *Bacillus icteroides*. These organisms are widely distributed in Nature, in man and animals; I have isolated them from spring water where the chances of contamination were very remote. Although certain minor variations, such as size and appearance of the colonies, mobility, etc., may appear in the comparative study of these various bacilli, all these variations become reconciled if one studies a number of cultures of genuine hog cholera bacilli. I might mention here that a paratyphoid bacillus isolated by Dr. Harvey Cushing,[16] of Baltimore, which he called Bacillus O, was agglutinated by Sanarelli's antiamaryllic serum (prepared with *Bacillus icteroides*) in very high dilution (1-30,000). This serum was intended for use in the treatment of cases of yellow fever. A similar result was also obtained with cultures of the hog cholera bacillus, using a dilution of 1-10,000. Sanarelli's observations were confirmed by a number of observers, among them Wasdin and Geddings, of the Marine Hospital Service, who reported[17] that they had infected monkeys, dogs, rabbits, guinea pigs, rats, and mice with yellow fever by inoculation with cultures of *Bacillus icteroides*. They also found that certain of these animals could be infected by insufflation of dried cultures, and concluded that in yellow fever infection took place by way of the respiratory tract through primary colonization in the lungs.

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[10] *Report on the Ætiology and Prevention of Yellow Fever*, by George M. Sternberg. Washington, Government Printing Office, 1890.

[11] *Twentieth Century Practice of Medicine*, New York, Vol. xx, pp. 452 to 461.

[12] Lecture delivered before the University of Montevideo, January 10, 1897, *British Medical Journal*, 1897, iii, p. 7.

[13] Reed and Carroll, The Specific Cause of Yellow Fever. *Medical News*, September 9, 1899.

[14] Reed and Carroll, *Journal of Experimental Medicine*, Vol. v, No. 3. December 15, 1900.

In 1898, Dr. Aristides Agramonte, acting assistant surgeon, U. S. army, was assigned to duty in our laboratory for some months, for the purpose of studying *Bacillus icteroides* and bacillus X. He was then ordered to Cuba, where he succeeded in isolating *Bacillus icteroides* from about thirty-three per cent. of yellow fever cadavers examined at Santiago. He also obtained the organism from cases that were not yellow fever and concluded that it bore no relation to the disease.[18]

Early in 1900, yellow fever appeared among the American troops at Havana, and during the summer it became quite prevalent among the Americans and Spaniards in and about the city. In order to take the advantage of the opportunity offered for continuing the study of the ætiology of the disease, a board of army medical officers was ordered to meet at Havana for the purpose. It was composed of Major Walter Reed, surgeon, U. S. army, the writer, and Dr. Jesse M. Lazear, non-immunes, and Dr. Aristides Agramonte, a Cuban immune. The three last named were contract surgeons. Dr. Agramonte and Dr. Lazear were already on the island; Dr. Reed and the writer arrived at Havana, June 25, 1900, and within a day or two the board was organized and work begun. Cultures from the blood of eighteen patients drawn during life were carefully studied, and from these, as well as from cultures made at eleven autopsies, the board failed to recover *Bacillus icteroides;* the conclusion was drawn, therefore, that the organism could be excluded from further consideration. Two separate lines of work now presented; one, the study of the bacterial flora of the intestine and anaerobic cultures from the blood and various organs; the other, the theory of the transmission of the disease by the mosquito, which had been advanced by Dr. Carlos Finlay, in 1881. After due consideration it was decided to investigate the latter first, for various reasons: First, it seemed probable that it could be decided in a few weeks; second, there were many points of similarity between the two diseases, malaria and yellow fever, in regard to seasonal prevalence, favorable locality, manner of extension, etc.; third, the lapse of an interval of several weeks between primary and secondary cases pointed to the existence of an intermediate host; the prompt subsidence of an epidemic upon the occurrence of severe frosts corresponded with the effect of the latter upon the mosquito, and the same insect was suggested by the peculiar manner in which the disease appeared to jump from house to house, even when the inhabitants did not communicate with one another. Then arose the question of the tremendous responsibility involved in the use of human beings for experimental purposes. It was concluded that the results themselves, if positive, would be sufficient justification of the undertaking. It was suggested that we subject ourselves to the same risk, and this suggestion was accepted by Dr. Reed and Dr. Lazear. It became necessary for Dr. Reed to return to the United States, and the work was begun by Dr. Lazear, who applied infected mosquitoes to a number of persons, himself included, without result. On the afternoon of July 27, 1900, I submitted myself to the bite of an infected mosquito applied by Dr. Lazear. The insect which had been hatched and reared in the laboratory, had been caused to feed upon four cases of yellow fever, two of them severe, and two mild. The first patient, a severe case, was bitten twelve days before; the second, third, and fourth patients had been bitten six, four, and two days previously, and were in character mild, severe, and mild, respectively. In writing to Dr. Reed that night of the incident I remarked jokingly that if there were anything in the mosquito theory I should have a good dose. And so it happened. After having slight premonitory symptoms for two days I was taken sick on August 31st, and on September 1st, I was carried to the yellow fever camp. My life was in the balance for three days and my chart shows that on the fifth, sixth, and seventh days my urine contained eight tenths and nine tenths of moist albumin.[19] The tests were made by Dr. Lazear. I mention this particularly because the result obtained in this case does not agree with the twentieth conclusion of Marchoux, Salimbeni, and Simond,[20] that the longer the interval that elapses after infection of the mosquito the more dangerous he becomes. Twelve days, the period above cited, is the shortest time in which the mosquito has been proved to be capable of conveying the infection. It is my opinion that the susceptibility of the individual bitten is a much more potent factor in determining the severity of an attack, than the duration of the infection in the mosquito, or the number of mosquitoes applied. On the day that I was taken sick, August 31, 1900, Dr. Lazear applied the same mosquito, with three others, to another individual who suffered a comparatively mild attack and was well before I had left my bed. It so happened that I was the first person in whom the mosquito was proved to convey the disease.

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[15] *Nineteenth Annual Report of the Bureau of Animal Industry*, 1902, p. 297.

[16] *Johns Hopkins Hospital Bulletin*, Nos. 112 to 113, July-August, 1900, p. 156.

[17] *Report of the Commission of Medical Officers detailed by authority of the President to investigate the Cause of Yellow Fever.* Washington, Government Printing Office, 1899.

[18] Aristides Agramonte, Report of Bacteriological Investigations upon Yellow Fever. *Medical News*, Vol. lxxvi, No. 6, 1900, p. 203 *et seq.*, and *Centralblatt für Bakt.*, etc., Band xxv, Nos. 18-19, 1899.

On the eighteenth of September, five days after I was permitted to leave my bed, Dr. Lazear was stricken, and died in convulsions just one week later, after several days of delirium with black vomit. Such is yellow fever. He was bitten by a stray mosquito while applying other insects to a patient in one of the city hospitals. He did not recognize it as *Stegomyia* and thought it was a *Culex*. It was permitted to take its fill, and he attached no importance to the bite until after he was taken sick, when he related the incident to me. I shall never forget the expression of alarm in his eyes when I last saw him alive in the third or fourth day of his illness. The spasmodic contractions of his diaphragm indicated that black vomit was impending, and he fully appreciated their significance. The dreaded vomit soon appeared; I was too weak to see him again in that condition, and there was nothing I could do to help him. Dr. Lazear left a wife and two young children, one of whom he had never seen.

(To be concluded.)

Original Communications.

OBSERVATIONS ON THE QUANTITY OF DAY AND NIGHT URINE.*

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Ever since physiology and pathology have occupied a place in the scientific world, the kidney and the various problems connected with the excretion of urine have taken a place scarcely second to any in medicine, and the literature of the subject is enormous. We need merely suggest such purely fundamental questions as how the urine is excreted; how the activity of the organ can be altered or the composition of the urine changed by various factors in health or disease, to indicate the wide extent of the field and how much yet remains that is unsettled, which will furnish material for study and research in the future.

There is one phase of the question of clinical, as well as of scientific, interest, which does not seem to receive so much attention as it merits. This is the relative proportion of urine excreted during the day and the night in health and in certain pathological conditions.

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[19] The Ætiology of Yellow Fever,—A Preliminary Note. Reed, Carroll, Agramonte, and Lazear. *Proceedings of the Twenty-eighth Annual Meeting of the American Public Health Association, at Indianapolis, Ind.* Chart, Case I.

[20] *Annales de l'Institut Pasteur,* Tome xvii, No. 11, November, 1903, p. 665.

* Made in the Medical Clinic, University Hospital, Ann Arbor, Mich. Read before Section in Internal Medicine and Pathology, Wayne County Medical Society, Detroit, Mich, October 12, 1903.

Several have studied the relation, as it exists in health, with fairly uniform results. The figures of H. Roger, cited by Certowitch[1] will be given as being an average. He divided the twenty-four hours into two unequal parts—sixteen hours day, and eight hours night, making his observations, which covered a period of thirty-two days, upon an individual aged thirty-four years; during which time, while the food was varied, the liquid taken was carefully measured, as was also the urine, with the average results here given:

	24 hours.	*Day.*	*Night.*
Total	1497 c. c.	1152 c. c.	345 c. c.
Average per hour.......	62 c.c.	72 c.c.	43 c.c.

The quantity of day urine (Qd) as compared with the night (Qn) would thus be Qd: Qn:: 62: 38 (or as 100: 61).

The earlier observers expressed the ratio by taking the day urine as 100 and the night in relation to it; but I prefer to consider the total urine as 100, and then express the day and night urines as parts of it, and this method has been followed in the tables given later. Quincke[2] and Laspeyres[3] divided the twenty-four hours into periods of fifteen hours and nine hours—from 6 a. m. to 9 p. m. for day urine, and 9 p. m. to 6 a. m. for that of the night. They consider a normal ratio Qd: Qn:: 100: 50, but say that 100: 90 may occur, and still be within physiological limits, but that in the twenty-four hours thus divided Qn should never be equal to or greater than Qd.

In the following observations the periods are 7 a. m. to 7 p. m. and 7 p. m. to 7 a. m., thus making them of equal length. It was necessary, therefore, to obtain a new standard for the normal, with which to compare the diseased conditions. For this purpose, observations were made for a month during the fall of the year upon a young adult in active life, making no change in his habits of eating and drinking, but the urine passed was measured and the bladder always emptied at 7 o'clock, morning and evening. In the ratio thus obtained the Qd was to the Qn as 67: 33 (or as 100: 50). This result, as will be seen, agrees very well with those previously mentioned when the difference in the daily division is taken into consideration, but I think we must allow, with the twelve-hour periods, that a ratio of 50: 50 (to correspond with the 100: 90 ratio mentioned) may be within physiological limits although probably it is rather exceptional.

Having settled upon a normal proportion, let us now consider the conditions as modified by disease, taking first a brief glance at the results obtained from cases previously reported.

Quincke[4] was the first to call attention to the fact that, in cases of œdema, more urine was passed during the night than the day. Wilson[5] reported seven cases of kidney and cardiac disease, in which the ratio Qd to Qn was disturbed and said that this change should be an aid to diagnosis in suspected renal disease.

Iljisch[6] reported twenty-nine cases of œdema and arrived at the same conclusions as to the disturbed relation in cases with œdema, and also in nephritis without œdema. He adds that (1) in cardiac disease in periods of compensation the relation is normal; (2) as œdema is being lessened the Qn is usually markedly increased; and finally, (3) if such patients are out of bed several hours during the day the Qn is markedly increased.

Laspeyres[7] gave the literature of the subject and reported sixty-five cases. Among his conclusions he states that: the greatest nightly polyuria occurs in cases of myocarditis; nervous tachycardia does not give nightly polyuria, and it will serve to aid the diagnosis between organic and non-organic diseases of the heart; acute parenchymatous nephritis does not give so great a disturbance as chronic nephritis, especially if the latter is accompanied by a cardiac lesion, and this fact may serve in the diagnosis in the case where an acute nephritis develops in the course of an old or chronic renal lesion; and lastly, in cases with œdema, medicines (digitalis, diuretin, etc.) begin to provoke the polyuria with nocturnal predominance and, following, the quantity of night urine diminishes as the equilibrium in the circulation reappears.

Certowitch[8] has presented the most recent work on the subject, and reports eighteen cases, confirming these results in the cardiac and renal cases and adds that the approach of asystole augments the night urine and as it regulates itself this is diminished. He also considers the cause of the disturbance and argues that, while the healthy man in full activity eliminates during the day 90 per cent. of fluid taken (Roger), and when confined in bed excretes 76 per cent. (André Marsin[9]), the subject of heart disease during failure of compensation, and the nephritic eliminate only 30 per cent. to 50 per cent. of liquid taken in, therefore, the remainder accumulates in the body tissues and has a tendency to be excreted during the night, causing the polyuria.

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[1] *Les quantités des urines diurnes et nocturnes à l'état normal et pathologique.* Thèse Inaugurale, Genève, 1901.

[2] *Arch. f. exp. Path. u. Pharm.* Band 32.

[3] *Deut. Arch. f. klin. Med.* Vol. lxviii. 1900.

[4] *Loc. cit.*

[5] *Lancet,* June 29, 1889.

[6] *Münch. med. Wochenschr.* No. 52, 1896.

[7] *Loc. cit.*

[8] *Loc. cit.*

[9] *Thèse de Paris,* 99.

The fifty-six cases here reported may furnish additional testimony to that already mentioned, as they illustrate some facts not brought out before, and also confirm some of the earlier work. This material was put in my hands[10] by Dr. Dock, who, for a number of years, has ordered that all patients with albuminuria, diabetes, and heart disease, as well as some acute infections, shall have the urine divided into day and night portions. As stated above, 7 a. m. to 7 p. m. constitutes the day, and 7 p. m. to 7 a. m. the night. These periods of time were selected on account of nursing arrangements. Many cases could not be utilized, owing to errors in carrying out the measurements, or to the fact that patients did not remain long enough; but no selection was made.

TABLE I.—MISCELLANEOUS DISEASES.

Number.	Case Number.	Diagnosis.	Urine. Quantity. Day.	Urine. Quantity. Night.	Urine. Ratio. Day.	Urine. Ratio. Night.	Albumin.	Casts.	Œdema.	Heart Examination.	Atheroma.	Age.	Result.
1	229.99	Gastric Carcinoma.	475	520	48	52	⅛	Granular, Hyaline. Waxy	0	Systolic murmur at apex.	+	64	Unimproved.
2	50.01	Hæmaturia.	660	500	57	43	Trace.	0	0	Negative.	0	27	"
3	112:00	Gastritis, Chr.	200	375	35	65	"	Hyaline.	0	Indistinct sounds.	M'k'd	60	Improved.
4	286.00	" "	313	200	61	39	"	0	0	Negative.	0	31	Advised.
5	120.98	Arthritis "	490	450	52	48	"	0	0	Systolic murmur at pulmonary.	0	25	Improved.
6	95.01	Hypertrophic Cirrhosis Liver.	288	264	52	48	$\frac{1}{12}$	Granular.	0	Negative.	—	43	Not changed.
7	213.98	Pulmonary Tuberculosis	270	395	41	59	Trace.	Hyal., Gran., Epithelial.	0	"	0	23	"
8	131.01	Diabetes Insipidus.	4700	2400	66	34	Neg.	0	0	"	—	32	"
9	365.00	Leucæmia, mixed.	575	485	54	46	¼	Gran and Hyaline.	0	"	—	38	"
10	56.97	" "	390	490	44	56	$\frac{1}{10}$	" "	Slight.	Systolic murmur at apex.	—	43	"
11	73.00	" "	282	538	34	66	Cloud.	Leucocyte and Hyaline.	0	Negative.	—	27	"

To give some idea of the severity of the nephritis, figures will be found in the tables giving the amount of albumin present. These are obtained as follows, and can be only approximate, owing to variations from day to day. The test for albumin employed was heat and nitric acid, and if there was only a small amount present, it was described as a trace, cloud, or precipitate, as the case might be. If a larger amount was found, after the reaction was completed the test tube containing the urine was set aside for twenty-four hours, to allow the precipitate to settle, when the bulk of precipitate in the bottom of the tube was described as being a certain proportion of the amount of urine in the tube.

TABLE II.—ACUTE DISEASES.

Number.	Case Number.	Diagnosis.	Urine. Quantity. Day.	Urine. Quantity. Night.	Urine. Ratio. Day.	Urine. Ratio. Night.	Albumin.	Casts.	Œdema.	Heart Examination.	Atheroma.	Age.	Result.
12	214.02	Croupous Pneumonia.	225	140	62	38	Trace.	Hyaline, Granular.	0	Rapid—weak.	0	11	Recovered.
13	206.00	Scarlet Fever.	571	622	48	52	"	" "	0	Negative.	0	12	"
14	205.00	"	562	626	47	53	"	" "	0	"	0	10	"
15	207.00	"	520	605	46	54	"	" "	0	"	0	13	"
16	208.00	"	631	554	53	47	"	" "	0	"	0	7	"
17	111.02	Typhoid Fever.	480	405	54	46	Neg.	0	0	"	0	32	"
18	108.02	"	875	810	52	48	"	0	0	Systolic murmur at pulmonary.	0	22	"
19	71.02	"	1407	1147	55	45	"	0	0	Sounds weak.	0	23	"
20	115.00	"	915	852	52	48	Cloud.	Many.	0	" "	0	58	"
21	22.97	"	566	463	55	45	"	Hyaline, Granular.	0	Negative.	0	21	+
22	59.02	"	780	450	63	37	"	" "	0	"	0	20	Recovered.

Certain other factors will be mentioned in the tables as having an influence upon the ratio, such as the presence or absence of œdema, of atheroma in the vessels, the condition of the heart in renal cases, the age of the patient, and medication.

In regard to the last named factor, the changes in ratio caused by various drugs do not seem to be very well understood at present. As was mentioned before, Laspeyres says that in cases of œdema, medicines, such as digitalis, diuretin, etc., at first cause polyuria with nocturnal predominance, but afterwards the quantity of night urine diminishes as the equilibrium in the circulation reappears. In my cases, given later, this statement does not seem to be verified. As will be pointed out, the nocturnal urine was increased many times, and in certain of the cases it did predominate (as it had before the drug was exhibited); but, on the other hand, the day urine was increased to a greater degree, so the final result was a change in the ratio toward the

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[10] Dr. W. H. Morley was associated with me early in the research and aided largely in collecting the material before he found it necessary to give up the work.

TABLE III.—RENAL AND CARDIAC DISEASES.

Number.	Case Number.	Diagnosis.	Urine.				Albumin.	Casts.	Œdema.	Heart Examination.	Atheroma.	Age.	Medication.	Result.
			Quantity.		Ratio.									
			Day.	Night.	Day.	Night.								
23	126.99	Acute Paren. Nephritis.	782	562	58	42	Trace.	Casts present at times.	0	Negative.	0	18	——	Improved.
24	253.99	Acute Paren. Nephritis.	516	733	42	58	"	Hyaline.	+	Apex 1″ impure. Pulm. syst. murmur.	0	17	Basham's M.	"
25	97.98	Chr. Nephritis with acute exacerbations.	955	965	50	50	1/12	Hyal., Gran., Epithelial.	+	Sounds very weak.	—	55	Digitalis, nitroglycerin.	"
26	90.02	Chr. Paren. Nephritis.	562	502	53	47	¼	0	+	Syst. murmur at base. Apex 2″ stronger than 1″.	0	20	Basham's M.	"
27	134.03	Chr. Paren. Nephritis.	233	534	30	70	Trace.	Hyal., Gran., & Blood casts; much pus.	0	Negative.	0	13	Urotropin.	
28	8.02	Chr. Paren. Nephritis.	883	775	54	48	⅛	Short and long Hyal. and Granular.	+	Systolic murmur over base.	+	54	——	"
29	368.02	Chr. Paren. Nephritis.	585	612	49	51	1/10	Hyal., Gran.	0	Systolic murmur at apex.	0	18	Potas. acetat.	"
30	320.00	Chr. Paren. Nephritis.	419	527	44	56	⅛	" "	0	Negative.	0	18	Basham's M. and Potass. acetat.	"
31	111.01	Chr. Paren. Nephritis.	232	238	49	51	1/10	0	0	Tachycardia (Post-diph.)	0	24	Strychnine.	"
32	178.95	Chr. Nephritis.	508	488	51	49	¼	Hyal., Gran., Waxy, Epithelial.	Gener'l	Aortic murmur.	0	20	Basham's M.	"
33	52.02	" "	185	300	38	62	Cloud.	Hyaline.	Gen'ral Anasarca.	Dullness enlarged, arrhythmia. Sounds weak, no murmurs heard.	+	61	Digitalis, strychnine.	Unimproved
34	109.96	Chr. Paren. Nephritis.	577	962	37	63	⅛	"All kinds."	Gener'l	Negative.	0	35	Basham's Mixt.	Improved.
35	200.00	Chr. Nephritis.	920	939	49	51	¼	Many Hyal., Gran., and cellular.	0	"	0	27	Basham's Mixt.	"
36	301.00	" "	497	441	53	47	Cloud.	Few Hyal. & Gran..	0	"	+	40	Potas. acetate, caffeine.	"
37	41.95	" "	1012	381	71	29	¼	Hyal. Gran. Epithelial.	+ Slight general	Absolute dullness enlarged. Mitral systolic murmur.	—	21	Digitalis. Basham's M.	"
38	36.95	" "	500	315	61	39	1/6	Hyal. some with granules.	Slight.	Negative.	—	25	Nitroglycerin.	"
39	186.03	Chr. Nephritis, Interstitial.	670	835	45	55	Trace.	Hyal., Gran.	0	Apex 5″ I. C. S. 2 inches outside nipple. Aortic systolic murmur.	M'k'd	60	"	"
40	65.01	Chr. Nephritis, Interstitial.	463	523	47	53	1/10	Hyal,, Gran., Leucocyte.	Ascites and mark'd Œd'ma	Apex 5″ I. C. S. Dullness enlarged. Sounds impure.	"	52	Digitalis, nitroglycerin, strychnine.	+
41	83.02	Albuminuria.	313	249	56	44	⅛	Hyal., Gran.	0	Negative.	0	22	——	Improved.
42	147.95	Pyelonephritis.	465	675	41	59	¼	Hyal., Gran., Leucocyte.	Ascites and Œd'ma	Mitral systolic murmur. arrhythmia.	—	38	Boric acid, etc.	Worse.
43	258.01	Nephrolithiasis.	505	635	44	56	1/20	Hyal., Gran.	0	——	—	29	Potass. acetate.	Improved.
44	4.99	Fibroid Heart.	625	440	59	41	Trace.	Hyal., Gran. and Leucocyte.	+	Dullness enlarged, arrhythmia.	—	55	Digitalis.	+
45	111.03	Mitral regurgitation.	566	668	46	54	⅛	Many Hyal. & Gran.	+	Dullness enlarged. Mitral systolic murmur, arrhythmia.	+	51	Digitalis, nitroglycerin.	Improved.
46	136.02	Ascites, Mitral regurgitation.	323	200	62	38	Neg.	Hyal., Granular.	Ascites and Œd'ma	Mitral systolic murmur, arrhythmia.	0	57	Helleborein.	"
47	274.03	Mitral regurgitation and stenosis	248	612	29	71	1/6	Hyal., Gran., Leucocyte.	0	Dullness enlarged. Apex 5″ I. C. S. outside nipple. Mitral systolic murmur. Arrhythmia.	+	64	Digitalis, Potas. acetate.	"
48	118.00	Double aortic, Double mitral, Hypertrophy and dilatation.	590	862	41	59	Cloud..	Hyal., Gran., Leucocyte.	0	Apex, 6″ I. C. S., anterior Axillary line. Dullness enlarged.	0 ?	32	Nux vomica.	+ (apoplexy)
49	56.00	Double aortic, Mitral regurgitation.	200	220	48	52	⅛	Hyal., Gran., Leucocyte.	+	Heart dilated. Murmurs over heart, no localized apex.	+	57	Digitalis, strychnine, nitroglycerin.	+
50	231.00	Aortic regurgitation. Mitral stenosis.	262	367	42	58	Cloud.	Granular.	0	Arrhythmia.	+	53	Digitalis, nitroglycerin.	Unchanged.

51	122.01	Mitral regurgitation, Aortic stenosis.	856	585	59	41	Neg.	0	+	Heart enlarged. Mitral and aortic systolic murmurs.	+	72	Nitroglycerin.	Improved.
52	129.96	Dilatation, atheroma.	201	284	41	59	$\frac{1}{30}$	0	—	Slight dilatation of left ventricle.	+	62	Nux vomica.	“
53	286.99	Mitral regurgitation. Pleurisy with effusion.	598	1044	37	63	$\frac{1}{8}$	Hyal., Gran., Waxy.	+	Mitral systolic murmur.	+	31	Basham's M. Digitalis.	“
54	193.03	Mitral regurgitation. Myocarditis.	345	410	46	54	Trace.	“ “	+	Apex 6″ I. C. S., 1″ outside nipple. Gallop rhythm. Apex 1″ sound impure.	0	32	Digitalis, strophanthus.	“
55	20.97	Anasarca, Hypertrophy of left ventricle.	436	400	52	48	1/8	“ All kinds.”	Marked	Apex 6″ I. C. S. Fœtal rhythm. No murmurs heard at first; later, mitral syolic.	+	50	Digitalis, nitroglycerin.	+
56	50.95	Mitral stenosis.	570	515	52	48	0	0	Trace.	Arrhythmia. Mitral diastolic murmur at times.	—	30	Strychnine.	Improved.

normal. There are two factors to be considered in this relation: first, and most important, is the drug; and, second, the time of administration. I think my tables will show clearly that diuretin increases the day urine most markedly and it may be taken as a type of those diuretics which act rapidly. Then, being administered during the day time, they exercise their effects most strongly during the day, and thus aid in restoring the normal ratio.

Digitalis may be taken as a type of the other class of drugs causing diuresis, which have a slower and more prolonged action. The figures obtained in the following cases, however, would indicate that their effects are much the same as diuretin, only less pronounced; in other words, they increase the nocturnal urine to a less extent than the day urine and therefore aid the normal ratio, but do not cause as great a disturbance in it as does diuretin.

Potassium acetate and Basham's mixture would be included in the digitalis group (as far as our purposes here are concerned) as not being so active as the diuretin.

This question of the effect upon the ratio, of the different medicines and the time of their administration, however, is not very satisfactorily settled as yet, and I am carrying out, under Dr. Dock's direction, some further research upon the subject, administering them to patients with cardiac and renal disease, not only, as is commonly done, during the day time, but also at equal intervals during the twenty-four hours, and seeing what effect it will have upon the ratio; and I hope to be able to report later in greater detail upon this phase of the subject.

In the first three tables given herewith the figures do not include those days when diuretin was given, for the before named reason, but those days when digitalis, potassium acetate, and Basham's mixture were given, are included, and the drug used is indicated in the " Medication " column.

TABLE I.—MISCELLANEOUS DISEASES.

In this table of miscellaneous diseases with nephritis associated there is little disturbance of ratio except in Cases 1, 3, 7, 10, and 11.

In Cases 1 and 3 the nephritis, no doubt, accounts for part of the trouble, but probably a very important factor was the atheroma which was present in both, but was especially marked in No. 3. Atheroma itself may not be the important factor, but it indicates, or is associated frequently with, changes which cause the disturbance, as many times where the largest per cent. of nocturnal polyuria is present a greater or less marked degree of atheroma is found.

Case No. 7 (Qd : Qn : : 41 : 59) may perhaps be explained by the nephritis alone, which appears to have been quite marked—granular, hyaline, and epithelial casts being found in the sediment. In Case 10 the renal conditions were not so marked, but there was a disturbance of the circulation, as shown by a systolic murmur at the apex and slight œdema at the ankles. In the leucæmic case, No. 11 (Qd : Qn : : 34 : 66) it is difficult to explain the great preponderance of Qn. The heart examination was negative and the nephritis not very severe. During the time of observation there was slight fever to about 101° F. usually, sometimes to 103°, with slight chills in the afternoon, but sweating was also often noted at night.

The case of diabetes insipidus (No. 8) is interesting in this connection, as the patient passed on the average over seven litres of urine in twenty-four hours, giving a perfectly normal ratio, 66 : 34.

TABLE II.—ACUTE DISEASES.

From a study of Tables I and II it appears safe to conclude that a mild nephritis may not cause much disturbance; the ratio probably is changed, but in the acute diseases it has not passed the physiological limits excepting in the cases of scarlet fever. That we may see these changes better, we will take these cases up in greater detail later in the paper. (See Table IV.)

TABLE III.—RENAL AND CARDIAC DISEASES.

It would hardly appear necessary to give any further history of most of these cases, as the table gives the important points in the examination and treatment. A study of the details given would certainly confirm the contentions of the earlier workers, that in disease of the kidney and heart, there tends to be a disturbance of the ratio between day and night urine; this is slightly marked in acute nephritis and in chronic disease of the kidney, but is markedly changed when these are associated with cardiac disease, as, for instance, in Cases 33, 47, and 53.

The change may be more marked with disease of the myocardium but the one case here cited (No. 54) would of course not be enough to disprove or to add weight to that claim.

In certain of the cases here mentioned, it is rather hard to tell why the ratio is not disturbed more than it is; as, for instance, in Case 37 (Qd : Qn :: 71 : 29) with marked nephritis, œdema of the legs and sacral region, and slight general œdema of the skin. Here, perhaps, we should be justified in thinking the heart's efficiency was not much impaired. The examination on entrance showed "Shock rather strong, absolute dulness upper border fourth rib outside parasternal line. Just inside nipple is soft systolic murmur heard best in fourth I. C. S. inside parasternal line. Aortic second strongly accented." At a later examination "sounds were less murmurish." The heart then was hypertrophied and slightly uncompensated. This was restored during the stay in the hospital with a corresponding improvement in ratio, as will be shown later. The history of the case would bear out the same idea, that the main trouble was with the kidneys and not with the heart; the latter condition dating back, in all probability, to an attack of acute inflammatory rheumatism four years before, but causing no special cardiac symptoms. The kidney condition, on the other hand, dated back only three months, from a cold, and on the evening of the day on which the patient caught cold his feet and legs were swollen for the first time, and since then he has always been troubled with them more or less. The œdema, then, was of renal origin, and would not cause so great a disturbance as if it had been due to the heart; but even so we should have expected a greater nocturnal polyuria from the nephritis, and why we did not get it, it would be hard to state. Laspeyres, also, reported some cases in which he did not get so great a predominance in nocturnal polyuria as he would have expected from the conditions present.

Case No. 38 (Qd : Qn :: 61 : 39) also shows little change from the normal ratio, resembling No. 37 in that the history points to kidney disease of over one year's duration—no heart symptoms, and heart examination was negative. Case No. 41 showed albumin present only part of the time, as it would disappear for several days and then reappear. Special mention of the other cases hardly seems necessary, as they practically all show the same thing—a greater or less deviation from the normal ratio. In functional disease of the heart a normal ratio has been found to exist, so the observation of the relative proportions of day and night urine would aid in the diagnosis of this condition from an organic disease.

Beyond the aid to diagnosis, we may be assisted in following the course of a disease by noting the changes in ratio as the patient progresses toward recovery or the reverse. To do this, a fairly long observation of the case is necessary and due regard to certain factors, especially the medication, must be paid, mention being made particularly of diuretics. The changes caused by these have been discussed earlier and need not be taken up again here.

We give below some observations showing the changes as they take place, the cases referred to being those of scarlet fever recorded in Table II and some of the cases of nephritis and heart disease of Table III.

The scarlet fever occurred in one family, the children being from seven to thirteen years old. All the cases followed a typical course, making good recovery notwithstanding the mild parenchymatous degeneration of the kidneys. To see if any change in ratio took place during the course of the disease, examinations were made at short periods of a week or ten days, with the following results:

TABLE IV.—SCARLET FEVER.

	Days observed.	Urine, Quantity and ratio.	Albumin.
Case 15:	10	580 : 550 :: 51 : 49	"Negative" to "trace."
	11	465 : 650 :: 42 : 58	"Trace" to "cloud."
Case 13:	10	840 : 710 :: 54 : 46	"Trace."
	10	390 : 527 :: 43 : 57	"Trace."
	10	357 : 655 :: 35 : 65	"Faint cloud."
	7	750 : 670 :: 53 : 47	"Faint cloud" to "neg."
Case 16:	10	895 : 580 :: 61 : 39	"Trace."
	10	567 : 600 :: 49 : 51	"Cloud."
	15	495 : 505 :: 50 : 50	"Faint cloud."
Case 14:	10	872 : 1132 :: 44 : 56	"Trace."
	10	464 : 336 :: 58 : 42	"Trace."
	15	410 : 450 :: 48 : 52	"Trace" to "negative."

In thus examining these cases for the shorter periods we see the changes in ratio taking place which resulted in those given in Table II. As the kidney lesion progressed, the proportion of night urine rose, and finally, as improvement came on with the disappearance of albumin, a readjustment backward toward the normal took place. In Case No. 14 the ratio is more irregular than in the others, but no explanation can be given for this. By studying the cases in this way we can see the changes caused by the disease more clearly, although, as mentioned, they are not so marked as we get in some other conditions. In the typhoid cases it was not possible to watch the changes as we could in the scarlet fever, because the albumin and casts were either present or absent in a certain case when the urine began to be measured separately, and continued about the same during the whole course of the disease.

From Table III we give the following cases:

CASE 25. Chronic parenchymatous nephritis with acute exacerbations.

Days.	Urine.	Medication.	Result:
5	1080 : 1190 : : 48 : 52	Nitroglycerin and digitalis.	Improved.
5	830 : 740 : : 53 : 47		

CASE 29. Chronic nephritis, anæmia, epilepsy.

7	575 : 565 : : 50 : 50	Potas. acetate.
6	595 : 660 : : 48 : 52	Potas. acetate.

Result: General condition improved, but there was more albumin in urine at end than at the beginning of the observations.

CASE 31. Chronic paren. nephritis, postdiphtheritic tachycardia, partial paralysis of throat.

10	205 : 270 : : 43 : 57	Strychnine.
10	227 : 195 : : 54 : 46	Strychnine.
12	258 : 248 : : 51 : 49	Strychnine stopped.

General improvement.

NOTE.—The last ratio will be noticed as not quite so favorable as the former—this has been noticed in several of the cases, and is probably due to the patient, as he improved, moving about more, which has a tendency to increase the nocturnal urine.

CASE 32. Chronic nephritis.

8	425 : 564 : : 43 : 57	Basham's mixture.
10	283 : 352 : : 45 : 55	Basham's mixture.
12	661 : 493 : : 57 : 43	Basham's mixture.
7	594 : 529 : : 53 : 47	Basham's mixture.

Gradual improvement with few exceptions during whole case. See Note Case 31.

CASE 34. Chronic paren. nephritis.

6	375 : 640 : : 37 : 63	Strontium lactate.
16	605 : 1015 : : 37 : 63	Strontium lactate.
11	500 : 1015 : : 33 : 67	Basham's mixture.
8	680 : 1085 : : 39 : 61	Basham's mixture.
16	620 : 1060 : : 37 : 63	Basham's mixture.
15	620 : 815 : : 43 : 57	Basham's mixture.

Here we get very little change in ratio, only a slight improvement, which corresponded with some improvement in the general condition. There was a good deal of œdema present and much albumin in the urine when the patient went home. Heart examination was negative. It will also be noted that Basham's mixture caused very little diuresis.

CASE 35. Chronic paren. nephritis.

10	875 : 959 : : 46 : 54	
15	1092 : 1097 : : 50 : 50	Basham's mixture.
16	835 : 788 : : 52 : 48	Basham's mixture and strontium bromide.

Improved.

CASE 36. Chronic paren. nephritis.

17	537 : 558 : : 49 : 51	Caffeine, potass. acetate.
18	435 : 329 : : 57 ; 43	Caffeine, potass. acetate.

Improved.

CASE 37. Chronic paren. nephritis.

6	897 : 351 : : 72 : 28		
8	1171 : 422 : : 74 : 26	Digitalis.	
11	1118 : 373 : : 75 : 25	Digitalis.	
8	828 : 350 : : 71 : 29	Digitalis.	See Note Case 31.

Improved.

(This case was discussed in detail earlier in the paper.)

CASE 40. Chronic interstitial nephritis, atheroma.

2	250 : 500 : : 33 : 67	Digitalis and nitroglycerin.
4	530 : 520 : : 50 : 50	Diuretin and nitroglycerin.
5	390 : 415 : : 48 : 52	Digitalis and nitroglycerin.
6	500 : 633 : : 36 : 64	Digitalis and nitroglycerin.
7	850 : 890 : : 49 : 51	Diuretin and nitroglycerin.
9	630 : 610 : : 52 : 48	Strychnine.
6	445 : 425 : : 51 : 49	Strychnine.
6	220 : 265 : : 45 : 55	Strychnine.

Died.

This case shows the changes caused by medication very well. When the patient entered the hospital he was placed on digitalis and nitroglycerin and kept on these about two weeks; his ratio was 33 : 67 at the end of this period. Under diuretin the day urine was most markedly increased and the ratio became 50 : 50. When diuretin was stopped, the proportion of day urine fell gradually to practically the same point at which it was when the patient entered. Under a second course of diuretin it came back to 49 : 51, and remained there for a week after the drug was stopped and strychnine substituted, after which the night proportion rose gradually and the day proportion fell until death occurred. This illustrates the action of diuretics like diuretin, which act rapidly and, when administered only during the day time, as is commonly done, increase the day urine most markedly.

CASE 45. Mitral regurgitation, arteriosclerosis, chronic nephritis.

5	550 : 730 : : 43 : 57	Diuretin, digitalis, nitroglycerin.
10	600 : 730 : : 45 : 55	Diuretin, digitalis, nitroglycerin.
4	433 : 580 : : 43 : 57	Diuretin, digitalis, nitroglycerin.

Result: During first two periods there was improvement. During the last period the patient was much worse; he was unable to lie down and there was marked cardiac arrhythmia. By some error the separation of urine in the case was stopped at this point. As will be seen, with the change for the worse in the condition came also a less favorable ratio. The patient died two weeks later.

CASE 46. Mitral regurgitation, ascites, chronic nephritis.

8	310 : 365 : : 54 : 46	Helleborein.
8	335 : 135 : : 71 : 29	Helleborein.

Improved.

CASE 50. Aortic regurgitation, mitral stenosis, chronic insterstitial nephritis, enlarged spleen.

7	254 : 475 : : 35 : 65	Digitalis and nitroglycerin.
7	310 : 364 : : 46 : 54	Digitalis and nitroglycerin.
9	231 : 264 : : 47 : 53	Digitalis and nitroglycerin.

Improvement in ratio, but not in general condition.

CASE 51. Mitral regurgitation, arteriosclerosis, chronic interstitial nephritis.

5	680 : 490 : : 58 : 42	Nitroglycerin.
5	1120 : 825 : : 58 : 42	Nitroglycerin.
7	796 : 410 : : 66 : 34	Nitroglycerin.

Improved.

CASE 54. Mitral regurgitation, myocarditis, chronic parenchymatous nephritis, chronic gastritis.

5	240 : 570 : : 30 : 70	Digitalis.
6	445 : 455 : : 49 : 51	Digitalis and strychnine.
9	320 : 403 : : 44 : 56	Strophanthus and strychnine.
8	310 : 340 : : 48 : 52	Strophanthus and strychnine.

Improved.

CASE 55. Arteriosclerosis, contracted kidney, hypertrophy of left ventricle, anasarca, nephritis.

6	334 : 397 : : 46 : 54	Digitalis.
6	449 : 385 : : 54 : 46	Digitalis.
5	764 : 527 : : 59 : 41	Digitalis.
2	550 : 450 : : 61 : 49	Digitalis.

Died.

This case is one which does not follow the rule as laid down by the previous cases. The patient gave a history of obscure symptoms on the part of the liver, pain in that region, and occasional jaundice for over eleven years. There was irregularity of the heart, with swelling of the legs and abdomen, for two years, so that he could not work for some months. Five months before his entrance to hospital he became short of breath and thinks he was jaundiced. Four months before entrance, he had pain in the back and frequent micturition, especially at night, swelling of the legs, etc. Examination at hospital showed " No cyanosis or jaundice, large amount of œdema in back and below waist; Cheyne-Stokes respiration, heart dilated, no murmurs heard; fœtal rhythm; liver and spleen enlarged." As is shown in the table, the ratio improved during his entire stay in the hospital, and so apparently did the patient until a few days before the end. The œdema grew softer and the heart became stronger, so that a loud systolic murmur was heard at the apex. While, however, the urinary ratio continued to improve, the patient took a turn for the worse, cyanosis increased, Cheyne-Stokes respiration reappeared, the heart dilated, and the patient died about a week later. Why this change was not reflected in the urinary condition cannot be stated, and this one case stands alone in the whole number as an apparent exception.

From a study of these observations we can conclude, as mentioned before, that the changes in a certain case from or toward the normal ratio are but expressions of the changes which take place in the patient's renal or cardiac condition, and therefore they can be used as an index to his progress. Certowitch noted this fact in one of his cases.

To make a brief summary of the results obtained in this study, I would (1) confirm the earlier writers' views as to the nocturnal polyuria occurring in renal and cardiac disease. (2) Point out the value of this fact as a diagnostic sign, especially in cardiac disease.

I would add (1) the possibility of tracing the course of a nephritis or of a cardiac disease by observing the changes in the relative amounts of day and night urine for short periods of time, and (2) when drugs which cause diuresis are administered during the day they tend to restore the normal ratio.

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Smallpox in Kansas.—The southern parts of Leavenworth and Jefferson counties, Kansas, are troubled with smallpox to the extent of closing the schools.

INFANTILE BRONCHITIS.*

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Acute bronchitis is a subject of interest to the general practitioner, owing to the prevalence of the disease at this time of the year. Out of 1,000 cases of various diseases coming directly under my care at the dispensary in the last two months, 293, or nearly one third, suffered from different forms of this disease. Of the above cases the majority of patients had involvement of the large tubes only, while in a large number the medium sized tubes were implicated, the small tubes being affected in only a small percentage.

It is well, before we go further, to define what we mean by bronchitis. We may say that it is an acute catarrhal inflammation of the bronchial mucous membrane, varying in degree and extent. It is usually bilateral and may affect any or all the tubes. It is not my intention to dwell upon the ætiology, but I will say in passing, the most important exciting causes are cold and sudden variations of temperature, especially when combined with high winds and dampness. It is not improbable that prolonged inhalations of overheated noxious air are a cause of bronchitis. The bactericidal theory seems to be gaining ground. Osler says: " The affection is probably microbic, though as yet we have no definite evidence upon this point."

Lueyrat considers simple tracheobronchitis a contagious disease and not due to exposure. In cover slips he found great numbers of a special microorganism. The constant presence of these organisms, as shown by cultures and examination, and the fact that they are very abundant in the beginning of the disease and diminish and almost entirely disappear in the last days, seems to indicate that they play a preponderating rôle in the ætiology.

Morse thinks that as the nose and throat almost always contain pathogenic cocci, it seems reasonable to suppose they are in the trachea and bronchi also, and probably are necessary for the production of bronchitis.

The bronchi in the infant, as compared relatively with the adult, are larger, more numerous, and occupy a greater space. The connective tissue is more abundant. The submucous connective tissue is of a loose texture and holds in its meshes a rich capillary plexus, which plays a more important rôle in the infant than later in life, in congestion and absorption. These anatomical differences make the infant prone to the disease, and when it occurs it may be of a serious nature. In bronchitis the process of inflammation may be in the large tubes (mild form), in the medium sized tubes (severe form), or the very small tubes, the so called capillary bronchitis.

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* Read before the Society of the Alumni of the City (Charity) Hospital at the stated meeting, January 13, 1904.

In bronchitis of the large tubes the onset is generally gradual and may be preceded by catarrh of the nose, larynx, or pharynx. The changes of the character of the cough, the slightly exaggerated breathing, and a rise in temperature, are indications that the tubes are involved. The cough may be severe and constant, or only slight, and there is no expectoration. The secretions are frequently coughed up into the mouth or pharynx and swallowed, and this sometimes excites vomiting; or they may be coughed up into the larynx or trachea and aspirated again into the lungs. The respirations are usually 40 or 50 to the minute, and frequently accompanied by a rattling sound which is produced by the mucus in the trachea or bronchi. The general symptoms are not severe, the temperature running from 100° F. to 102° F., with some loss of appetite, restlessness, and maybe vomiting or diarrhœa from the swallowed mucus.

The physical signs that manifest themselves on examination of the chest in the first stage are dry sonorous râles heard over the whole chest. These in a short time are replaced by moist, coarse, mucous râles, which are, however, inconstant. On palpation there is usually a marked rhonchal fremitus. The dyspnœa, if any, is usually very slight. These attacks do not, as a rule, last more than a week, unless the child is very delicate or susceptible; in such cases relapses are common.

The severe form (bronchitis of the smaller tubes) differs from the preceding variety chiefly in the severity of its symptoms. The onset may be like that just described, the severe symptoms not appearing until the patient has been sick for two or three days, or they may be severe from the onset. There are cough, dyspnœa, accelerated breathing, fever, and moderate or sometimes severe prostration. The cough is of a short, teasing character, rather than severe and paroxysmal. There is marked dyspnœa shown by recession of the ribs and all the soft parts of the chest, and dilatation of the alæ nasi on inspiration. The child nurses with great difficulty. The respirations are from 50 to 80 per minute, and the temperature is from 101° F. to 102° F., the first day or two, but may be 103° or 104°—so high a temperature does not continue unless pneumonia develops. There is usually more or less prostration, which depends more on the dyspnœa and rapid respiration than on the temperature. Frequently there is slight cyanosis.

In the beginning, the chest is filled with sibilant and sonorous râles which may last from twelve to twenty-four hours, when they are replaced by moist râles, coarse or fine, according as they are in the large or small tubes. There may be loud wheezing râles on expiration. The râles are best heard behind, but are heard all over the chest. On percussion the chest is normal or tympanitic. As the case progresses toward recovery the fine râles are the first to disappear.

At the beginning of such a case it is impossible to say whether the disease will be limited to the medium sized bronchi, or extend to the finest tubes. In young and very delicate infants it is very apt to involve the small tubes, especially after measles. In other cases, usually young infants, there may be attacks of respiratory failure, or the so called "acute suffocative catarrh" may develop, because of the infant's inability to empty the tubes of the secretion, and the dyspnœa steadily increases, the child does not cough or cry, the pulse is rapid and feeble; the respiration is very rapid, superficial, and irregular, the skin is cyanotic and clammy, and the *lower* extremities may be cold. There is marked prostration.

The temperature may be high, in some cases 104° F., and dulness, apathy, and stupor may be present. The upper part of the chest is distended, while at the same time the recession of the lower intercostal spaces and the epigastric, hypochondriac, and supraclavicular regions show how great is the obstruction to the entrance of air into the alveoli. The percussion note is unaltered or tympanitic, or there may be dulness at the bases from pulmonary collapse. On auscultation the entrance of air may be observed to be fairly free in the upper and anterior parts of the lungs, but feeble or absent at the bases behind. The small and medium sized tubes are literally filled with secretion from the bronchial glands, dilated capillaries, and epithelial cells from the walls of the bronchi.

These attacks often come on quite suddenly, even in robust infants, and if the treatment is not very energetic, in fact, heroic, death often follows in a few hours. If cough is not excited in some way, the little patient drowns in his own secretion. I have had a number of such cases to deal with, and have learned how vigorous the treatment must be, and how closely every symptom must be watched.

The usual course of the disease in infants shows a subsidence of severe symptoms in two or three days, the temperature falling to 100° or 100.5° F., and the constitutional symptoms gradually subsiding as the temperature declines to normal. The constitutional symptoms are rarely severe enough to give alarm, except during the first thirty-six to forty-eight hours. Recovery is the rule, the exception being when in some cases the process extends to the smallest tubes and capillary bronchitis develops, passing into bronchopneumonia. Bronchitis is principally to be distinguished from this disease. In bronchopneumonia the temperature is higher, lasts for a longer time, there is much more prostration, the râles are usually localized, frequently being in one lung, oftenest at the base posteriorly. The duration of the disease is much longer and general symptoms are more severe. Then, in bronchopneumonia there is distant bronchial breathing, increased vocal fremitus and dulness over the affected area gradually shading off to normal, whereas in bronchitis the percussion note is normal or tympanitic.

In the severe form the onset is abrupt with a chill, severe cough, fever ranging from 100° to 103°. The cough resembles that of the mild form, except that it is more severe. The fever is highest the first two or three days, and then gradually subsides. The râles in the chest are first dry, and later large and small moist râles are heard, showing that the large and medium sized tubes are involved. These attacks usually last from two to three weeks, the patient being sick enough to be in bed for four or five days. Relapses are common and if the attack complicates or follows pertussis or measles, bronchopneumonia may follow, as I have quite frequently seen in epidemics of pertussis and measles, but on the whole the prognosis is good.

The treatment of the mild cases in infants consists in keeping them indoors in a large well ventilated room, at the temperature of 70° to 72° F., and having the air frequently changed, the infant being removed from the room while it is done; keeping them warmly dressed in flannels or an oiled silk jacket. If seen in the first stage, when nothing can be heard but harsh breathing and a cough, tincture of aconite with sweet spirit of nitre should be given every hour, as follows:

℞ Tinct. aconiti	4 minims;
Spirit. ether. nitrosi	1 drachm;
Water q. s. ad	1 ounce.

S. A teaspoonful every hour for a child six months to a year old.

The chest should be thoroughly rubbed with camphor oil three times a day.

If the child is constipated the bowels should be thoroughly opened with calomel, followed by castor oil, and for the distention of the abdomen by gas, enemata, carminatives, and castor oil should be given, taking great care not to upset the stomach. The food should be reduced in quantity and strength at the beginning. If the attack is not aborted by these means counter-irritation may be applied to the chest by means of a mustard paste (one part of mustard to six of flour) which is left on the chest about half an hour or until the chest is thoroughly reddened. This should be done every three hours. If the soreness of the bronchial tubes is not relieved by this means, inhalations should be used, and this can best be done by use of the "bronchitis tent" and croup kettle. The plain steam can be used, or steam from lime water; or, what is better still, a tablespoonful of compound tincture of benzoin or a few drops of creosote to the pint of water can be put into the croup kettle and the steam inhaled. The bronchitis tent consists of a canopy raised over the bed a sufficient distance to allow the circulation of plenty of air. Through one side of this canopy passes a tube leading from a kettle of boiling water, under which is an alcohol lamp to keep the temperature sufficiently high; by this means the moist air breathed by the patient soothes and quiets the inflamed mucous membrane of the air passages. The mucous membrane in the early stages of inflammation is always dry and red, lacking its normal moisture. By reason of this dryness the upper air passages fail to catch up particles of dust upon their surface and do not moisten the air before it reaches the lungs. It will be remembered the bronchial mucous membrane is covered with ciliated epithelium, which, by the constant upward wavy motion of its cilia, urges out all impurities. Dryness of the surface at once stops this ciliated motion.

During the first stage before secretion has been established, resort should be had to ipecac and to potassium citrate or acetate, which act as sedatives to the inflamed mucous surfaces, overcoming dryness and irritation.

℞ Syrup, ipecac	1 drachm;
Potass. citrat	4 drachms;
Water	6 ounces.

S. One drachm every three hours.

Having considered the treatment of the first stage of bronchitis we pass now to the second. The condition of the mucous membrane is now quite different from that of which we have just been speaking. In place of an absolute lack of secretion, we have a profusion of cast off epithelial cells, a large amount of mucus, and more or less liquid poured out upon the walls of the bronchial tubes, forming obstruction everywhere to the ready passage of air. This state is one in which the stage of excitement of the inflammation is followed by one of local depression and an effort on the part of the tissues to rid themselves of the congestion and useless epithelial formations. The physical signs are now found to consist of a large number of loose râles which are distinctly moist, and later become liquid and bubbling, and may cause gurgling on inspiration and expiration. Sometimes they are musical or squeaking. Generally, the latter signs do not come on until the case is far advanced, and only last a few days or hours, as the mucus is so loose as to be easily coughed up and the lung readily cleared.

The object of the physician is to use remedies which will stimulate the bronchial tubes and increase the volume of liquid poured out. For this purpose the bronchitis tent can be employed, but the drugs to be used internally are ammonium, chiefly the chloride, and the pitches, such as terebene.

℞	Ammon. chloridi	2 drachms;
	Ext. glycyrrh, fl.	2 drachms;
	Water	3 ounces.

Sig. A teaspoonful every four hours.

Usually, this treatment brings about a cure, but there are cases in which a profuse secretion supervenes, the dreaded "acute suffocative catarrh" which comes on so suddenly that if the physician is not near at hand death will follow before medical aid can be obtained.

The objects to be accomplished are to rid the lungs of the excessive secretions, prevent the bronchial tubes from being filled up by more secretion, and support the heart and respiration until the crisis is over. Where the lungs are rapidly being filled with secretion, nothing is better, in a strong child, than an emetic; ipecac may be used in the form of the powder, five to ten grains, or a teaspoonful of the syrup of ipecac. If the pulse is rapid, strong and full tincture of aconite should be given in sufficiently large doses to control, quiet, and slow it. It is well to begin with a one quarter of a minim every hour, watching the pulse and shortening the interval as the necessity of the case may require. It may be necessary to give it every fifteen minutes to a child from six months to one year old. Frequently repeated small doses are better than large doses at longer intervals. When the pulse is weak, small, thready, and rapid, digitalis should be employed and strychnine should be given in full doses to stimulate the respiratory centre and excite the nervous system, which is depressed by the increasing carbonic acid in the blood. Oxygen should be inhaled almost continuously. To stop the profuse secretion, atropine by the mouth or hypodermically may be used, and to relieve the intense congestion in the bronchial tubes and the large amount of secretion, dry cupping over the chest is very efficacious and often gives immediate relief. Spirit of camphor is an excellent remedy, and can be given in five drop doses every hour. If death seems imminent, hot and cold dashes of water may relieve the patient sufficiently to keep up respiration until voluntary efforts are made. Often when the lungs seem full of secretion and very little air is entering, holding the child up, head downward, and using gentle flagellation or slapping with the hand over the buttocks and back of the chest will not only cause mucus to run out of the tubes and mouth, but stimulate respiration by stimulating the respiratory centre.

The use of remedies designed to allay the cough in these cases is absolutely unjustifiable, as they result in the retention of the secretion. The question as to whether the cough is excessive or not depends on the ability of the lung to rid itself of the secretion in its bronchial tubes. All expectorants, such as the ammonium salts, are entirely contraindicated, as they only aggravate matters by increasing the secretion and filling up the tubes. The child should not be allowed to lie in one position for more than a few minutes, but should be changed from side to side to prevent accumulation of fluid at the bases of the lungs or on either side.

I am well aware that the general practitioner far too frequently uses his stock bronchitis mixtures, trusting they will hit the case, because they were good in some previous case, not realizing that the condition that may confront him in the one case may be directly reversed in the next and require entirely different therapeutic agents. The treatment of bronchitis, therefore, necessitates, first of all, an accurate diagnosis of the condition to be dealt with and of the stage of the disease.

In conclusion, I want to emphasize the necessity of the frequent and careful examination of the chest even in the mild forms of bronchitis, as even the mild forms in an infant may almost in a twinkling change to one of grave import.

222 West Fifty-ninth Street.

The Jones County, La., Medical Association was organized at Ellisville, on January 17th, with the following officers: President, Dr. S. O. Smith, of Ellisville; vice-president, Dr. R. G. McCormick, of Laurel; secretary and treasurer, Dr. Troy M. Sexton, of Laurel.

THE SANITARY NEEDS OF PANAMA.

By M. L. MADURO, M. D.,

NEW YORK.

Hippocrates gave as the cardinal hygienic formula " Pure air, pure water, and a pure soil," and after all these centuries we know nothing to add to it. The evils arising from sanitary neglect are as old as civilization, and now that the world's attention is fixed on the building of an interoceanic ship canal through the Isthmus of Panama by the United States government, it behooves this country to give its first thought to the sanitary needs of the towns and villages through which the ditch will be dug, before beginning active work on the canal proper.

Self preservation is the first law of Nature, but it is a law which we ignorantly and frequently disregard in laying our lives and health at the mercy of unsanitary conditions which can easily be remedied. In any community it is important for all, that each be made to live cleanly. The question of drainage is a most important and essential problem for the preservation of life and health; it is of interest to the whole public, and should be carried out by public authority. The world's advance in medicine to-day concerns particularly the prevention, rather than the cure, of disease. An able and recent example of what science has accomplished in this manner can be seen by turning to the medical history of the island of Cuba since the Spanish-American war. We stand aghast at the horrors of war, yet the mortality of war is small compared with that of preventable disease—disease a consequence of neglect, abuse, and the want of knowing how to live. An experience of some months of active practice in the city of Panama, convinces me that most of the disease one is called on to treat is directly traceable to man's neglect of sanitary precautions, for it stands in a certain relation to the amount of neglected filth permitted to poison water and air. I have found that a large percentage of the so-called malaria and Chagres fever, and even the dysenteries, are nothing more or less than types of typhoid fever, with its characteristic clinical course in the mode of onset and the temperature curve. Opportunity was lacking to substantiate the above by testing with the Widal reaction. The poisonous gases, the products of decomposing animal and vegetable matter, are mixed with the watery vapor from excessive damp, and being inhaled, cause disease. This excess of moisture aggravates the impurities in the atmosphere, so that only by thorough drainage will a remedy be found. Among foreigners who are unacclimated and who live on the Isthmus, the inhalation of these heavy vapors is extremely depressing, and it induces the habit of drinking liquor as a stimulant, which causes a temporary relief from the feeling of oppression, but, by lessening the resistance of the system, invites disease. The city of Panama possesses no aqueduct, so that it depends on the heavy rains for its water supply, which is stored in tanks and cisterns. During the dry season, water is sold by the bucket at exorbitant rates, making it a luxury for the households to obtain sufficient for the bare necessities. This problem could be readily solved by building an aqueduct, the source of good clear water being found in the Juan Diaz river, ten miles out of town. An antiquated sewer, made of brick and improperly ventilated, runs through part of the city. This is naturally always offensive, because the porous walls of the sewer are more or less permeated by the filth of its contents. It should be replaced by pipe sewers that are perfectly vented, so that there can be an escape of all contained gases when they are compressed by wind blowing into the outlet or by the rise of the tide. Such precautions will prevent the forcing of sewer gas into dwellings, a free circulation of air inhibiting the formation of bad gases that are generated by its absence. It is a well known fact that typhoid fever is rarely absent from towns with unventilated sewers. With proper ventilation it is of advantage to have exposed outlets to sewers, and sanitary engineers advise added ventilation by means of manholes, opening at frequent intervals in the centre of streets, far away from the house line. The flushing and cleaning of sewers on the Isthmus will be performed by the heavy rains, substituted by special apparatus during the dry season, the flushing points being the regular street corner gullies, which should be properly trapped to prevent sewer gas from arising. Tide valves will be found necessary on the Pacific side, in order to dam the tide from setting back into the sewers. Next in importance—perhaps even greater as regards conditions in Panama—is the consideration of the question of house drainage, the institution of modern water closets, of soil pipe ventilation, arrangements for the disposal of house slops, general house ventilation, in fact, the installation of up to date plumbing. That the inhabitants would welcome such an innovation goes without saying, for, besides its great conveniences, it will add materially to the public health. Other important needs can be enumerated as follows:

1. Tearing down the rookeries that the very

poor live in, their occupants transferred to well drained, lighted, and ventilated buildings of however cheap construction.

2. The organization of an efficient street cleaning department, the duty of which should include the frequent watering of streets with an antiseptic solution, the removal of solid waste in carts specially constructed to arrest putrefaction, its rapid conveyance to a crematory built on modern plans, and, if possible, the further utilization of that waste for the pecuniary good of the towns.

3. Opening up of blind and narrow streets to sunlight, and paving all thoroughfares in suitable fashion, and further filling in old vaults and cisterns.

4. A systematically equipped board of health, the duties of which in the broadest sense will be to teach cleanliness as it affects air, water, and food. Enough stress cannot be laid on the latter, for public protection must be given to meat supplies in particular, by the institution of refrigeration, which will enable meat to be hung a longer time than twenty-four hours, as is the present custom. The examination and control of a milk supply is a necessity, as also the prevention of food adulteration.

5. Finally, strict quarantine regulations must be enforced, the more so as the beginning and completion of the waterway will draw people from all parts of the world. The hospital facilities on the Isthmus are sadly in need of reorganization; the erection of two terminal hospitals in Panama and Colon, and their equipment with the most modern accoutrements, is suggested, as also the establishment of field hospitals all along the line of the ditch. The present site of the Canal Hospital, in the city of Panama, on a very high plateau about two miles out of town, is eminently fitted for the erection of a central hospital on the pavilion plan. A good corps of trained nurses will be indispensable for the well-being of the patients. The United States, in directing this most important work, will unquestionably go about it in a very thorough fashion, its first principle being the acquiring of complete plans by competent hands. Panama is by no means the black hole that its traducers have painted it, and it is my opinion that fulfilling all the sanitary needs, the Isthmus will in time become the winter health resort that Havana is said to be to-day.

210 West One Hundred and Seventh Street.

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Mount Sinai Hospital.—Dr. Samuel M. Brickner has been appointed adjunct attending gynæcologist. The new hospital is to be opened on February 15th.

A SUGGESTION FOR THE RAPID CALCULATION OF PERCENTAGE MILK MIXTURES; WITH DESCRIPTION OF A MECHANICAL DEVICE FOR THE INSTANTANEOUS CALCULATION OF SUCH FORMULÆ.*

By THOMPSON S. WESTCOTT, M. D.,
PHILADELPHIA,
ASSOCIATE IN DISEASES OF CHILDREN, UNIVERSITY OF PENNSYLVANIA.

No argument is needed at the present day to prove the superiority of the percentage method in infant feeding, and no one who has thoroughly mastered its details would be willing to go back to the older stereotyped and inflexible formularies of the past. The necessity for mathematical formulæ, however, has largely prevented the general adoption of this method, simple as the calculations really are to any one at all familiar with mathematical processes.

After several years of missionary work in this field the writer has been forced to the conclusion that simpler and more rapid methods of calculation must be devised, if the system is to meet with the universal adoption that it deserves. While studying this interesting problem it was recognized at the outset that a special calculation for every formula to be prescribed necessitated a very considerable waste of time and energy; and with this thought in mind the writer has set out to simplify the present methods by reducing the calculation to its simplest terms. The first step in progress has been the recognition of the fact that, since a percentage formula indicates a definite ratio on a decimal basis between the solids and the total quantity of the mixture, a corresponding ratio must exist between the component liquids (milk and cream) and the total quantity. In this fact lies the germ of the present communication.

Take, for instance, the formulæ for calculating the quantities of cream, milk, and lactose which are most generally employed (Baner's), when 16 per cent. cream and whole milk are used:

$$C = \frac{(F - P)\,Q}{12}$$

$$M = \frac{P \times Q}{4} - C.$$

$$\text{Lactose} = \frac{(S - P)\,Q}{100}$$

As these hitherto have been used, the known quantities,—fat percentage, proteid percentage, and total quantity of mixture—are substituted in the formulæ and the resulting values of C and M

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[1] Read at the meeting of the Philadelphia Pædiatric Society, June 9, 1903.

worked out. If, however, the value of Q is left indeterminate, and definite values for F and P alone are taken, we find, for example, for a 3.00 per cent. fat and 1.00 per cent. proteid mixture of indeterminate quantity,

$$C = \frac{(3-1)}{12} Q = \frac{2}{12} Q = \frac{1}{6} Q,$$

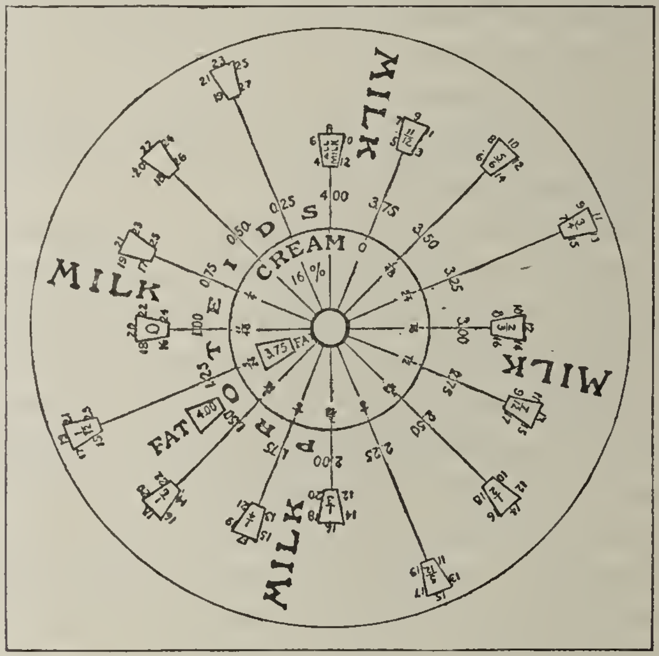
and

$$M = \frac{1 \times Q}{4} - \frac{1}{6} Q = \frac{1}{12} Q.$$

It is at once evident that we have here an expression for the values of the milk and cream in terms of the total quantity of the mixture, and that, in such a percentage combination, the cream must always be $^{1}/_{6}$ and the milk $^{1}/_{12}$ of the total quantity, no matter how large or small the latter may be. In a mixture of 24 ounces one can say at once that the cream must be $^{1}/_{6}$ of 24 ounces (4 ounces) and the milk $^{1}/_{12}$ of 24 ounces (2 ounces). Surely nothing can be simpler than this. In a 48-ounce mixture, again, the same ratio must obtain, and therefore the cream must be 8 ounces and the milk 4 ounces. If these simple relations are remembered one need never be at a loss to write for a 3 — 1 mixture these simple proportions of the total quantity, no matter how large or small, be it for a single bottle, for the whole day's feeding, or for the supply of any number of babies who may take this formula. It follows, of course, that the balance of the mixture must be made up of the diluent, which is more easily expressed as "q. s. ad the total quantity."

Now, if similar calculations are carried out for various other fat and proteid percentage combinations tables may be formulated giving the proportions of 16 per cent. cream and whole milk in terms of Q in any desired series. In preparing such tables, fat percentages ranging from 0.25 to 4.00, by intervals of 0.25, were variously combined with corresponding proteid percentages, so that a complete series of the fractional ratios for all the possible combinations of fat and proteid percentages within these limits was worked out. A study of these tables shows that for any definite fat percentage the fractions representing the proportions of milk and cream required to give the successive proteid percentages run in regular arithmetical progressions, those for the cream running downward as those for the milk increase. For example, in the 3 per cent. fat table, it is noted that the cream fractions begin with $^{3}/_{16}$ and the milk with 0, for 0.75 proteids; for 1.00 proteids the proportions are $^{1}/_{6}$ and $^{1}/_{12}$, respectively; and for 1.25, $^{7}/_{48}$ and $^{1}/_{6}$, respectively, the cream fractions decreasing by intervals of $^{1}/_{48}$, and the milk fractions increasing by intervals of $^{4}/_{48}$. Again, the table for the 3.25 fat combinations begins at 1.00 proteids with $^{3}/_{16}$ for the cream and $^{1}/_{16}$ ($^{3}/_{48}$) for the milk, and advances by the same intervals for the milk, giving $^{7}/_{48}$, $^{11}/_{48}$, $^{5}/_{16}$, $^{19}/_{48}$, etc.; while the cream fractions run downward, giving $^{1}/_{6}$, $^{7}/_{48}$, $^{1}/_{8}$, $^{5}/_{48}$, etc., the same as those in the previous table, but corresponding with different proteid percentages.

These regular arithmetical progressions have suggested a mechanical device whereby these tables may be condensed into a scale or chart, so that by properly adjusting it the fractional parts of total quantity may be read off and the calculations made at sight. This device consists essentially of two disks, one much smaller than the other, concentrically fastened and movable upon a third disk of the same dimensions as the larger one. The smaller and larger disks are divided evenly by 16 radii, each one being marked successively by one of the proteid percentages from 0.25 to 4.00, and at the extremity of each of these radii on the periphery of the larger disk is a window-like opening showing the under disk. Through these openings appear the fractions giving the proportions of milk, while at the extremities of the rays on the smaller disk appear the series corresponding with the cream proportions. Another window on the larger disk displays the series of fat percentages ranging from 0.25 to 4.00, and the same series is displayed through a window in the small disk. By adjusting the larger disk to show the desired fat percentage in the "fat"-window, and then making the smaller disk show a corresponding figure in its "fat"-window, the two necessary fractions can be read off at the inner and outer ends of the ray marked by the desired proteid percentage,—the cream on the periphery of the small disk, the milk in the window of the large disk.



For example, if the "fat"-windows are adjusted for 4.00, one can see at a glance that 1.50 proteids calls for $^{5}/_{24}$ Q for the cream, and $^{1}/_{6}$ Q for the milk, or, in a 24-ounce mixture, for 5 ounces cream and 4 ounces milk.

The calculation for sugar can be made with equal facility. The quantity of dry sugar of milk to be added to bring the sugar up to a desired percentage is a function of the proteids, and is entirely independent of the fat percentage. The same factor, therefore, is to be used in all mixtures containing the same proteid percentage. These factors are expressed on the chart in a circular arrangement around the "milk"-window corresponding to each proteid percentage. Reading upward and downward in regular sequence from left to right, the five figures around each window correspond to 5.00, 5.50, 6.00, 6.50, and 7.00 per cent. of sugar, and the calculation of the amount of sugar is made by multiplying the corresponding factor by $^1/_4$ of the total quantity of mixture, and pointing off two decimal places.[1] In the 3—1 mixture already illustrated, suppose 6 per cent. of sugar were desired. The factor indicated at the top of the window of the 1.00 per cent. proteid ray is 20. Multiplying this by $^1/_4$ of 24, or 6, and pointing off two decimals, the result is 1.2 ounces. For 5 per cent. sugar it would be $16 \times 6 = 0.96$ ounce, and for 7 per cent., $24 \times 6 = 1.44$ ounces.

This device, therefore, puts at the disposal of the physician an almost instantaneous method of determining the quantities of 16 per cent. cream, whole milk, and sugar, required to make any of the usual percentage formulæ for any quantity of total mixture.

This instrument was devised as an interesting generalization of mathematical principles; it has finally shaped itself into what promises to be the practical solution of the whole confusing problem of formulary calculation of percentage milk mixtures.

1833 Spruce Street.

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New Hospital for Chicago.—The offer of the site of the ill fated Iroquois Theatre for the erection of a $2,000,000 hospital as a memorial to those who lost their lives in the recent fire was made on January 19th to Mr. Arthur E. Hull, as the representative of the Iroquois Memorial Association. It is said that the offer was made by a prominent surgeon, who prefers to remain incognito, but who promised to contribute $5,000 if the association agreed to carry out the project. The idea is to build a modern and an immense emergency hospital. In case the hospital does not materialize, it is thought a statue or other form of memorial may be erected.

Correspondence.

LETTER FROM RIO DE JANEIRO.

Climatic Conditions.—Vital Statistics.—Bubonic Plague, Yellow Fever, and Variola.—Vaccine and Pharmaceutics.—Shipping Regulations.—Sanitary Measures Against Plague.

Rio de Janeiro, Brazil,
December 12, 1903.

The season of heat is commencing earlier than usual this year, at least so I am informed, since this is my first experience with the country. On one day last week, the thermometer in the Botanical Gardens here registered in the shade, at eleven a. m., 40° C., and ever since the fifth inst. the heat has been very great. Notwithstanding this, there has been no particular increase in the death rate of the city. And, in connection with the calculation of the death rate, I feel obliged to say that, as officially given, it is absolutely worthless; indeed, it is worse, it is misleading. The reason for this fact, lies, not so much in unreported deaths, for it is probable that the error is slight in this regard, but in the fact that no one knows with the least certainty just what the population of Rio is to-day. The last recognized official census is that of 1890, which places the population at 429,848 people. This was generally accepted at the date of its announcement as virtually correct. Ten years later another census was taken, which was at once rejected, even officially, as being too small, this being due to faulty methods of taking it.

Then an unofficial census was taken, and with this as a basis and a system of calculated increase based on the increase of former periods of time, and an estimation based on the number of school children and the increase in this number during the past ten years, all these methods having been employed, the authorities here state the population to be 800,000, a number believed, by those who should best know, to be very greatly in excess.

At the same time, it is shown and believed by the Brazilians themselves, that the birth rate in Rio has been slowly decreasing for the past ten years, and has been for some years exceeded by the death rate. Taking this as a basis for his calculations, an Argentine statistical authority has recently published a pamphlet to show, and he proves it apparently in a satisfactory manner for Argentinos, that Rio is a smaller city, as regards the number of its inhabitants, than it was at the time of the census of 1890. This pamphlet is not accepted as a standard work in Brazil.

Be this as it may, it is very difficult to estimate a death rate when the population is unknown. Now, the death rate of Rio, as officially published, is not above that of many places that Americans have always supposed to be most sanitary cities to live in, and yet, that this is not a sanitary place to live in is well known.

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[1] In order to avoid the mixed decimals which would result from the subtraction of the proteid percentage from the sugar percentage in certain combinations, these differences have been multiplied by 4, thus producing integral factors. This multiplication is therefore allowed for in using the chart by taking one-quarter of the total quantity instead of Q.

To return to the question of temperature—I will refer to health statistics later—one can always keep fairly comfortable here, if one does not have to stay in Rio itself during the summer. In town the nights are said to be often unbearable; indeed I have been told by foreigners, that Rio differs from all known cities in the world, in that oftentimes the nights in summer were very much hotter than the days. But, with Petropolis, two hours away; with the Internacional Hotel, an hour from town and very cool; with Hotel Corcovado, the old hotel Das Paieneiras, at an altitude of almost 50° metres on Corcovado mountain; with Tijuca, 1,300 feet above the sea, and of easy access; with these and other places in the vicinity one can get cooled off at night, and be refreshed for the next day's work. Of course, considerable crowds resort to all these places on Sundays and on church holidays, of which there are almost fifty during the year.

Petropolis is the official seat of government during the hot season, and the residence of the foreign legations at all seasons. It is situated in a series of small valleys in the mountains lying to the eastward of Rio, and the railroad by which the ascent of the mountains is made, by the Riggenbach Rack system—with a gradient of 1 in 6.5—is reached by a steamer trip of one hour from Rio. This is a very pleasant place to live in, founded by the late Emperor Dom Pedro, after whom it is named. The town called, after his wife, Therseopolis, is only a little distance away from Petropolis, and is in the Organ mountains, so called from the pipe like appearance of the peaks from a distance, and this place is chiefly famed for the production of a very delicious jam made from quince, which is highly regarded by all.

The centre of the main streets of Petropolis is formed by a mountain stream flowing between substantial walls, and as the current is always swift, it is, with its tree lined sides, a very beautiful adjunct to the charming scenery of the city.

In the city of Rio itself, more especially in certain districts, there are also streams walled in; but as there is in the dry season very little water in them, and as many drains empty into them, they are at such times merely picturesque, but most unsanitary objects.

In regard to the health of the city, as published by the authorities, if their estimate of the population is accepted, the rates of mortality are not very excessive for a tropical country, but then unfortunately that estimate is just what one cannot accept. For instance, between January 1, 1903, and December 6, 1903, there were recorded 15,006 deaths from all causes, of which number 580 were caused by yellow fever, 323 by plague, 686 by variola, 715 by malarial fevers, 2,531 by pulmonary tuberculosis, 1,386 by diseases of the "nervous system," 1,929 by diseases of the "circulatory apparatus," 1,487 by diseases of the "respiratory system," 2,170 by diseases of the "digestive system," and 393 by diseases of the "urinary apparatus."

There were 251 deaths due to violence, 51 due to suicide, and 103 to unknown causes.

The death rate per thousand for the week ending December 6th, during which there were 372 deaths from all causes, was officially stated to be 24.24. But if you use as a basis of calculation for the rate a population figure of, say, a trifle under 500,000, which is probably much nearer the true population, the result will be very considerably higher.

Looking at the city, with its outlying districts, and noting the small size of the houses, with their one or two stories, and bearing in mind that most houses have only one family living in them; looking also at the comparatively few persons one sees on the streets as compared with other cities whose population is known to be four fifths of a million, no one who is anything of an observer would ever accuse the city of Rio de Janeiro of accommodating 800,000 persons.

The deaths from plague during the three weeks that I have been here have not increased in number, nor does the disease appear to have assumed a very virulent type; while yellow fever can hardly be said to be more than just present, there having been only two cases and one death during that period. Variola is always present. It may be interesting to know that I have tried at all the best pharmacists in town to purchase vaccine to use myself, and I find it impossible. Vaccination is performed here free at the Vaccination Bureau, but otherwise it is almost impossible to obtain virus.

It is also very difficult to purchase many of the preparations in common use in the United States and elsewhere; tablets for use either orally or hypodermically are almost unknown, owing to the practically prohibitive tariff placed upon them by the Brazilian government, and also to the fact that all such preparations entering the country have to be submitted to the Government chemical laboratory, and carefully analyzed before being allowed to be sold. What few tablets, tabloids, and other preparations of that sort one finds, are therefore very expensive, and are also likely to be rather stale.

During the months of the summer here (the ruling went into effect on December 4th) no ships are allowed to come to the wharves, but are compelled to load and unload in the open bay. As, however, the wharves are very small, with a very moderate depth of water, this does not put commerce to any great inconvenience at this time. The government has effected a large loan of some five million pounds in Europe, for the building of a sea wall and the excavation of the bay off this, so as to form a long pier head or wharf, which, when completed, will be used by all shipping. This project will require—so it is estimated—some ten years for its final completion. In the meantime it is believed by many of the old residents here that the consequent stirring up of the waters of the bay, caused by the dredging work, will give rise to a very severe epidemic of yellow fever. How true this supposition may be, in view of the recent discoveries in regard to the fever and its relation to the insect which propagates it, it is, of course, impossible to say. It would appear, however, that the work could be done without any remarkable exacerbation of the disease.

It is interesting to note that, since the completion of the port works at Santos, just south of here, which also included an entirely new system of sewerage, there have been no cases of yellow fever. Whereas some five or six years ago there was an epidemic every summer, now they have had no cases for three years.

On account of the plague, all Brazilian and Argentine ports have quarantined against Rio de Janeiro. The Argentine government compels the steamship lines coming to Buenos Ayres from here to carry an Argentine physician, who on the way down disinfects the baggage and passengers from Rio. Should five days elapse after such disinfection without any suspicion of plague, the passengers are allowed to land. If the companies do not carry an Argentine physician, then the ship is quarantined after arrival at Buenos Ayres, and disinfected and held with her passengers for five days. After embarkation, even in the case of disinfection, the addresses of all passengers are taken, and they are kept under surveillance for a week.

Vessels going from here to Santos are disinfected at the Ilha Grande quarantine station, below here, and those going from here to northern Brazilian ports are disinfected here by means of sulphur gas generated by a furnace on a small disinfecting barge. Such disinfection was done to a steamer leaving here the other day for New York, via Bahia.

No yellow fever has this year—or rather this season—been reported from either Pernambuco or Bahia.

I neglected to state above, in regard to the disinfection performed by the Argentine doctors on board the steamers touching here on their way to Argentine ports, that such passenger steamers are required by Argentine regulations to carry on board a small steam disinfecting chamber, of size sufficient for the introduction of an emigrant's mattress, and all the disinfection is done in this chamber. In regard to the existence of bubonic plague in this city, it is stated that it has been here for almost three years now. The deaths run from twenty to thirty a week, and the new cases every week are a trifle more than double that amount, so that the mortality is not high compared with that which is the rule in Eastern countries. Many of the laity doubt if it is the true bubonic plague, but I see no reason for doubting it, as it is proved in every case by bacteriological examination.

All houses where it makes its appearance are disinfected, and most of the patients are removed to the Hospital Paulo Candido, where last Saturday there were ninety-six cases under treatment. House to house inspections have been made and a premium of 300 reis is paid on rats by the sanitary authorities. To date 17,000 rats have been turned in.

The disease is not confined to any one quarter of the city, but has appeared in almost every district or ward into which the city is divided. Now, in former epidemics of yellow fever here this has not been the case; one year one or two districts would have almost all the cases of fever, and the next year other districts would be involved, so that I believe but on very few occasions has there been a general epidemic throughout the city. Of course, while one portion of the town was having an epidemic, there would be isolated cases elsewhere; but it appears certainly to have been a fact that the disease used to be practically confined to one or two districts.

The Central Kentucky Medical Association, at its recent meeting at Danville, elected the following officers: President, Dr. J. E. Caldwell, of Perryville; vice-president, Dr. I. S. Gose, of Danville; secretary and treasurer, Dr. Steele Bailey, of Stanford.

Therapeutical Notes.

The Ambulatory Treatment of Blennorrhagic Orchioepididymitis.—Maurange, according to the *Revue française de médecine et de chirurgie* for January 11th, first bathes the patient. The scrotum is well lathered with soap and hot water, shaved, then carefully dried. He then lies down on a bed. The scrotum and contents are then drawn up on the pelvis, and a thick layer of the following ointment freely applied to the distended region:

℞ Methyl salicylate..........20 grammes ($^{2}/_{3}$ ounce);
Guaiacol *a*................2½ grammes (45 grains);
Lanolin ....15 grammes (½ ounce);
Petrolatum ....25 grammes (6¼ drachms).
M. ft. ungt.

This is at once covered with a layer of ordinary covered cotton (not absorbent). Under the scrotum a strong band of cotton is then passed, the ends being held by the patient, who thus supports the scrotum till the conclusion of the dressing, in the position first given it by the physician. A layer of cotton is slid in front between the penis and scrotum and between the penis and the pubes. Over this is applied yet more cotton and a layer of taffeta, having a hole in it for the penis to pass through; then, according to Langlebert's method of forming a suspensory, a considerable quantity of cotton in thick layers is placed over the scrotum. The loins and upper part of the thighs are then bandaged, terminating by a strong compressing double spica of gauze.

For the first two hours a moderate burning sensation is felt, but this lessens very rapidly. In some hours all pain disappears, and walking becomes possible. The dressing may be removed on the fifth day, when all swelling will be found to have disappeared, the epididymis to be completely reduced, and its consistence almost normal. For some days further a suspensory is ordered as a precautionary measure. Meanwhile, of course, the gonorrhœa must be appropriately treated.

For the Disinfection of Stools.—*Revue française de médecine et de chirurgie* for January 11th recommends a teaspoonful (5 grammes, or 75 grains) of the following mixture to be put into the commode:

℞ Zinc sulphate............100 grammes (3 ounces);
Sulphuric acid.....................5 to 10 grammes
(75 to 150 minims);
Essential oil of mirbane...0.02 gramme ($^{1}/_{3}$ minim);
Indigo blue...............0.15 gramme ($^{1}/_{6}$ grain).
M. The blue is merely a distinctive mark to prevent errors. This mixture effectually kills the unpleasant odor of stools and urine.

Oatmeal in Diabetes.—Von Noorden (*Canadian Practitioner and Review*, January, quoting *Berliner klinische Wochenschrift*) finds that it is possible on a diet of oatmeal to lessen the quantity of sugar in the urine, and also the acetone bodies. The porridge is made by thoroughly cooking 250 grammes of oatmeal or rolled oats with 300 grammes of butter and 100 grammes of albumen, in the form of vegetable albumen; or the white of an egg may be added after the porridge is partly cooked. This is sufficient for twenty-four hours' nourishment, and is given every two hours. He allows at the same time a little wine, brandy, or strong coffee. This diet is especially useful in those cases which fail to derive any benefit from the ordinary diabetic foods. After a few weeks' successful trial with this the patient can gradually substitute other articles, but must always retain a proportion of the porridge. Von Noorden reports great success from a year's exprience, finding the acetone vanish in a few days, and the sugar always very low.

For the Crises of Ureteral Calculus.—Dr. Debout d'Estrées (*Journal de médecine de Paris*, January 3rd), in a communication to the Société médicale de l'Elysée, recommends the following enema as having given the best results (after hypodermic of morphine) in calming the crises:

℞ Chloral hydrate............4 grammes (1 drachm);
Antipyrine ....2 grammes (½ drachm);
Yolk of egg...............................No. 1;
Distilled water..........190 grammes ($6^{1}/_{3}$ ounces).
M.

For Muscular Cramps.—The *Journal de médecine de Paris* for January 3rd recommends friction of the cramped muscles with the following liniment:

℞ Sydenham's laudanum } equal parts.
Chloroform
Essential oil of hyoscyamus
M.

Biliary Lithiasis.—Kraus in *Journal de médecine de Paris*, for August 23, 1903, recommends:

℞ Calomel ....½ gramme (7½ grains);
Podophyllin } of each..25 centigrammes (3¾ grains);
Euonymin
Extract of belladonna.15 centigrammes (2¼ grains);
Licorice powder............enough to make 10 pills.
M. One pill at night.

Glandular Tuberculosis. — As non-operative measures, *Nord médical*, for January 15, 1904, recommends besides change of climate, selected diet, etc.:

℞ Iodine ....2 grammes (30 grains);
Extract of rhatany.........8 grammes (2 drachms);
Syrup, enough to make...............1,000 grammes
($33^{1}/_{3}$ ounces).
M. Teaspoonful, morning and evening.

Arsenic and quinine are also advised, and, besides artificial sea baths, the following is mentioned:

℞ Iodine ....10 grammes ($^{1}/_{3}$ ounce);
Potassium iodide..........20 grammes ($^{2}/_{3}$ ounce);
Water ....250 grammes ($8^{1}/_{3}$ ounces).
M. Put into bath (tub of wood, or enameled).

Anorexia.—*Pharmazeutische Zeitung*, for January 16, 1904, gives the following:

℞ Menthol ....½ gramme (7½ grains);
Ethereal tincture of valerian } of each...10 grammes
Tincture of caraway ($^{1}/_{3}$ ounce).
M. Fifteen drops, before each meal.

Otalgia.—*Nouveaux remèdes*, for January 8, 1904, gives Moure's prescription:

℞ Atropine sulphate } of each....5 centigrammes
Morphine hydrochloride (¾ grain);
Glycerin ....15 grammes (½ ounce).
M. One or two drops in the ear, morning and evening.

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NEW YORK, SATURDAY, FEBRUARY 6, 1904.

THE AUTOMOBILE SHOW.

Probably few things that have occurred in years in the way of an exhibition have been of as much interest to the physicians of New York as the automobile show held in Madison Square Garden recently.

At this exhibition several hundred automobiles of different kinds and makes were exhibited. The whole floor space of the garden, the galleries, the café, and the cellars, was crowded with machines, and there were so many who could not obtain floor space for their exhibits that they were obliged to secure other quarters outside for a branch, or second, exhibition. From the opening to the closing of the exhibition Madison Square was crowded with physicians from New York and the surrounding country, all examining automobiles with the object of obtaining one which would best answer their purpose when making their calls in private practice, for they see in the automobile a carriage which requires no horses and no repairing of harness; they do see, however, that the cost of machines is greater than that of a horse and buggy, and that unless they buy reliable machines made by manufacturers of experience accidents may occur to them, the results of which would amount in repairs to much more than would those of their buggies or carriages. Automobiles of all kinds were seen, varying from six hundred to six thousand dollars and even more in price where racing and expensive touring cars are considered. These are not desirable, however, in the practice of medicine, for physicians were selecting automobiles usually with reference to the location in which they practised. It seems a general idea that in cities electricity is the best motor power, while in the country the gasoline engine is more valuable. Among the machines that are most interesting to the physicians are: 1. The runabout, with or without a top. 2. The physician's road wagon, with or without a top. 3. The phaeton buggy, with an adjustable top. 4. The single seated open road wagon with an adjustable tonneau. 5. The coupé. 6. The coupé carryall. 7. The landau. 8. The carriage. 9. The hansom. 10. The victoria.

Of all the wagons for city use, the coupé with the chauffeur's seat on the box in front is probably the most comfortable as well as the most elegant, when of the electric type; and next the hansom. The carriages, landaus, and victorias are not much used by physicians. The coupé carryall, electric, is a beautiful and useful vehicle. It can be operated by the physician himself and is very convenient for the use of his family as well, which is very often an important question in investing in automobiles at their present price. We then come to the consideration of the more practical vehicle for the physician, those spoken of as "physicians' road wagons and runabouts." There are many makes of these, both electric and gasoline, with and without tops and at very moderate prices. The former of these are especially good for country use, the latter preferable in the city.

The most useful vehicles for business and pleasure in both city and country that the automobile show has shown us are the gasoline road wagons with the adjustable tonneau. They are strong and well built, can travel any distance up hill and down, and have the desired speed. Without the tonneau they look like any other road wagon and can be used with a single seat or by the physician when making his calls and also by any member of his family, the same as with a buggy. A buggy top could also be adjusted to such a road wagon. If the physician desires to tour, to take out a party of friends or his family for a ride, the tonneau with a seat for two is placed on the back of the wagon.

If he chooses, for an initial expense of from $40 to $50, a so-called glass top can be put on which will separate the back, or tonneau, part from the front seat, and he can then ride in an enclosed, covered vehicle practically the same as a coupé, with a man in front to manage the machine for him. Such, in short, is the information which would probably be of interest to our readers concerning the special vehicles shown to the New York practitioners who visited the automobile show.

COUNTRY HOSPITALS FOR TUBERCULOUS CHILDREN.

Within recent years the problem of caring properly for children of great cities who are afflicted with external, or surgical, tuberculosis, has become more and more pressing for solution. We have a sufficiency of hospitals in the cities, where such children can receive treatment at the hands of expert surgeons, and where they can remain for a little while to become convalescent after the active treatment has been applied. On the other hand, we lack provision for the further care of these little patients, until they are restored to comparative health. The well known English orthopædist, Tubby, in a recent article in the *British Medical Journal* (I, 1903, p. 454) puts in a very strong plea for the establishment of a system of country hospitals for the care of surgical tuberculosis in children. According to the plan proposed by Mr. Tubby, each metropolitan or urban hospital should be merely the central receiving station; where the diagnosis should be made, and the active treatment applied. The patients thereupon should be sent to the rural branch hospitals for convalescence. In this manner the capacity of the urban hospitals would be greatly enlarged, and also the treatment of all cases could be carried on far more satisfactorily. Another suggestion of Mr. Tubby's is that in each rural hospital there should be a surgical staff, consisting of local surgeons, the whole organization and the entire system being supervised by the chief surgeon or surgeons of the urban hospital, of which the rural institution should be a branch.

This plan seems very advantageous from the viewpoint of the children concerned, and also from that of the surgeons who take care of these cases. We might add that arrangements could be made to have the rural surgeons come to the central hospital from time to time for a short course of instruction and observation, thus profiting to the extent of a special postgraduate course. Visits to the rural hospitals by the surgeons of the city hospital could also be arranged periodically. In these rural hospitals, which need not at all be elaborately equipped, the children could become convalescent under the beneficent effects of the pure fresh air, the abundance of sunlight and of wholesome food, and cheerful surroundings, far better than if they were sent back to their tenements from the overfilled city hospital because others are clamoring for admission.

This system of branch rural hospitals suggested by Mr. Tubby could be made available, not only for tuberculous children, but also for both children and adults convalescent from a variety of diseases, such as for example typhoid fever and the severe, prostrating forms of influenza. To such of the city's poor as are now sent to their homes as soon as possible after the active symptoms of their disease have subsided, in order to make room for others that need the beds more urgently, this system of rural hospital would offer an opportunity to complete their recovery and to gather strength of body and mind for the subsequent struggle for existence.

IMPERFECTIONS IN OUR METHODS OF EXAMINING THE LIVER.

It is judiciously observed by a writer in a recent comprehensive publication * that our knowledge of the normal and pathological changes in the liver has not reached the satisfactory degree of exactness attained by closely related diagnostic sciences, such as, by way of illustration, the exploration and determination of kidney diseases. For this purpose, the urine affords a means of investigation yielding results which, for certainty and completeness of detail, are incomparably superior to our methods of inquiry into the obscurer regions of hepatic disorder. While we can without much difficulty, as a rule, procure a specimen of the urine to solve our doubts and suspicions, it is seldom possible to obtain in a state proper for analysis that parallel fluid—

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* L. Brauer, Untersuchungen über die Leber, Hoppe-Seyler's *Zeitschrift f. physiologische Chemie*, Bd. XL., 1903.

the bile—mixed with the secretion of the gall bladder. In short, as compared to the trim clipped domain of renal discovery, the more extensive and ill defined expanse of liver disease has hitherto presented the difficulties of a dark continent of pathological science.

It is now well known that the normal gall bladder contains mucin or nucleoalbumin, but not albumin in a form susceptible of coagulation. As soon as albumin of this molecular construction makes its appearance in the bile, it is an infallible sign of mischief—as unmistakable an indication of disease within the liver as albumin in the urine is an unequivocal sign of disease within the kidney. It is, therefore, unfortunate that the results of the examination of the bile through fistulæ, as in cases of cholecystitis, are not to be wholly depended upon as true indices of what has occurred in the parenchyma of the liver. The probability is too great that catarrh of the bile ducts, existing anteriorly to the operation of cholecystotomy, has profoundly altered the chemical constitution of the bile. Artificially considered, by means of fistulous openings in dogs, the contents of the gall bladder present variations of an important kind from what our speculations *a priori* had taught us to believe. Normally the bile from this source contains neither nucleoalbumin nor sugar nor alcohol, either ethylic or amylic. There are some few substances that, administered by the mouth, pass unchanged through the liver, and, like the bile acids, are taken back through the secondary portal circulation. Such a substance is methylene blue. Such substances likewise in all probability are salol and naphthalin. The importance of these facts to our therapeutic attempts to obviate the bacterial infection of the gall passages is distinct. To complete the parallelism between diseases of the liver and kidneys, both present, as a morbid phenonemon of primary significance, the elements of that process by which albuminuria develops. For the physiological experiments show that the irritation of the liver cell by foreign matter, such as alcohol, is followed by the deposit in the gall bladder and ducts, of albumin (albuminocholy) and the presence of cylindrical, hyaline casts.

How far does the urine, as we are able to procure it naturally, give us an accurate view of the pathological changes in the liver cells? In answer to this inquiry, it must be said that, unfortunately, except in a single instance, that of acute yellow atrophy, the urine as we get it shows us little beyond the signs of functional disturbances in the liver; and, though such disturbances of function, as Murchison taught, may and probably do imply the growth of definite maladies, we have in so stating the matter achieved but a negative result. It still leaves obscure the progression from cause to effect. For, if we enquire into the cause of these disturbances of function, we are brought by the irresistible reasoning of experimental pathology to the conclusion that the cause is to be found in an irritation of the liver cells and canaliculi, and that the true source of this irritation can scarcely be any other than an importation of foreign poisons, or toxines. As to the genesis of these tides of infection, it is equally certain that it must take place in one or more of the three supplementary organs of the liver, namely, the duodenum, the stomach, and the blood. We are thus thrown back upon the examination of these three as a more direct road to the truth than that through the urinary examination, though the importance of the last must never be forgotten. The analysis of the urine shows us in concrete form what has already occurred; the examination of the contents of the stomach, the fæcal matters, and the blood, brings us to a view of the gathering forces of disease.

Roberts Bartholow.

"NORMAL SALINE SOLUTION."

It is quite customary among physicians and physiologists to refer to the physiological (0.6 per cent.) salt solution as "normal saline solution." We note in the London *Pharmaceutical Journal* for January 16th that this is liable to be confounded with the chemist's normal volumetric solution of sodium chloride (N/1 NaCl). The writer, Mr. T. H. H. Francis, states that to his actual knowledge in two cases this latter solution has been supplied for physiological purposes when normal saline solution was asked for, and in one case, certainly, the patient died; in the other, the result is unknown. Physiological salt solution is usually wanted in a hurry, and it is quite likely that in the confusion such an error would repeatedly be made. As the chemical normal saline solution is nearly ten times as strong as the physiological solution, disastrous results are quite likely to happen. Since the chemical normal saline solution is but one of a series of volumetric solutions styled "normal," the chemists can hardly be asked to change their onomatology. We would, therefore, strongly urge the disuse of the term normal saline solution, as applied to the 0.6 per cent. solution of sodium chloride for physiological purposes, and a rigid adherence to the term "physiological salt solution."

MARTYRDOM TO PROFESSIONAL DUTY.

Cases of martyrdom to duty in the medical profession are commoner than most people are aware of, but owing to their less dramatic character do not so frequently come under public notice. We regret to record the death, on February 4th, in St. Mary's Hospital, Hoboken, of Dr. Joseph G. Rooney. On January 18th, five firemen were injured at a fire in Hoboken. Dr. Rooney worked over them in his shirt sleeves in the bitter cold, and refused to leave until all his patients were safely cared for. As a result, his arms were frostbitten and gangrene set in, which, in spite of all efforts, continued unchecked, and terminated fatally, as above stated, on February 4th. Dr. Rooney belonged to West New York, N. J.

NO NATIONAL ANTI-CIGARETTE CRUSADE AT PRESENT.

We learn that the crusade against cigarettes, upon which we commented unfavorably in a recent issue, had its foundation only in the mind of some practical joker in Philadelphia. That his joke, however, was taken seriously by a large number of "temperance" societies and crank reformers, who immediately took up his suggestion with enthusiasm, justifies the strictures we made. The audacious jester must have been surprised at the remarkable result of his endless chain, which will probably go on linking itself indefinitely in the hands of those who have not learned that they are the victims of a hoax.

The cigarette, *per se*, is the least injurious method of using tobacco. Inhaling does not, as many people seem to think, fill the lungs with smoke; that is a physiological impossibility. At most, the larynx and upper part of the trachea may be touched. The larger area of mucous membrane thus exposed to absorb nicotine is more than offset by the extreme comparative mildness of the cigarette. If this form of using tobacco is really particularly harmful, it is because the cigarette smoker often does not give his system time to recuperate from the narcotic effects of the herb; he smokes continuously, where the cigar smoker allows a certain interval between cigars. The most powerful effects of tobacco are to be obtained through the disappearing habit of chewing. Next in order we should place the use of the cigar, which includes both smoking and chewing. The non-absorbing porcelain pipe, the briar, the clay cutty, and the porous meerschaum continue the descending scale, which ends with the much maligned yet comparatively harmless cigarette. How absurd, yet how consistent with the tactics of "antis" in general, would be a law to forbid the sale of cigarettes and to allow that of every other form of tobacco!

BIOGRAPHIC CLINICAL HISTORIES.

The study of the causes which have produced lifelong ill health of individuals of past generations has its attractions. Nothing positive can, of course, be learned, because examinations are impossible, and clinical histories, even when elicited with the greatest care from the patient and his immediately surrounding friends, are not infrequently found to be misleading. Some good, however, may perhaps be accomplished by thus calling attention to serious faults which were always overlooked in the past and are often neglected at the present time. No harm can accrue from the deduction of plausible theories so long as the author draws evidence from the imperfect histories to show the presence of conditions then unknown, but now generally recognized as competent to produce such clinical pictures; but, when the clinical history demonstrates the presence of a condition which rarely if ever produces such a complex of symptoms, it is hardly advisable to insist that there the ætiologic factor was to be found. Compound myopic astigmatism is not very prone to induce such severe nervous symptoms as are aften the result of hypermetropic astigmatism, whether simple or compound. Possibly it may do so in exceptional cases, but an attempt to ascribe to it headache and asthenopia culminating in paralysis and aphasia should rest on something better than the possibility of an unrecognized astigmatism in myopic eyes, especially when the patient had been for years under the care of eminent ophthalmologists, one at least of whom it is acknowledged should have been able to recognize whether any astigmatism was present or not. This seems too much like forcing the history to bear out the author's ideas. It cannot be productive of good and will be apt to raise a question as to the soundness of such reasoning from biographic clinical histories.

News Items.

Society Meetings for the Coming Week:

MONDAY, *February 8th.*—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private) (Anniversary); New York Ophthalmological Society (private); Gynæcological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence.

TUESDAY, *February 9th.*—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, *February 10th.*—New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox Medical and Surgical Society (private).

THURSDAY, *February 11th.*—New York Academy of Medicine (Section in Pædiatrics); New York Academy of Medicine (Section in Otology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, *February 12th.*—Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, *February 13th.*—Obstetrical Society of Boston (private).

Change of Address.—Dr. George Bolling Lee, to Hotel Somerset, 150 West Forty-seventh Street, New York.

NEW YORK.

College of Physicians and Surgeons.—Dr. William J. Gies, adjunct professor of physiological chemistry, has been assigned to a seat in the faculty.

A Fire at Bellevue Hospital on February 2nd did some damage in the drying room of the laundry of the institution. The fire was extinguished by the hospital fire department.

The Medical Society of the County of New York.—Stated meetings of this organization will be held on February 29th, March 28th, April 25th, May 23rd, and September 26th. The officers for the year are: President, Dr. Wendell C. Phillips, 40 West Forty-seventh Street; first vice-president, Dr. George Montague Swift; second vice-president, Dr. Henry S. Stearns; secretary, Dr. John Van Doren Young, 60 West Seventy-sixth Street; assistant secretary, Dr. Edmund Prince Fowler; treasurer, Dr. John S. Warren, 164 West Seventy-third Street.

The Brooklyn Society of German Physicians gave its annual banquet at the Eldorado restaurant on January 30th. Dr. Ernest Schalck acted as toastmaster. Among the speakers were Dr. J. Sheppard, president of the Kings County Medical Society; Dr. Isaac Adler, of New York city; Dr. A. Ritter, and Dr. J. Fuhr.

An Office Building for Physicians.—It is understood that the Madison Avenue Hotel, at Madison Avenue and Fifty-eighth Street, is to be remodeled into an office building by the J. C. Lyons Building & Construction Company, owners of the building. It is said that the offices will be rented only to physicians and that a number of specialists in medicine and surgery have already leased offices there.

A Plan to Sterilize Money.—Dr. Thomas Darlington, Commissioner of the New York Board of Health, appeared before the House Committee on Banking and Currency recently and indorsed pending legislation for "clean money." Dr. Darlington said experiments were now being made in the New York bacteriological laboratory to ascertain whether old bills were mediums of transmitting disease germs. Should the experiments prove that the money in use in New York is loaded with disease germs, Dr. Darlington will formulate a plan for the daily or weekly sterilization of money from the great arteries of trade, such as the street car companies and the great retail stores.

X Ray Prize Essays.—Believing that the further development of x rays is of great importance to surgery and medicine and the human race, and to encourage research and disseminate the knowledge gained, the *Illustrated Review of Physiologic Therapeutics* offers the sum of fifteen hundred dollars in cash prizes for the best essays on X Rays in Medicine and Surgery, the first prize being $1,000. All surgeons, physicians, and hospitals interested in any branch of x ray work should write to the *Illustrated Review of Physiologic Therapeutics*, 19 East Sixteenth Street, New York city, for information concerning title, time allowed, conditions, etc.

New York Hospitals Overcrowded.—The crowded conditions prevailing in the hospitals of the city during the last month, especially in Bellevue and the allied hospitals, and the knowledge that the situation will grow more acute during the next two years before the hospital accommodations can be increased, have caused the trustees of Bellevue and the allied institutions to view the outlook with feelings of alarm. At the request of the Bellevue trustees, the clerks of the allied hospitals have compiled figures which show the remarkable increase in the city's hospital needs and easily account for the conditions during January. The figures show that Bellevue alone admitted and treated 27,068 cases during 1903, an increase of 3,995 patients over the previous year. Gouverneur had 4,052 cases, an increase of 1,067; Harlem had 2,846 cases, as compared with 2,374. Fordham showed a decrease of 3.5 per cent. of patients, due to the fact that those from the Alexander Avenue precinct were sent to

Lebanon Hospital last year, thus relieving Fordham. The average daily census in Bellevue was 818 last year, compared with 723 in 1902. Although Bellevue has 839 beds for adult patients, 200 of these are in special wards and are useless in time of an epidemic.

The Academy of Medicine.—A clinical meeting of the Section in Otology will be held on Thursday evening, February 11th, at 8.15, and the members are invited to present interesting cases and pathological specimens. At the meeting of the Section in Pædiatrics on Thursday evening, Dr. Louis Fischer will present several cases of Sporadic Cretinism, and will also present a case of Congenital Asymmetry due to Absence of the Pectoralis. Dr. Lewis A. Coffin will read a paper on Disease of the Accessory Sinuses of the Nose in Children, and a paper on A Clinical Study of Sixty-two Cases of Intestinal Infection by the Bacillus Dysenteriæ, by Dr. L. E. La Fetra and Dr. John Howland, will be presented. The following candidates have been recommended for election to Honorary Fellowship by the Council: Reginald Heber Fitz, Boston; William W. Keen, Philadelphia; William Osler, Baltimore; Victor C. Vaughan, Ann Arbor, Mich.; William H. Welch, Baltimore; T. Clifford Allbutt, London; W. Watson Cheyne, London; Lord Lister, London; William Macewen, Glasgow; Arthur Ernest Sansom, and Hermann Weber, London; Charles Bouchard, Ch. Lannelongue, Pierre Marie, E. Roux, Paris; Emil von Behring, Marburg, Germany; Ernest von Bergmann, Eduard Heinrich Henoch, Robert Koch, Ernest von Leyden, Johannes Orth, Wilhelm Waldeyer, Berlin; Vincenz Czerny, Wilhelm Erb, Heidelberg; Paul Ehrlich, Frankfurt; Friedrich von Esmarch, Kiel; Theodor Kocher, Berne; Johannes von Mikulicz-Rodecki, Breslau; Hermann Nothnagel, Vienna; Angelo Celli, Rome; Santiago Ramon y Cajal, Madrid; J. P. Pavlov, St. Petersburg; S. Kitasato, Tokio.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g Jan. 23.		Week end'g Jan. 30.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	106	13	65	17
Diphtheria	65	15	57	10
Scarlet fever	96	11	88	10
Typhoid fever	88	9	126	10
Consumption	..	68	..	56
Cerebrospinal fever	..	..	..	..

Lectures on School Hygiene will be given in Philadelphia during this year by prominent men. "Nervous Diseases, Their Causes and Effects," by Dr. S. Weir Mitchell, will constitute the first lecture.

Faith Curist Arrested.—Because he refused to send for a physician, and relied entirely upon prayers, a faith curist was arrested last week in Philadelphia, charged with being an accessory to the death of his child, who died from pneumonia.

The Neurological Society of Philadelphia celebrated its twentieth anniversary on January 26th, and elected the following officers: President, Dr. Charles S. Potts; vice-presidents, Dr. D. J. McCarthy, Dr. William Pickett; secretary, Dr. T. H. Weisenburg; treasurer, Dr. J. H. W. Rhein.

Farewell Dinner to Dr. Hinsdale.—A farewell dinner was given to Dr. Guy Hinsdale on January 29th, at the Union League Club. Dr. Hinsdale, who is secretary of the Climatological Society, and retiring secretary of the Philadelphia Medical Club, has been called to Virginia Hot Springs, to take charge of the sanitarium in that place.

The E. E. Montgomery Gynæcological Society of Jefferson Medical College held its fourteenth annual banquet at the Colonnade Hotel on February 2nd. Dr. H. A. Wiggins, of New York, delivered the annual address, his subject being Intestinal Anastomosis. Other speakers were Dr. W. W. Keen, Dr. F. X. Dercum, Dr. R. C. Rosenberger, Dr. F. H. Maier, Dr. E. E. Montgomery, Dr. Hobart A. Hare, and Dr Davis.

Philadelphia Obstetrical Society.—A meeting of the society was held on Thursday evening, February 4, 1904. Dr. Ellice McDonald read a paper on Fibromyomata of the Uterus, giving a pathological and statistical study of 280 cases, which was discussed by Dr. Charles P. Noble, Dr. Thomas S. Cullen, of Baltimore; Dr. John G. Clark, Dr. Guy L. Hunner, of Baltimore; Dr. Barton Cook Hirst, and Dr. Brooke M. Anspach.

Addition to St. Agnes Hospital.—Edwin F. Durang, architect, has completed plans for an additional building to be erected on the grounds of St. Agnes Hospital at Broad and Mifflin Streets. It will be a four-story stone structure, conforming in architectural appearance with the present buildings. The dimensions will be 50 by 125 feet. In the basement will be located the quarters for the out-patient department. The first and second floors will be devoted to private wards; on the third floor will be the nurses' quarters and children's wards, and on the fourth floor will be several operating wards. The plans have been submitted to the board of trustees of the institution, and as soon as they are approved estimates for the work of erection will be invited.

College of Physicians of Philadelphia.—A stated meeting of the Section on General Medicine will be held on Monday evening, February 8, 1904, at 8.15 o'clock, in the lower hall. Dr. William Egbert Robertson will present a patient with chronic cyanotic polycythæmia; Dr. William G. Spiller will read some Remarks on the Uncinate Group of Fits on Extensive Hæmorrhage Occurring in Epilepsy, Dr. David Reisman and Dr. F. T. Stewart will read a brief note entitled Persistent Diarrhœa following Herniotomy; Dr. J. M. Anders will read a paper on The Relation of Typhoid Fever to Tuberculosis; Dr. Robert N. Willson, Jr., will read a paper on The Diagnosis of Incipient Phthisis, with special reference to the Physical Signs and the Frequency of Bacilli in the Sputum. Fellows desiring to read papers at future meetings are requested to communicate with the clerk. Fellows desiring to become members of the Section on General Medicine will please send their names and addresses to the clerk, S. McC. Hamill, M. D., 1822 Spruce Street.

GENERAL

Statement of Mortality in Chicago for the Week Ending January 30, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on estimated mid-year populations of 1,950,000 for 1904, and of 1,885,000 for 1903:

	Jan. 30, 1904.	Jan. 23, 1904.	Jan. 31, 1903.
Total deaths. all causes	549	517	586
Important causes of death—			
Acute intestinal diseases	14	24	22
Apoplexy	13	13	10
Bright's disease	24	32	41
Bronchitis	40	24	32
Consumption	57	66	52
Cancer	19	18	17
Convulsions	14	10	15
Diphtheria	7	7	3
Heart disease	56	47	46
Influenza	7	4	2
Measles	..	..	4
Nervous diseases	23	29	27
Pneumonia	121	106	104
Scarlet fever	3	3	7
Suicide	5	8	10
Typhoid	5	9	12
Violence (other than suicide)	27	16	32
Whooping cough	..	..	10

Smallpox has broken out at Shamokin, Pa. It is thought that the disease was conveyed from Mahanoy Valley.

Typhoid Fever has been prevailing at Kittanning, Pa. The local authorities and officials of the State Board of Health have had some friction relative to the placarding of notices warning the residents about the water.

The Wisconsin Board of Health.—Dr. U. O. B. Wingate has declined reelection to the post of secretary of the Wisconsin Board of Health, and Dr. William F. Whyte has been elected to succeed him. Dr. Wingate will devote himself to private practice in Milwaukee.

Legislation in Kentucky.—A bill now before the Kentucky legislature intended to regulate the admission to the practice of medicine, has aroused some controversy. The bill places considerable discretionary power in the hands of the State board of health.

The Army General Hospital.—An appropriation of $400,000 to provide for the establishment of an Army General Hospital in Washington was stricken from the army appropriation bill in the House of Representatives after prolonged debate. It was ruled out on a point of order as being in the nature of new legislation.

The St. Paul City Hospital.—Dr. Arthur B. Ancker, superintendent of the city and county hospital at St. Paul, Minn., after handing in his resignation with a view to accepting the superintendency of the Presbyterian Hospital, of Chicage, has been induced to withdraw his resignation and remain in St. Paul.

Health Statistics of the State of New York.—The Department of Health of the State of New York in its bulletin of vital statistics published on February 2nd says there were 127,100 deaths in the last year in the State, which makes a mortality per 1,000 population of 16.7. While the total mortality is about 3,000 greater than that of last year, the estimated increase in population reduces the death rate from that of 17 per 1,000 population. There were 10,250 deaths from pneumonia. Grippe is estimated to have caused 8,000 deaths.

The Black Hills, S. D., Medical Society has been organized by the practitioners of western South Dakota with the following officers: President, Dr. A. H. Bowman, of Deadwood; vice-president, Dr. C. W. Hargens, of Hot Springs; secretary, Dr. A. G. Allen, of Deadwood; treasurer, Dr. F. S. Howe, of Deadwood.

Porter Memorial Hospital, of Chicago.—This institution, which was founded by Mrs. Julia A. Porter, in 1882, as a memorial to a deceased son, has received an additional gift of $75,000 from the same benefactress, which will be expended in the construction of a new fireproof building to replace the present structure.

The San Francisco, Cal., Society of Eye, Ear, Nose, and Throat Surgeons, at its meeting on January 21st, elected the following officers: President, Dr. M. W. Frederick; first vice-president, Dr. G. W. Merritt; second vice-president, Dr. E. V. Card; secretary, Dr. J. Auburn Wilburn; treasurer, Dr. J. H. Philip; librarian, Dr. George Brady.

The Brashear Medical Society held its regular quarterly meeting at Bloomfield, Ky., on January 20th, and elected the following officers for the current year: President, Dr. Hugh Rodman; vice-president, Dr. Edward Williams; secretary and treasurer, Dr. Wiley Rogers. Semiannual meetings will be held in the future.

The Medical Recorder is the title of a new monthly medical journal, published at Shreveport, La., under the editorship of Dr. Oscar Dowling. It opens with an original article on A Not Infrequent Complication in Appendectomy, by Dr. John A. Wyeth, of New York, followed by eight other original communications of a practical character.

Municipal Sanatoria.—Another step has been gained in the movement in favor of municipal sanatoria for consumptives under the Ontario act respecting such, by the endorsation of a by-law by the qualified ratepayers of Toronto, Ont., on January 1, 1904, requiring $50,000 to aid in establishing a municipal sanatorium under the act, for the citizens of that city. The vote stood 4,434 for, and 4,031 against; majority for, 403.

The Harvard Smallpox Commission.—Dr. W. R. Brinckerhoff and Dr. E. E. Tyner, who have been working with Professor W. F. Councilman, of the Harvard Medical School, have been sent to the Philippine Islands to prosecute their studies of the life history of the smallpox germ discovered by Dr. Councilman. A purse has been raised by friends of the school to defray the expenses of the work.

The Michigan State Medical Society.—The Michigan State Medical Society council met last week at the Ste. Claire Hotel, Detroit. Reports show the society is in a flourishing condition, with an enrollment of 1,800 in the 60 different county organizations throughout the State. Dr. A. P. Biddle, of Detroit, was reelected secretary, and by virtue of his office becomes editor of the *Medical Journal.* The next meeting will be held in Grand Rapids, May 25th.

Santa Fe Railway Hospital.—This building was destroyed by fire about a year ago, and bids are being asked for to replace the institution at Albuquerque, N. M. Plans and specifications call for a more commodious and better equipped structure than the one destroyed.

The Orange County, N. Y., Medical Association, at its meeting on January 20th, at Middletown, elected the following officers: President, Dr. W. E. Douglas, of Middletown; vice-president, Dr. E. D. Woodhull, of Monroe; secretary and treasurer, Dr. C. I. Redfield, of Middletown.

The Clinton County, N. Y., Medical Society, at its recent meeting in the rooms of the Plattsburgh Club, elected the following officers: President, Dr. C. D. Silver; vice-president, Dr. G. D. Dare; secretary, Dr. D. S. Kellogg; treasurer, Dr. Frank Madden.

Gift to Johns Hopkins Hospital.—Mr. Henry Phipps. well known from his founding of the Phipps Institute, of Philadelphia, has made, through Professor William Osler, a gift of $20,000 to the Johns Hopkins Hospital, to be expended in establishing a new out patient department for the exclusive treatment of consumptives.

Hospital Authorities Blamed for Typhoid Fever in Columbus, O.—The Columbus (O.) Board of Health, as a result of an investigation of the origin of the typhoid fever epidemic in that city, have lodged a formal complaint against the authorities of the State Hospital for the Insane, who directed that the sewage from that institution be turned into the Scioto River above the intake of the city water works, knowing at the time that there was typhoid fever at the State Hospital.

Civil Service Examinations for the State and County Service.—The State Civil Service Commission announces general examinations to be held February 27, 1904, including the following positions: Apothecary in State hospitals and institutions; library assistant in the State library; physical instructor in State institutions; physicians in State hospitals and institutions of both regular and homœopathic schools; pupil nurse, Erie county hospital. Applications for these examinations must be made on or before February 22nd. Full particulars of the examinations and blank applications may be obtained by addressing the chief examiner of the commission at Albany.

Embargo on Chicago Hospitals in Chicago.—Building Commissioner Williams has notified those in charge of eight hospitals that they must receive no new patients in their institutions until certain specified building changes are made. The hospitals involved are the following: Englewood Union Hospital, 340 West Sixty-fourth Street; Post Graduate Hospital, Twenty-fourth and Dearborn Streets; West Side Hospital, 819 West Harrison Street; Harding Medical College, 3832 Rhodes Avenue; Chicago Woman's Hospital, Thirty-second Street and Rhodes Avenue; Homœopathic Hospital, 354 Wood Street; Emergency Hospital, 83 Plymouth Place; Baptist Hospital, 3410 Rhodes Avenue.

Medical Society of the State of New York.—At the annual meeting, held in Albany, January 26th, 27th, and 28th, the following officers were elected for the ensuing year: President, Dr. Hamilton D. Wey, of Elmira; vice-president, Dr. Joseph D. Bryant, of New York; secretary, Dr. F. C. Curtis, of Albany; treasurer, Dr. O. D. Ball, of Albany.

The following were nominated to fill vacancies on the State Board of Medical Examiners: Dr. Eugene Beach, of Gloversville; Dr. Joseph P. Creveling, of Auburn; Dr. Edward B. Angell, of Rochester, and Dr. James D. Spencer, of Watertown.

The society adopted a resolution, introduced by Dr. A. G. Root, of Albany, instructing the committee on legislation to enter an emphatic protest against the passage of the "optometry bill."

Lower Death Rate in Chicago.—"An old-fashioned winter" is not without its compensations. Notwithstanding that the mean temperature of the month has been five degrees below the normal the death rate promises to be among the lowest on record. The average January rate since 1893 has been 16.32 per 1,000. For the month just closing it will be about 14. The lowest during the period was 13.69 in January, 1898; the highest, 20.91 in 1893. Last January, although milder than normal, the public health was affected by the "coal famine" and the death rate was 16.07 per thousand.

The ice cap, by retarding wave motion and sun penetration, threatens the quality of the water supply, and there are indications of a prevalence of what used to be known as "winter cholera." It will be the part of prudence to boil all water to be used for drinking purposes for some weeks to come.

A Pharmacologist Wanted at Washington.—The United States Civil Service Commission announces an examination on March 1, 1904, to secure eligibles from which to make certification to fill a vacancy in the position of pharmacologist (male) in the Bureau of Plant Industry, Department of Agriculture, at $1,800 per annum, and other similar vacancies as they may occur. Applicants will not be assembled for this examination. The person appointed to this position must be a man trained and equipped with the knowledge and experience necessary for isolating and handling poisonous and other active principles of plant origin. He must be trained in animal physiology and pharmacology, and must have had experience in studying by exact laboratory methods the effect exerted on the different animal functions by the active principles of plant origin. He should be familiar with the best forms of apparatus used in carrying on such experiments, and should have abundant laboratory experience in making such investigations. He should be able to read at least French and German, in addition to English. Persons who desire to compete should at once apply to the United States Civil Service Commission, Washington, D. C., for application Form 1312, which should be properly executed and filed with the Commission at Washington, with the material required, prior to the hour of closing business on March 1, 1904.

Pith of Current Literature.

DEUTSCHE MEDIZINISCHE WOCHENSCHRIFT.

January 1, 1904.

1. Relations of Anthrax Bacilli to the Endothelial Cells of the Mouse and the Guinea Pig, By von Behring, and Much.
2. Experiences with Moser's Polyvalent Scarlet Streptococcus Serum, By von Bokay.
3. Unusual Localization of Acute Circumscribed Œdema, By Quincke and Gross.
4. Exodin, a New Laxative, By Ebstein.
5. Is Appendicitis More Frequent than Formerly? By Villaret.
6. A Case of Traumatic Hysteria with Peculiarly Clouded Consciousness and Amnesic Aphasia, By Westphal.
7. Pathology and Treatment of Cardiospasm, By Miculicz-Radecki.
8. Treatment of Post Partum Hæmorrhages, By Fritsch.
9. Experimental Inoculation of Syphilis on Animals, By Neisser and Veiel.
10. Serum Treatment of Tetanus, By K. Wallstabe.
11. Treatment of Gonorrhœal and Other Vaginal Discharges with Yeast, By Frænkel.
12. Treatment of Granular Eyelids, By Post.

1. **Anthrax Bacilli and Endothelial Cells.**—Von Behring and Much found that the endothelium of the heart of mice and guinea pigs stained more deeply with Ehrlich's methylene-blue-eosin stain, the longer the animal lived after inoculation with anthrax bacilli, the cytoplasm assuming a rose color. This oxyphilic degeneration appears to be due to the action of the bacilli and is accompanied by a heaping up of the bacilli in the cells. An ordinary phagocytosis does not seem to be present. More bacilli are found in the cells of these animals than in the blood. The intimate relations between the endothelial cells and the virus of anthrax bacilli is proved by the fact that in the peritoneal transudate of mice inoculated intraperitoneally, uninuclear and multinuclear leucocytes are found indicating oxyphilia and invasion by bacilli. Behring concludes from the experiments that the antibodies for the virus of the anthrax bacilli are to be found in the endothelium of the blood vessels. The contact of the toxic agent of the living bacilli with the fixing material in the endothelium is probably brought about by the normal presence of a colloidal solution of the antibodies in the intravascular and the intracellular fluids.

2. **Polyvalent Scarlet Streptococcus Serum.**—Bokay gives a report of twelve severe cases of scarlatina in which Moser's polyvalent serum was used. There were a rapid disappearance of severe brain symptoms of the eruption, fall of the temperature without any signs of collapse, and an improvement in the character of the pulse. In one case an abscess developed from the use of the serum, and in seven cases an exanthem was noted. The kidneys were not affected in any instance. The serum has not yet been placed on general sale.

4. **Exodin.**—Ebstein describes this new laxative as a tasteless and odorless preparation. It has no effect upon the stomach and when combined with large oil enemata, has been efficacious in relieving stubborn constipation. From one to three tablets, each containing seven grains and a half, are given daily.

5. **Frequency of Appendicitis.**—Villaret reviews the statistics of the army and finds that the apparent greater frequency of appendicitis is due, not to an increase in the frequency of the disease, but to greater accuracy of diagnosis. On the other hand, former frequent diagnosis of liver disease, peritonitis, and chronic gastric catarrh, is comparatively rare.

6. **Traumatic Hysteria.**—Westphal relates a case of a thirty-three year old man who a year previously had been in a railroad collision in which he had suffered from a light concussion of the brain. He would have attacks of clouded consciousness with a peculiar form of delirium in which he lived over the incidents of the collision.

8. **Treatment of Post Partum Hæmorrhages.**—Fritsch recommends two extravaginal devices for the control of postpartum hæmorrhage. One is to seize the bleeding uterus and push it firmly over the symphysis, pack the wedge-shaped area behind it with large pieces of gauze, towels, etc., and apply a very tight binder for twenty-four hours. This is applicable for cases with uterine atony. When the cervix is torn, suture is uncertain if the parametrium is involved. A double compression can then be used, after the expulsion of the placenta, by pushing the vulva upwards as far as possible, and the anteflexed uterus downward into the pelvis. In from fifteen minutes to three quarters of an hour, the external hand may be replaced by a heavy sandbag. Fritsch alleges among the advantages of this method the absence of danger of infection, since the manipulation is entirely extravaginal, the saving of blood which would otherwise be lost if suture or tamponing were attempted, the rational method of hæmostasis by compressing the bleeding surfaces upon each other so that there is no space for further hæmorrhage, and the lack of necessity of after treatment once the bleeding has stopped.

9. **Inoculation of Syphilis Upon Animals.**—Neisser and Veiel failed to inoculate pigs and an ape with syphilis by the method of inducing a blood complement.

10. **Yeast Treatment of Leucorrhœa.**—Frænkel speaks highly of the use of pastilles of yeast in the treatment of vaginal discharges of all kinds. He reports five stubborn cases cured by their use. They are cheap and easy to employ.

12. **Treatment of Granular Eyelids.**—Post recommends a device which projects a stream against the inflamed lids, producing a hyperæmia which acts in a curative way. The author uses a warm physiological salt solution containing corrosive sublimate in great dilution.

ZENTRALBLATT FUER GYNAEKOLOGIE.

December 19, 1903.

1. Gynæcological Sequels of Placenta Prævia, By E. Radtke.
2. Review of Sellheim's Work on the Normal Situs of the Female Pelvic Organ, By W. A. Freund.
3. A Speculum for Vaginal and Perineal Operations, By M. Stolz.

1. **Gynæcological Sequels of Placenta Prævia.**—Radtke goes exhaustively into the histories of thirty-five patients who had suffered from placenta prævia. The subjective sensations of the patients are unimportant, except a general weakness experienced by the greater number of them for some time. Objectively, descensus vaginæ was found three times, movable retroversioflexion, seven times, endometritis, five times, once with a lacerated cervix, catarrh of the cervix three times, laceration of the cervix in fourteen cases, parametritis in sixteen instances, and a bilateral or unilateral inflammation of the appendages in five cases. Eleven of the patients had suffered from puerperal fever. Seven patients showed a normal condition of the pelvis, and one presented a parovarian cyst. Seventy-five per cent. of the women had anæmia, dating from the placenta prævia, and all these patients complained of weakness and lassitude, vertigo, headaches and occasional syncope. Many of the patients were incapable of performing their household duties, but a good many of these suffered from some of the severer pelvic lesions. The author recommends thorough treatment of these cases that their ability to work may be restored to them as well as the prophylactic virtue of preventing abortions and premature births in subsequent pregnancies.

ZENTRALBLATT FUER INNERE MEDIZIN.

January 9, 1904.

1. The Leucocytes in Pleurisy, By G. SAGIANZ.
2. Reflex Depression of the Pulse, By M. HEITLER.
3. Pulse Curve Taken During Laughter, By M. HEITLER.

1. **The Leucocytes in Pleurisy.**—Sagianz concludes that pleurisies of a non-tuberculous character, even when the transudation is abundant and fever is present, do not influence the leucocyte count, which remains between 6,000 and 12,000. Serous tuberculous pleurisy causes a moderate leucocytosis (15,000 to 20,000), but this is dependent upon the stage of the underlying pulmonary disease. Empyema causes a very decided leucocytosis, the count varying from 22,000 to 29,000; but the number of leucocytes diminishes rapidly after thoracotomy, less rapidly with drainage. It remains parallel with the presence or retention of more or less quantities of pus, so it is reasonable to assume that a leucocytosis is dependent upon material absorbed from pus, either the toxines of the bacteria or the abnormal cell products of the body's cells, as Löwit has suggested.

PRESSE MEDICALE.

December 26, 1903.

1. Radiodiagnosis of Foreign Bodies in the Bronchi, By A. BÉCLÈRE.
2. Direct Œsophagoscopy and Tracheobronchoscopy, By JEAN GUISEZ.

1. **Radiodiagnosis of Bronchi.**—Béclère points out that mineral substances are more easily discovered than vegetable. The right bronchus usually contains the foreign body. Diagnosis from symptoms may be difficult in the infant. Radioscopy is superior to radiography, saving time, allowing several points of view, showing if the foreign body is movable or fixed, and permitting the erect posture of the patient. A regulable bulb should be used and an iris diaphragm of lead. Radiography may follow radioscopy and should obtain two images to be examined stereoscopically. The adult patient should hold the breath during exposure, taking three or four deep breaths first, and an extra sensitive plate is required. Three cases are cited.

2. **Œsophagoscopy and Tracheobronchoscopy.**—Guisez describes minutely the instruments he uses in these procedures. A tube well lighted and passed down the œsophagus under cocaine is superior to the olive pointed bougie, which may slip past a foreign body, and to x rays, which some foreign bodies do not intercept. Where tracheotomy has been performed, examination of the respiratory tract may be made by introducing the tube into the wound; this gives a view of the smaller bronchi. Small tubes of a diameter from 6 to 10 millimetres are used for the bronchi, the technics being somewhat delicate. Potassium bromide and morphine may be given the patient before examination. Mucus may be removed with Killian's pump. The stomach should be empty. A previous radioscopy in case of doubt will prevent prolonged search for an imaginary foreign body.

ROUSSKY VRATCH.

November 8, 1903.

1. The Successes of Modern Otology, By N. P. TROFIMOFF.
2. Venous Cirrhosis of the Liver Without Ascites, By E. A. RATNER.
3. On Cancerous Degeneration of Dermoid Tumors of the Ovary (*To be concluded*), By T. V. ZALENSKY.
4. Treatment of Paralytic Flaccid Joint by Means of Artificial Anchylosis (Arthrodesis), By E. A. HEINKING.

2. **Cirrhosis Without Ascites.**—Ratner deals with cases of atrophic cirrhosis in which there is no ascites, because there is a collateral flow to the portal circulation. In the case cited the patient was a man, forty-one years of age, with a marked case of Laennec's cirrhosis, in which the most noteworthy feature was an enlargement of the superficial veins of the anterior abdominal wall. No ascites was present, although the disease was quite advanced. Two symmetrical strands of veins, in places each of the thickness of a little finger, extended from the inguinal regions to the umbilicus and thence parallel upward on the abdominal wall to the ensiform cartilage. These veins were distinctly seen. The author thinks that the reason why there was no ascites in this case was that the portal circulation was relieved by a connection with the parietal system of veins. As the enlarged veins had been present for about eight years in this patient, the disease was at least nine years old; a duration unusual in a case of atrophic cirrhosis. This unusual condition of things was due to the balance of circulation maintained for a long time through the collateral route. There is a great deal of confusion in the use of the terms "atrophic" and "hypertrophic" cirrhosis, and Rat-

ner thinks that we should substitute the terms "venous" and "biliary" cirrhosis for the forms affecting the connective tissue along the venous channels and biliary canals of the liver. In the present case the spleen was not enlarged, because there is a question as to whether, in cirrhosis of the liver, hypertrophy of the spleen is caused by the pressure on the splenic veins or by a cirrhotic process in the spleen, parallel to that going on in the liver. The findings in this case favor the former hypothesis.

4. **Arthrodesis for Paralytic Joints.**—Heiking recommends the operation of arthrodesis or artificial ankylosis as the best treatment for flaccid joints rendered so by paralysis, as after anterior poliomyelitis. This operation restores the functions of the limb, but does not give the dexterity and ease of motion of a healthy joint. The condition after these operations is to be preferred to the helpless state of flaccidity. In this case the shoulder joint was operated upon, the procedure consisting of the removal of the cartilage over the head of the humerus and the freshening of the scapular surface. Silver wire was passed through the head of the humerus and through the upper margin of the glenoid cavity, thus sustaining the weight of the arm.

November 15, 1903.

1. A Rare Murmur in the Region of the Liver, By A. K. Zivert.
2. Cancerous Degeneration of the Dermoid Tumors in the Ovary, By T. V. Zalensky.
3. On Hæmatemesis in Peritonitis, By V. P. Gerassimovitch.
4. Periodic Paraplegia, By A. A. Shtchipinsky.

1. **Murmur in the Hepatic Region.**—Zivert reports the case of a man, aged twenty-eight years, who showed symptoms of cancer of the stomach with metastasis in the liver. Over the latter organ there was heard a constant, sharp, blowing murmur. The localization of this murmur was between the fourth and seventh ribs and the axillary and parasternal lines. The murmur disappeared in the patient's sitting position and reappeared in the recumbent, was intensified at each cardiac systole and at each inspiration. Neither heart nor arteries gave any murmur, which was not transmitted, and was heard altogether for only three days. At autopsy the only cause of the murmur was found to be a mass of adhesions which passed from the left lobe of the liver in the neighborhood of the portal vein to the diaphragm, and in the presence of large amounts of gas in the stomach, the diaphragm being thus forced upward, tightening the obstruction caused by the adhesions over the portal vein. When the patient rose the diaphragm was forced down and the adhesions loosened their hold on the vein, so that the murmur disappeared. The metastasis was found in the omentum, which was gathered in front of the liver and gave the impression of an enlarged liver on palpation.

2. **Cancerous Degeneration of Ovarian Dermoids.**—Zalensky found in cancerous degeneration of ovarian dermoids tumors of the type of epithelioma, springing from the dermoid covering of the cysts. In bilateral ovarian dermoids, cancerous degeneration was found only on one side. These degenerations occur generally in elderly women. The metastases were confined as a rule to the peritonæum, but in one case the axillary glands were affected.

3. **Hæmatemesis with Peritonitis.**—Gerassimovitch describes cases of hæmatemesis in which there was no ulcer of the stomach, but peritonitis. Six patients whose histories are reported showed hæmatemesis without changes in the mucous membrane of the stomach; of these four died of purulent peritonitis. The author thinks that in these cases the vomiting was of toxic origin, and not a sign of appendicitis, as Dieulafoy asserted, but of general septic peritonitis. In cases of appendicitis without peritonitis, this vomiting is due to the migration of germs from the appendix to the stomach, in other words, the vomiting is a sign of sepsis. On examining the mucosæ of such stomachs microscopically, there were minute hæmorrhages from diapedesis of blood cells through the blood vessel walls. The occurrence of erosions may be considered secondary in these cases. The hæmorrhages were caused by toxic changes in the walls of the vessels, a paralysis of the vasomotor nerves of the gastric vessels, and a local stasis and rise of blood pressure. Bloody vomiting in peritonitis is observed more often in children, and is of bad prognostic import.

RIFORMA MEDICA.

December 16, 1903.

1. On the Dimethylamidobenzaldehyde Reaction in Urine, By D. Guggino.
2. A Second Case of Disturbance of the Sense of Moisture, By E. Ravenna.
3. Partial Cystectomy for Vesical Tumors, By E. Arcoleo.
4. Neoarthrosis with Metallic Supports, By G. Pascale.

1. **Ehrlich's New Reaction in Urine.**—Guggino employed the new reaction of Ehrlich, with dimethylamidobenzaldehyde, in a large series of cases with a view of determining its clinical value. Ehrlich, in 1901, when he first introduced this reaction, claimed considerable diagnostic value for it. The reaction consists in the change of color that takes place in urine on the addition of a solution of dimethylamidobenzaldehyde in the proportion of two per cent. in equal parts of pure hydrochloric acid and distilled water. A few drops of this reagent are added to five or six cubic centimetres of the urine. The color varies from pale red to dark red. The latter is seen, according to Ehrlich and other observers, only in pathological urines. Normal urines give usually the lighter tints. A positive reaction means in this instance a dark red, or, at least red color. Clements, who examined three hundred urines with this test, concluded that it is not of any diagnostic value, but is of "symptomatic value" as it occurs in a large variety of conditions both with and without intestinal and gastric disorders. It has no relation apparently to the

diazoreaction or to the indican tests. In another study of similar character Koziczkowsky of Senator's clinic concluded that the reaction has clinical value, as it is present in the majority of intoxications and infections, and varies in intensity according to the severity of the infectious or toxic process. It usually diminishes toward convalescence in these conditions. In enteritis it is positive only in cases of tuberculous nature, thus serving as a differential sign in the diagnosis of intestinal inflammations. Guggino tested the value of this procedure in a large number of patients with surgical, medical, and gynæcological diseases, and concluded that the test has no clinical significance. It has not the value of a symptom, nor that of a prognostic element. It occurs, in varying intensity, in the same disease and does not depend on the stage of the malady. It is present in normal urine just as markedly as in pathological urines in certain cases.

2. **Disturbed Sensibility to Moisture.**—Ravenna found in a case of general paralysis a marked disturbance in the sense of moisture of the skin. The patient felt as though constantly bathed in perspiration, while the skin was dry. Tambroni attempted to localize this sense in the hippocampal gyrus, but this must be accepted with some reserve. In the present case, the author had the opportunity to study the brain after the autopsy, and found that the hippocampal gyrus presented in both hemispheres profound changes of degeneration and disintegration in its ganglion cells, together with a marked gliosis. The frontal convolutions of the same individual showed the same degenerative changes in the ganglion cells, but no hypertrophy of the gliomatous tissue. In the hippocampal gyri "glycogenic corpuscles" were also numerous, while in the other convolutions examined for control, this was much less marked. While the lesions were therefore not limited to the hippocampal region, the predominance of the changes found in this convolution gives rise to the belief that Tambroni was correct in his supposition that the hippocampal gyrus was the seat of the sensation of moisture.

MEDICAL NEWS.

January 30, 1904.

1. Criminal Procedure Against the Unlawful Practice of Medicine, By HONORABLE JULIUS M. MAYER.
2. A New Method for Performing Intestinal Anastomosis, By JOHN W. KEEFE.
3. A Fatal Case of Chorea Complicated by Endocarditis, Pericarditis, and Nephritis, By AUGUSTUS A. ESHNER.
4. Notes on the Widal Reaction: (1) The Question of Dilution; (2) the Influence of Jaundice, By E. LIBMAN.
5. A Brief Note on the X Ray Treatment of Glandular Tuberculosis, By FRANK P. VALE.

1. **The Unlawful Practice of Medicine.** — Mayer is a Justice of the Court of Special Sessions of New York city. Before him are tried many cases of unlawful practice of medicine. His paper is therefore of special value. The law of New York, as it now stands, is defective. The courts are called upon, not only to decide questions of fact, *i. e.*, whether the defendant is actually guilty, but must also decide questions of law, since the statute does not define what the practice of medicine is. There are other difficulties which render the obtaining of a conviction difficult. The author makes three suggestions which he believes would, if adopted, conduce to greater public security. These suggestions are: (1) The definition, by an act of legislature, of what constitutes the practice of medicine. (2) The abolition of the minimum punishment clause now in existence. (3) The adoption of some method by which injurious medical advertisements shall be excluded from the daily press.

2. **Intestinal Anastomosis.**—Keefe reports a new method of performing intestinal anastomosis. He has employed the method eight times on dogs and once on a human being. The diseased portion of the intestinal tract and as much of the mesentery as is necessary, are excised with the aid of the Downes electrothermic angeiotribe. The continuity of the intestine is reestablished with Lembert, Cushing, and a modified Lembert sutures. The author describes the method at length and seven illustrations accompany the paper.

4. **The Widal Reaction.**—Libman considers two questions: (1) The proper degree of dilution. (2) The influence of jaundice. (1) The author asserts that it is essential in performing the agglutination test to use dilutions of 1 to 20 and of 1 to 50. It is even possible that the 1 to 100 or higher dilutions might be positive when the lower ones are negative. (2) Jaundice *per se*, in the author's opinion, cannot give rise to a positive Widal reaction. The cases of jaundice reported in which a positive reaction was obtained are not conclusive. While it is possible that icteric serum may at times possess a certain amount of agglutinating power, yet there is no proof that this power is sufficiently strong to interfere with our clinical diagnosis.

MEDICAL RECORD.

January 30, 1904.

1. The Movement of Plague in the Philippine Islands, By E. L. MUNSON.
2. Report of a Case of Brain Tumor Involving the Right Lateral Ventricle, By WILLIAM M. LESZYNSKY.
3. Contributions to the Obersteiner-Redlich Theory of Tabes Dorsalis, By G. B. HASSIN.
4. An Antiseptic Toilet for the Hands and Vulva, By DOUGLAS H. STEWART.
5. Instruments for the Production of Abortion Sold in the Market Places of Paris, By FREDERIC GRIFFITH.
6. Scarlatinal Panotitis: Exfoliation of a Portion of the Labyrinth; Radical Operation, By CARL KOLLER.
7. An Unusual Case of Potassium Iodide Idiosyncrasy, By HENRY GATHMANN.

1. **Plague.**—Munson writes on plague as it affects the Philippine Islands. The paper treats the subject from the public health point of view. Outside of Manila the disease has never made much progress and even in that city it has been confined, to a great extent, to the Chinese and native quarters of the town. The author concludes his paper by asserting that there is reason to believe that a continuation of the present sanitary policy will bring steady improvement and may ultimately result in

the extermination of the plague infection from the islands.

2. **Brain Tumor.**—Leszynsky thinks that the case he reports presents unique features. Case.—A girl, nineteen years of age, without history of traumatism to the cranium or previous infection, is attacked with severe headache. This is soon accompanied by vomiting and vertigo, and in the course of a few months blindness is developed. All of these symptoms continue unabated with the addition of astereognosis of the left hand, slight left hemiparesis with hypæsthesia, and, later, unilateral convulsive attacks limited to the face for several months, subsequently involving the arm and leg, and ultimately becoming general, mostly in the form of tonic muscular spasm; rectal and vesical incontinence, and paralysis of the left abducens. Up to the time of operation, the voluntary power in the left upper and lower extremities was preserved, although there was some perceptible weakness on resistance to passive movements. The patient finally died and the autopsy discovered a tumor the size of an egg which appeared to spring from the inner wall of the right ventricle.

3. **Tabes Dorsalis.**—Hassin reports some new data which he believes will help to prove the correctness of the Obersteiner-Redlich theory of the nature of locomotor ataxia. Briefly stated the theory is this: Some pathological process extends from the spinal roots to the surrounding pia mater, which, becoming inflamed, compresses the posterior roots, thus producing their degeneration. This is necessarily followed by atrophy of the posterior columns of the cord.

4. **The Sterilization of the Hands and Vulva.**—Stewart proposes a new method for sterilizing the hands and the vagina which he asserts is more effective than any of the other methods now in vogue. One should resort, for the hands, to both mechanical and chemical sterilization. For the vulva the mechanical method canot be resorted to. The method for the hands may be summarized thus: Five minutes' mechanical. Powdered pumice stone, brush, hot water, green soap, and wooden nail-cleaners. Five minutes' chemical. Two heaping teaspoonfuls of fresh (35 per cent.) calx chlorata and one tablespoonful of U. S. Ph. (36 per cent.) acetic acid to the pint of sterile water. If this solution stands for ten minutes without stirring, the necessary chemical changes are complete.

7. **Potassium Iodide Idiosyncrasy.**—Gathmann reports the following case. A man, aged fifty-two years, was put on potassium iodide in ten grain doses three times a day. The dose was increased by one grain daily. At the end of four days cyanosis of the fingers was noticed. The drug was withheld. Recovery. Two days later a single dose of fourteen grains was given. This was followed by a diffuse ecchymosis under the entire skin of all his fingers and thumbs, so that at first sight they appeared exactly as if he had dipped his fingers, up to the metacarpophalangeal joints, into a pail of indigo dye. The discoloration stopped very abruptly at these joints, a few dark-red specks at its upper limit being noticed on closer inspection only. The fingers, in addition, were numb, cold, stiff, slightly swollen, and very painful. The little finger of each hand was most severely affected and almost absolutely black; the process lessened very slightly in each succeeding finger, so that the thumbs were of a very dark blue, rather than black color. The drug was not again given. Measures to stimulate the circulation in the fingers were resorted to and all symptoms promptly disappeared.

AMERICAN MEDICINE.

January 30, 1904.

1. The Diagnosis and Treatment of Gallstones, By Max J. Stern.
2. The Medicolegal Aspects of Autoabortion, By Charles Greene Cumston.
3. Postoperative Intestinal Obstruction, By A. M. Pond.
4. Some Features of the Epileptic Attack, By B. Onuf (Onufrowicz).
5. Some Reflex Neuroses of Dental Origin, By William J. Lederer.
6. Intrauterine Flushing and Drainage for Infection: The Passing of the Curette and Douche, By Horace G. Wetherill.
7. The Relationship Existing Between the Ophthalmologist, Otologist, and the General Hospital, By Frank Allport.

1. **The Diagnosis and Treatment of Gallstones.**—Stern does not pretend to advance original ideas in his paper. He has just completed a course of clinical study under Kehr, in Halberstadt, and he now reports his master's teachings. Gallstones are present in one out of every ten adults. Symptoms arise in only about five per cent. of those afflicted. In order to have such a thing as gallstone disease there must be infection, in addition to the mere presence of gallstones. The general symptomatology and diagnosis of gallstone disease is discussed at some length. It is useful to bear in mind a general classification of the various types presented by the affection. All such classifications, however, must be accepted with reserve, as one type of disease may change over night into another, or it may do so gradually. The author gives the more prominent symptoms, the diagnosis, and the best line of treatment to be pursued in twelve types of gallstone disease. So far as treatment is concerned there are two methods of procedure: (1) The medical, which has for its object the production of the state of latency or quiescence. The method employed at Carlsbad is a good example of this type of treatment. (2) The surgical. With regard to operative intervention it is important to remember that while every case of gallstone disease is not a surgical case, yet one must not look upon surgical intervention only in the light of a last resort.

2. **Selfabortion.**—Cumston disagrees with the opinions usually advanced in works on medical jurisprudence with regard to selfabortion. He holds that selfabortion can be performed by a large majority of women; that is, that the anatomical obstacles are not insuperable. He discusses his subject quite fully and indicates the various criteria upon which, in any special case, one would be justified in announcing the opinion that a woman had or had not performed selfabortion. Of course all the author's remarks refer to the instrumental in-

duction of abortion. He believes that the practice in this country is not infrequent. The two chief methods employed are injections directly into the uterus, or destruction of the ovum by means of a stylette.

3. **Intestinal Obstruction.**—Pond asserts that intestinal obstruction occurs, as a complication, in five per cent. of all abdominal operations. Such obstructions are due to three chief causes: (1) Impairment of physiological function; (2) pathological processes; (3) mechanical obstructions. The author studies in detail each one of these principal causes and reports a number of illustrative cases.

4. **Epilepsy.**—Onuf asserts that there is not a single symptom which is characteristic of epilepsy. The ordinary textbook description of the socalled typical epileptic attack, while useful, is apt to lead the inexperienced astray. The author discussess the following points: (1) The initial cry; (2) the condition of the pupils; (3) the manner, grouping, and distribution of the spasms; (4) the state of consciousness; (5) the condition of the tendon reflexes. His observations are not always in accord with those of some of the leading authorities on nervous diseases.

6. **The Passing of the Curette and Intrauterine Douche.**—Wetherill has discarded the curette and intrauterine douche in the treatment of acute infections of the uterine cavity. He has no great faith in gauze packing. The following is the author's method of treating such infections. All débris is removed from the uterine cavity by means of the finger. The cavity is then irrigated with some mild solution, such as potassium permanganate solution, or weak alcohol. A double rubber drainage tube is now introduced into the uterine cavity and left in place. The subsequent treatment consists in uterine irrigations through this tube. Good results are claimed for the method.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 30, 1904.

1. Peritoneal Saline Infusions in Abdominal Operations. A Combined Clinical and Laboratory Study of Their Effects, By JOHN G. CLARK, and CHARLES C. NORRIS.
2. The Physiology of the Sympathetic in Relation to the Eye, By G. E. DE SCHWEINITZ.
3. Influence of Resection of the Cervical Sympathetic in Optic-Nerve Atrophy, Hydrophthalmus, and Exophthalmic Goitre, By JAMES MOORES BALL.
4. Pathology of the Cervical Sympathetic, By JOHN E. WEEKS.
5. Pathology in Inebriety, By T. D. CROTHERS.
6. Carcinoma of the Spine and Meninges Secondary to Cancer of the Breast, By F. SAVARY PEARCE.
7. Report of Ten Cases of Morphinism, By A. J. PRESSEY.
8. The Treatment of Emotional Disturbances, By HOWELL T. PERSHING.
9. Pulp Hypertrophy of the Teeth, By OSKAR ROMER.
10. The Control of Prostitution and the Prevention of the Spread of Venereal Diseases, By M. L. HEIDINGSFELD.

1. **Peritoneal Saline Infusions.**—Clark and Norris draw the following conclusions from their combined clinical and laboratory studies of the effect of intraperitoneal saline injections. (1) The use of salt solution does not increase, but unquestionably minimizes the dangers of pyogenic infection. (2) In addition to the reduction of mortality, the convalescence of the patient is rendered infinitely more comfortable and satisfactory through the reduction of thirst, the increase in the urinary excretion, and the minimizing of vesical irritation.

2. **The Physiology of the Sympathetic in Relation to the Eye.**—De Schweinitz's paper gives only the conclusions he has drawn after a review of the entire literature pertaining to the subject. The original paper should be consulted by those interested in the subject.

3. **Resection of the Cervical Sympathetic.**—Ball, after studying his own records, as well as those of other operators regarding the influence of resection of the cervical sympathetic in optic-nerve atrophy, hydrophthalmus, and exophthalmic goitre, formulates the following conclusions: (1) Excision of the superior cervical ganglion of the sympathetic nerve is worthy of a trial in those cases of simple atrophy of the optic nerve which resist measures less heroic. (2) It is yet impossible to say whether the bilateral operation is advisable in unilateral optic-nerve atrophy. (3) The value of sympatheticectomy in congenital hydrophthalmus has not been demonstrated. (4) In exophthalmic goître, complete excision of the cervical sympathetic is followed by a larger percentage of cures than is any other procedure. Thus far no deaths have been recorded. The number of operations, however, is small and final conclusions can be announced only after a large number of cases shall have been treated by this method.

5. **Pathology of Inebriety.**—Crothers wishes to give prominence to the following points: (1) In all cases of inebriety there are marked changes in the capillary and vascular system of the brain. The walls of the vessels show fibrinous deposits and sclerosis. The nerve cells and dendrites are altered and retracted, in some cases permanently destroyed; in all inebriates shrunken and disintegrated states exist. (2) The liver, kidneys, and heart show diminution or enlargement with fibrous and fatty deposits. Both the organic and functional activity of the organ are changed and sclerotic states are present. Conditions of starvation and poisoning exist in all cases. (3) Pathological changes are apparent in the paralysis of the sense organs and the higher psychic functions of the brain. These conditions are so common following the use of alcohol, sometimes in its moderate use, but always when taken in excess, as to constitute a pathology that is traced directly to alcohol as the most prominent cause. (4) The recent researches into the chemicophysiologic action of alcohol on the heart, blood vessels, cells and nerve fibres show a paralyzing and eroding action that cannot be mistaken for any other cause. The final conclusion is that the peculiar brain and nerve wreckage so commonly seen in persons using alcohol is due to the specific cause,

alcohol following a uniform line of degeneration which is traceable with more or less exactness.

7. **Ten Cases of Morphinism.**—Pressey reports his ten cases of morphinism in order to show that a certain percentage of people addicted to morphine may be cured of the habit, and this permanently. What the percentage of permanent cures is the author does not know. The method of treatment is not touched upon by the author, as he has given his views on this subject in another paper.

10. **The Control of Prostitution.**—Heidingsfeld reviews the consequences that have followed the attempt made by the Cincinnati board of health to legalize and control prostitution. This experiment has now been under way for three years. The author summarizes his views as follows: Suppression of prostitution is impossible, and control is impractical; it is absolutely incapable of coping with the larger and more dangerous class of clandestines, and it is powerless and impotent materially to prevent the spread of venereal diseases, emanating from those directly under control. Its influences are decidedly pernicious and harmful, inasmuch as it defeats salutary segregation, increases the more dangerous class of clandestines, restricts liberty, and infringes on personal and constitutional rights. It legalizes crime and fosters disease and immorality by imparting a false sense of security, and is virtually a deception and a snare. It creates opportunities for blackmail and personal gain, brooks an unjust and often unendurable interference, and discourages necessary and salutary medical attention. There are far more rational and legitimate measures for the prevention of the spread of venereal diseases, along the lines of the suppression of abortionists and the inculcation of general and individual education and prophylaxis.

BRITISH MEDICAL JOURNAL.

January 16, 1904.

1. Lumbago: Its Lessons and Analogies, By Sir W. R. Gowers.
2. Chronic Cyanotic Polycythæmia with Enlarged Spleen, By W. Osler.
3. Changes in the Spinal Cord in Diabetes Mellitus, By R. T. Williamson.
4. A Note on the Tendon Reflexes in Uræmia, By W. M. Stevens.
5. A Note on "Brachial Neuralgia," By H. Distin.
6. Respiratory Spasm Followed by Cessation of Breathing in a Recently-born Child, By R. Fullerton.
7. Hysterical Paraplegia in the Male, By F. Smith.
8. An Unusual Epileptic Case, By W. H. Lewis.
9. Scleroderma Associated with Raynaud's Disease and Addisonian Pigmentation, By G. C. R. Harbinson.
10. A Modified Operation of Castration, By W. Thorburn.
11. Intraperitoneal Abscess Due to Pneumococcus, By S. Boyd.
12. The Invasion Stage of Measles, By E. Smith.
13. A Case of Extreme Hyperpyrexia, By W. C. W. Glenny.

1. **Lumbago.**—Gowers holds that lumbago is due to compression of the nerve endings in the muscles (muscle spindles) by inflammation of their fibrous sheathes and of the fibrous tissue in which they run. For the condition he uses the term "fibrositis," which may be rheumatic, gouty, or traumatic. Muscular fibrositis in the arm constitutes brachial myalgia, and it is very common elsewhere—*e. g.*, stiff neck, pleurodymia, painful affections of the diaphragm, etc. This rheumatic fibrositis is seldom strictly symmetrical. It is more common in the second half of life than in the first, and there is often a family history of gout. Traumatic fibrositis is induced by sudden violent tension on tendinous and ligamentous structures. These so-called "muscle-strains" are very common. The duration of muscular fibrositis seems proportioned to the slowness of its onset. The affection of the arm is often prolonged and lasts for months. As regards treatment, attention is called to the value of diaphoresis and rest. Diaphoresis will often avert an attack, but is only of value when used early. But rest is the one thing needed by the painful muscles. In brachial myalgia a sling should be used early. Massage and electricity should be avoided. Aperients are of the first importance in all rheumatic and pseudo-gouty cases, salines being the most valuable. They should be taken on an empty stomach, so as to promote the flow of bile. The salicylates do but little good, except in the most acute forms. Counter-irritation with the actual cautery is sometimes of value. Deep hypodermic injections of cocaine repeated daily are often of great service in relieving the sensitiveness.

2. **Polycythæmia.**—Osler reports a number of further instances, gathered from the literature, of the condition first described by him as chronic cyanotic polycythæmia with enlarged spleen. He refers to Rosengart's view that the condition is one of tuberculosis of the spleen, and cites several instances where tuberculous lesions were present. Yet while cyanosis and polycythæmia are met with in primary splenic tuberculosis, it seems most unlikely that the cases of chronic cyanotic polycythæmia are due to this cause. In cases of chronic cyanosis the possibility of poisoning with the coal tar products (acetanilid, etc.) should always be borne in mind. The cyanosis is probably dependent upon increased viscosity of the blood, and the increased difficulty in its flow through the capillaries.

4. **Reflexes in Uræmia.**—Stevens finds that in cases of acute uræmia the reflexes are usually exaggerated: in severe cases ankle clonus, knee clonus, wrist jerk, and elbow jerk, may all be present and well marked. The presence of exaggerated reflexes is often of the greatest value in diagnosis between uræmia and apoplexy or epilepsy.

5. **Brachial Neuralgia.**—Distin reports two cases of severe brachial neuralgia, both occurring in men over sixty years of age. Traumatism was the cause, both patients having been regular and abstemious in their habits. In both cases all forms of treatment were unsatisfactory as regards the relief of pain. Morphine was not used, however.

9. **Scleroderma.**—Harbinson reports a case of scleroderma occurring in a woman, aged forty-five years. It is remarkable in the following respects: (1) there is scleroderma of the diffuse type affecting the hands, wrists, face, neck, and top of chest; (2) there is associated Raynaud's disease affecting hands, nose, and ears; and (3) there is deep bronzing of the skin, in distribution and characteristics typical of Addison's disease, without the typical constitutional symptoms, though there is undoubted debility.

13. **Hyperpyrexia.**—Glenny reports a case of extreme hyperpyrexia occurring in a girl aged nineteen years. Eighteen months before coming under observation she had a fall and struck the back of her head. This was followed by headaches which grew more and more severe. About a month after she came under observation her temperature rose to 107.6° F., and the next day to 113.6° F. The patient lived two months longer, and developed the symptoms of brain abscess, dying of pneumonia.

LANCET.

January 16, 1904.

1. Some Forms of Chronic Abdominal Surgical Disease, By E. S. BISHOP.
2. Physiological or Functional Albuminuria, By S. WEST.
3. The Termination of a Case of Recurrent Mammary Cancer Treated by Oophorectomy, By G. E. HERMAN.
4. The Preputial or Odoriferous Glands of Man, By A. KEITH, and A. SHILLITOE.
5. Carcinoma of the Duodenum; Resection; Recovery, By G. A. SYME.
6. On the Question of Trypanosoma Infection in Man, By F. MARCHAND, and J. C. G. LEDINGHAM.
7. A Case of Lobar Pneumonia in which the Physical Signs Persisted for Eight Weeks Accompanied by a Very Irregular Temperature, By J. M. BENNION.
8. Atmospheric Temperature and Smallpox, By D. SWEWRIGHT.
9. Case of Rupture of the Left Auricle, By F. W. FOOTT, and F. DE H. HALL.
10. Notes and Comments Upon Five Cases in which Chloroform Anæsthesia was Carried Out by Dubois's Apparatus, By P. M. CHAPMAN.

2. **Physiological Albuminuria.**—West's conclusions regarding functional or physiological albuminuria are as follows: 1. Albuminuria may occur as a transitory symptom in persons who, except for this symptom, may be judged to be perfectly healthy, for they appear to be so at the time and remain so. 2. But it may also occur in persons who, though they appear healthy at the time, develop signs of disease subsequently. 3. It is difficult to distinguish at a given time between those who will remain well and those who will not. 4. It is difficult to exclude for certain many of the pathological causes to which the albumin might be due. Though there may be no proof these causes are present, there is equally no proof that they are absent, and in some cases the result shows they were not absent. 5. Speaking generally, the larger the amount of albumin in the urine and the longer it persists the greater the probability of some permanent disease. 6. Continued observation of these cases shows that the so-called physiological albuminuria does very appreciably increase the risk of life and that this risk grows rapidly with every year of age after thirty years. From the foregoing propositions the general conclusion may be drawn that functional albuminuria is never, strictly speaking, physiological at all, but that it is, on the contrary, always pathological, though not necessarily renal.

3. **Oophorectomy for Cancer.**—In 1898 Herman reported a case of recurrent mammary cancer, in which the cancer was first noticed and removed in October, 1890. By the end of 1896 it had recurred so extensively that operation was impossible, and in March, 1897, the ovaries were removed. By September of that year the recurrent growths had disappeared, and the patient remained well until the end of 1901. In 1902 a tumor of the kidney was discovered which rapidly increased in size, and she died in June, 1903. The result of oophorectomy in this case was that it gave the patient four years and a half of good health. This may be expected in about one third of the cases, so that in all cases of inoperable mammary cancer oophorectomy should be offered the patient.

4. **Preputial Glands.**—Keith and Shillitoe call attention to the presence of symmetrical markings on each dorsolateral aspect of the prepuce of man. These are termed "preputial ocelli," and they produce the smegma found under the prepuce. During the formation of the prepuce, and as it grows forward, a new epithelium is formed on its deep surface; from this, deep ingrowths take place into the free margin of the prepuce which is thus thrown into folds. It is these ingrowths which give rise to the preputial ocelli. When the cells desquamate they are transformed not as are the cells of the skin into a corneous substance, but into a substance closely allied to sebum—smegma.

5. **Duodenal Cancer.**—Syme reports a case of that rare affection, carcinoma of the duodenum, occurring in a man aged forty years, in which the constricting tumor was successfully removed by resection of the gut. The operation was performed in August, 1903, since when the patient has remained in good health.

6. **Trypanosomiasis.**—Marchand and Ledingham report the anatomical findings in a case of splenomegaly and anæmia, in which microscopical examination of sections of the spleen, liver, and marrow showed the presence of bodies corresponding in all respects to those described by Leishmann, Donovani, and Ross as occurring in certain low tropical fevers. Leishmann thinks that the bodies are degeneration forms of a species of trypanosoma. Ross considers them to be examples of a new parasite for which he proposes the name *Piroplasma Donovani*. The authors agree with Leishmann, and think their case one of trypanosoma infection.

Letters to the Editor.

THE HOSPITAL CARE OF CRIPPLED AND DEFORMED CHILDREN.

28 East Thirty-eighth Street,
New York, *February* 1, 1904

To the Editor,

Sir: The last paragraph of your editorial on Recent Progress in the State Care of Crippled and Deformed Children, published in the issue of January 30th, is, I think, in some respects, misleading. The sentence, "But there is still lacking in this particular field of work an organized and equipped hospital building to be especially used for the treatment and education of this class of patients," would appear to indicate that in none of the States mentioned was there any hospital devoted exclusively to the treatment of crippled and deformed children.

The State hospital at Tarrytown has its own building. It has a schoolroom where the patients are instructed every day. It has a small, but pretty fully equipped operating room, with $2,500 worth of operating instruments. It has a shop, equipped with $500 worth of tools and machinery, where ordinary repairs and changes can be made to broken or inefficient apparatus. It has a corps of resident officers paid by the State, and the State annually appropriates a sufficient sum for maintenance, etc.

Although not a large hospital, and the building simply an old house converted into a hospital for temporary use, it is, in every sense, a hospital, devoted to the care and treatment and education, so far as its limited accommodations permit, of the poor crippled and deformed child.

Newton M. Shaffer.

ANTICIGARETTE LEGISLATION.

New York, *January* 26, 1904.

To the Editor,

Sir: Apropos of an editorial article in the *Journal* for January 23rd, entitled The Cart Before the Horse, and having reference to a "crusade against the cigarette on the part of a new band of enthusiasts—who intend to petition Congress to pass prohibitory laws against this harmless and necessary purely vegetable product," the undersigned wishes to remind the editor that the crusaders in question are asking for "a *national* law prohibiting the sale of cigarettes to *minors*."

It appears that the good brother has missed the point of the matter entirely. Similar laws regulating the sale of cigarettes to minors and children already exist upon the statute books of many of the States, and so far as the "necessary" use of the cigarette is concerned, we have heard no complaint from any of these "mental degenerates" that their "rights were being interfered with," for example, in the State of New York.

As an effort to draw the attention of the public to the baneful effects, universally so conceded, of the cigarette habit upon the mental and physical development of our youths and children, this crusade should certainly receive the hearty cooperation of so able and progressive a periodical as the *New York and Philadelphia Medical Journal.*

Alfred C. Prentice.

*** We think that our correspondent will find that national legislation on this subject would be unconstitutional. As to the evil results of children smoking (whether cigarettes or anything else) we have already frequently expressed our opinion in no uncertain voice.

Proceedings of Societies.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Ninety-eighth Annual Meeting, held in Albany, January 26, 27, and 28, 1904.

THE REPORT OF THE COMMITTEE ON HYGIENE.

Mr. President, and Members of the Medical Society of the State of New York:

In reviewing the events which have affected the public health in our State during the past year, your committee observes that apparently a needless sacrifice of valuable lives has resulted from neglect of well known methods for the prevention of the spread of acute infectious diseases. Much of the responsibility of this state of things must inevitably be borne by the medical profession of the State. It is not conceivable that physicians practising their art under the present laws of our State are ignorant of the ætiology, the mode of communication, and the methods of preventing the spread of infectious and contagious diseases. If not ignorant themselves, it follows either that the profession has been remiss in the exercise of the highest functions of its calling, or that the people and those who govern them are not yet sufficiently acquainted with the demonstrated facts of scientific medicine and are grossly neglectful of their duty. Because your committee believes that both these factors are active in perpetuating the existing unsatisfactory conditions in the domain of public health, it desires to emphasize once more our duty as guardians of the public health and as instructors of the people in matters of hygiene.

TYPHOID FEVER.

It seems improbable that we shall ever have more definite knowledge of the cause and methods for the control of typhoid fever than we have at the present moment. And yet the report of the State commissioner of health, for 1903, shows that there were nearly 25,000 cases in our State, with a mortality of 1,635 cases. Typhoid fever is most largely communicated by contaminated drinking water. Our intelligent Governor called attention to this in his message of January 6th, and referred to the passage by the last Legislature of Chapter 464 of the Laws of 1903, entitled An Act to Amend the Public Health Law relating to the Discharge of Sewage and other Waste Matter into the Waters of the State, the enforcement of which is vested in the State department of health. It is needless to emphasize the importance of such legislation. It is well known that all our public waters, including the beautiful Adirondack lakes, are infected. To restore them to a condition of purity, your committee recommends that every city and village and house sewering into public waters which are used as sources of water supply shall be compelled by law to purify the sewage by acceptable methods before it is discharged into public waters. A bill has been introduced by Senator Stewart, of Ithaca, which proposes to place the water supply and sewer systems of the State under the control of a State Board of Sewer and Water Commissioners, which is to be appointed by the Governor, and which is to consist of three men, one of whom must be a competent civil and hydraulic engineer, and another a competent bacteriologist. The bill appropriates $75,000 to carry out the provisions of the act. The intent of this bill is good, in so far as it emphasizes the necessity for such work to be attended to in an energetic and scientific manner, and at once. The best method of accomplishing this desirable object is a legitimate subject for debate. If we in our State had a system by which men were especially educated in matters of public hygiene and were compelled to earn the degree of Doctor of Public Health before exercising the function of health officer or health commissioner in any community, there would be no necessity for the creation of such a commission. In a previous report this committee and our then President, Dr. H. R. Hopkins, called attention to the desirability of thus elevating the standard of service in the department of public health. Instead of creating new boards, it seems to your committee that the time has arrived when the State should demand the most intelligent and active service from is various health officers, and should proceed at once to afford such as desire to enter that service an opportunity for special preparation in accordance with the method so successfully employed in England. In the meantime, the object desired could be accomplished under the direction of the State Commission of Health by the addition to the funds at his disposal of a sum much less than that called for in the bill.

But of even greater importance than the purification of sewage, however valuable that may seem, is the perfect disinfection of all typhoid dejections before they are emptied into a sewer or privy or buried in the ground. For this the attending physician is directly responsible. The awful epidemic in Ithaca, and indeed all great epidemics, have been directly due to the neglect of this very simple precaution. The false idea that frost kills typhoid germs must be intelligently combated, and the physician must be as alert in seeing that all dejections are sterilized before disposal during the cold months as he is during warm weather. If all typhoid dejecta were sterilized before disposal this disease would be eliminated as absolutely and as quickly as has been yellow fever from Cuba under the energetic and intelligent direction of General Leonard Wood.

TUBERCULOSIS.

The control of tuberculosis is less easily possible because of the nature of the disease. But the State and physicians have great responsibilities in this matter, and can do much to forward the work by the early completion of the sanitorium in the Adirondacks for incipient tuberculosis, by the establishment in every community of a hospital for the tuberculous, and by the scientific care of those wards of the State who have developed tuberculosis while in public institutions for restraint or for treatment for special diseases or in poor houses. The antiquated buildings and unscientific housing of the dependent classes can no longer be tolerated by an awakened public conscience.

SMALLPOX.

The prevalence of smallpox in many communities this year is sufficient commentary on the laxity with which our good laws for the control of this disease are carried out. Such a state of things cannot exist in a vaccinated community. We must repeat the demonstration of Jenner of the value of vaccination; and we must insist that vaccination be performed by public officers with as great attention to surgical asepsis as is demanded in major operations. If life insurance companies, including the industrial companies, would ask the date of the last successful vaccination instead of "Have you been successfully vaccinated?" and would refuse to issue policies except to those who show evidence of competent and recent vaccination, much help would be given. The revaccination of children after the age of puberty is neglected, and it is our duty to see that this is carried out systematically.

Because of the want of uniformity in the vaccine laws for different communities and of the fraudulent certificates of vaccination issued by those opposed to vaccination, your committee recommend that no child shall be admitted to any public or private or parochial school, until his scars have been examined by the public vaccinator or other competent authority and have been pronounced to be those of successful vaccination.

The State distributes diphtheria antitoxine and antitetanic serum to those physicians who make requisition for it through their local health offices. Your committee recommends that under the direction of the State department of health, vaccine lymph should be produced and distributed in the same manner, for it believes that in no other way can standardized and effective vaccine be uniformly supplied.

SCHOOL HYGIENE.

One of the most effective methods of educating the public as to the nature of infectious diseases and how they can be controlled is the teaching of the essential elements of this subject in our public schools. The medical inspection of public schools has been recognized throughout the land as of the greatest importance. Its primary aim is to aid in the control of the infectious diseases and to safeguard the individual victim of physical conditions which interfere with his development from the harm which must inevitably follow. But possibly of greater value than the direct practical benefit to the individual and to the community resulting from the early detection of infectious diseases or of crippling physical conditions, is the object lesson to both teachers and pupils of the importance of accurate observation of disease conditions. Your committee recommends that physicians in every community try to secure competent medical inspection of every school in the State.

STATE LABORATORY FOR BACTERIOLOGICAL DIAGNOSIS.

In this connection it is fitting that the committee give its unhesitating support to the maintenance of the State Laboratory for Bacteriological Diagnosis. The practical value of such a laboratory to physicians practising their art away from medical centres cannot be exaggerated.

PUBLIC BUILDINGS AND TENEMENTS.

The recent holocaust in a Chicago theatre has again called attention to the criminal neglect of public authorities in guarding the lives of the people in public buildings. Not only should the laws for protection from fire be stringently enforced in every community, but the equally important laws requiring sufficient air space and competent ventilation and plumbing in all buildings in which men and women are employed, or are permitted to congregate, be looked after. There is no question but that a greater loss of health and life results annually from neglect of these requirements than is caused by such fires as that of the Iroquois Theatre, though the result is not so dramatic. The constitutionality of the Tenement House Act has been upheld by a decision of the Court of Appeals handed down on January 8, 1904. The provisions of this act should be extended by legislation to cities of the second and third classes, for in them, as in New York and Buffalo, the tenement house problem is coming up and must be met by energetic action at the start. Your committee urges the utmost vigilance on the part of every member of this society in maintaining what has already been accomplished for the better housing of the poor.

CHILD LABOR.

Chapter 255 of the Laws of 1903 amends the labor laws relative to the employment of women and children. The provisions of this law limit the hours of employment of women and of children between the ages of fourteen and sixteen years, and prohibit the employment of children under fourteen years in any establishment, except during the summer vacation in cities of the third class. The provisions of this law are humane and right, and it is our duty as physicians to aid the commissioners of health in enforcing it.

Your committee in reiterating what is known to most of you and what has been said often enough before has no apology to make. It is only by constant repetition that we can keep before the public the importance of the subjects under our jurisdiction, and only by repeated recalls to our duty as citizens that we can disentangle ourselves from the engrossing cares of the daily routine of our lives.

JOHN T. HEFFRON,
JOSEPH D. CRAIG,
D. V. STILE,
M. A. VEEDER,
JOHN H. PRYOR.

THE SCIENTIFIC SESSIONS

Algernon T. Bristow, M. D., of Brooklyn, President, in the Chair.

FIRST DAY.—*Tuesday, January 26th.*

The meeting was called to order by the President in the Council Chamber of the City Hall.

Therapeutics of Iron.—Dr. REYNOLD W. WILCOX, of New York, opened the first scientific session with a paper on this subject. Theoretically hæmoglobin should prove an ideal medicament, but practically it had not done so. He suggested the name "massed" iron for iron albuminate, as most of such preparations were not really albuminates.

Tic Douloureux.—Dr. SARGENT F. SNOW, of Syracuse, said that in not one of the twenty chronic cases he had observed had excision of the nerve been required to secure relief, and in every instance there had been well marked intranasal pressure or accumulations in some of the sinuses. While relief of the pressure was indicated, systemic treatment should not be neglected.

Enuresis.—Dr. GEORGE E. BEILBY, of the State Industrial School, at Rochester, described his experience with this complaint, which, he said, affected from four to ten per cent. of the population of that institution. The urine was normal, and in only a few instances was there marked phimosis; hence, he explained most of the cases by supposing an undue irritability of the lumbar enlargement of the cord. In 71 of the 75 cases, masturbation was habitually practised. The treatment should consist in an appeal to the moral sense, the performance of circumcision for its mental effect, and the use of cold spinal douches, counterirritation and antispasmodics.

Traumatic Hæmorrhage Over the Third Anterior Frontal Convolution; Operation; Removal; Recovery.—Dr. W. U. C. KRAUSS, of Buffalo, reported the case of a robust man, fifty-six years old, in whom a small localized hæmorrhage was found on the opposite side of the head to that injured by a fall from a trolley car. A small vein of the pia mater, just in front of the centre of speech, was injured. The chief symptom was intense occipital pain. He talked easily the next day and appeared to be improving, but on the following day he began to talk incoherently. Facial epilepsy on the right side with aphasia followed. Health was restored in a few weeks.

The Toxæmia of Tuberculosis.—This paper was read by Dr. ARTHUR W. ELTING, of Albany. A glandular enlargement on the right side of the neck was removed under a diagnosis of Hodgkin's disease. The glands were caseated and had tubercle bacilli. The condition after operation was critical, probably in consequence of a large quantity of toxines entering the circulation.

Dilated Urachus.—Dr. C. F. TIMMERMAN, of Amsterdam, read a report of this case and exhibited the specimen.

Pyloric Insufficiency.—Dr. MARK I. KNAPP, of New York, gave the results of his observations in fifty consecutive cases. Pyloric stenosis was the precursor of insufficiency, in which latter condition there was present very litle chyme, and that coarse in character. Absence of chyme was not due to overmotility, but its immediate cause was chronic inflammation. Pyloric insufficiency had no definite symptom. He recommended alkaline treatment.

SYMPOSIUM ON DIABETES.

Pathology.—Dr. R. M. PEARCE, of Albany, gave a rapid sketch of what had been learned in this field. Opie had shown that there were two definite forms of chronic pancreatitis: the interlobular and the interacinal. This practically never occurred in the first form, but was present in some cases of the second variety. It was in this group that the islands of Langerhans were apt to be invaded. The speaker said that he had traced the development of these islands, and had found that they arose from the true secreting glands, and, in time, became thoroughly differentiated, thus suggesting that they had a special function. He did not believe that all forms of diabetes were dependent upon the pancreas.

Physiological Chemistry of Diabetes.—Dr. DAVID EDSALL, of Philadelphia, said it was a remarkable fact that, in birds, extirpation of the pancreas caused the disappearance of glycogen from the tissues and an excess of sugar in the blood, and yet no glycosuria resulted. The difficulty in diabetes might be one of glycogen construction or of excessively rapid conversion of the glycogen into sugar. Our knowledge of the different varieties of sugars was probably very incomplete.

Medical Treatment of Diabetes.—Dr. WILLIAM H. THOMSON said that he very rarely prescribed codeine or any other of the opium derivatives in diabetes, and believed such practice was harmful. He had learned from experience the great value of codliver oil in diabetes, and that diabetics could take it in large quantities with advantage. Its use was, however, contraindicated in obese persons or those leading a sedentary life. Next in importance to codliver oil he would place iron, and next to that, arsenic. In severe cases of diabetes he would prescribe fifteen grains each of antipyrine and sodium benzoate, four times a day, and, after a time, would substitute for these, fifteen grains of aspirin and ten of bismuth salicylate. Mineral waters were often beneficial in diabetes, but they should not be given to persons who were emaciating.

General Management of Diabetes.—Dr. F. C. SHATTUCK, of Boston, said that, except in the very mildest cases, the patient should be placed at once upon a rigid diet. If, however, diacetic acid and acetone were present in the urine, a radical change in the diet was dangerous. In the milder cases it might be safe to test the toleration of starch after one or two months of this diet, but, in severe cases, a much longer time must elapse before it would be proper to give proteids. If sugar persisted in the urine despite a rigid diet, a certain amount of proteid must be allowed. Diabetics should have warm clothing and plenty of rest, but exercise should be taken in amounts suited to the individual.

The Synchronous Occurrence of Diabetes and Non-Diabetic Glycosuria.—Dr. HEINRICH STERN, of New York, read a paper with this title. His conclusions were as follows: (1)The diabetic state may be established before glucose is excreted by the urine; (2) glycosuria is a symptom of many other disturbances, both ectogenous and endogenous; (3) with the aid of other disturbing factors it is possible to differentiate between the diabetic and non-diabetic form; (4) duplex mellituria is the result of two concurrent or intercurrent affections of dissimilar character having glycosuria as the one symptom in common; (5) duplex mellituria depends upon the alternate prominence of one set of symptoms, including glycosuria.

SECOND DAY.—*Wednesday, January 27th.*

The President's Address.—The committee to which the president's address was submitted reported in favor of the continued holding of semiannual meetings successively in Buffalo, Rochester, Syracuse, and New York. It further endorsed the President's suggestion that the annual meeting in Albany should in future commence on Tuesday afternoon and last until Thursday afternoon, and that the dinner should close the proceedings.

The Submerged Tonsil.—Dr. THOMAS J. HARRIS, of New York, said that the symptoms of this condition were repeated attacks of circumtonsillar abscess and of non-suppurative tonsillar inflammation, vague pain in the throat, the collection of mucus in the throat and a more or less annoying cough. He advised very thorough removal of the tonsil by means of the tonsillar punch.

Chronic Laryngitis.—Dr. Z. L. LEONARD, of New York, reported cases indicating that chronic catarrhal laryngitis was curable. He emphasized the benefits to be obtained from rest of the larynx and change of residence; and also sometimes of occupation.

The Diagnosis and Treatment of Chronic Otitis Media.—Dr. J. F. MCCAW, of Watertown, read a paper on this subject.

Irritable Bladder in Women.—Dr. R. L. DICKINSON, of Brooklyn, gave as the chief causes of irritability of the bladder in women: (1) Inflammation of its base; (2) uterine, ovarian, and tubal disease; (3) inflammations about the meatus; (4) urethritis; (5) the hyperæmias of masturbation; and (6) prolapsed conditions. Cystoscopy was very helpful, both in diagnosis and treatment, but the physician should aim to employ the smallest instruments possible.

Fifteen Years' Experience with Uterine Fibroids.—Dr. W. E. FORD, of Utica, based this paper on a study of 162 cases in which the ultimate result was known. Of 96 cases treated by galvanism the tumor and the symptoms disappeared in 7, and in 26 hæmorrhage and pain were relieved. He had operated on 61 cases, 34 by Baer's method. He believed that not more than 20 per cent. of the cases of fibroids required operation.

Results in Diffuse Septic Peritonitis by the Elevated Head and Trunk Position.—Dr. RUSSELL S. FOWLER reported 80 cases so treated, many of them very severe ones, with 67 recoveries. Briefly, the technics consisted in treating all infected areas successively with a mixture of equal parts of hydrogen peroxide and soda solution, and by saline solution. The pelvic and abdominal cavities were flushed out rapidly in the same way, taking care that at no time the intestines were allowed to escape through the wound. A glass tube was inserted into the pelvis and brought out through the abdominal wound, but was dressed independently of the operation wound. Immediately after operation the patient was placed in the elevated head and trunk position.

Asthenopia.—Dr. D. H. WIESNER, of Brooklyn, insisted on the fact that hysterical asthenopia actually existed, and that its recognition from other forms must be made by exclusion. The headache of asthenopia, when arising near the eye, indicated a refractive origin. When arising farther away, its source was usually muscular. Headache due to eyestrain grew worse as the day progressed, but was usually absent on awaking in the morning.

The Relation Between the Muscles of the Eye and Those of Other Parts of the Body.—Dr. LUCIEN HOWE, of Buffalo, read a paper on this subject, the practical outcome of which was that the muscles of the eye could be strengthened by measures directed towards the strengthening of the body muscles generally.

Glaucoma.—Dr. D. B. ST. JOHN ROOSA, of New York, laid down the following symptoms as always indicating the necessity of looking out for glaucoma: A weeping conjunctiva without glueing of the eyelids, a congested zone around the cornea, dimness of vision, neuralgia of the eyeball. Conjunctival anæsthesia with increased tension was confirmatory.

A Study of the Climate of Long Island.—Dr. W. H. ROSS, of Brentwood, Long Island, N. Y., read a paper based on personal metereological observations extending over ten years. He found the mean summer temperature to be 70° F., and the annual range 39° F. The yearly average humidity was low, 72.75, and the average number of clear and partly clear days, 300, or thirty less than El Paso, Texas. In addition to these advantages, there was on this island a tract of pine forest, six miles wide and sixty miles long.

The Treatment of Cancer by Its Own Toxine.—Dr. P. J. MCCOURT, of New York, read a paper on this subject.

Recent Researches in Radioactivity and Electricity; their Bearing on Radial Therapy; Legal Status.—Dr. J. S. WIGHT, of Brooklyn, stated that the high frequency discharge would cause coagulation of the blood and of serum albumin, and that he had been able to utilize this property in grafting. After the application of the grafts they were brought under the influence of the high frequency discharge with a pointed electrode, clotting occurred and the grafts took firm root.

(To be concluded.)

THE BALTIMORE TUBERCULOSIS EXPOSITION.

The Tuberculosis Exposition under the Auspices of the Maryland State Board of Health was held in McCoy Hall, Johns Hopkins University, Baltimore, during the week beginning January 25th. The opening exercises, which took place on the evening of January 25th, were presided over by Dr. William S. Thayer and brief introductory addresses were delivered by Mr. Edwin Warfield, Governor of Maryland; Mr. Robert McLane, Mayor of the city of Baltimore, and Dr. William Osler.

Mr. Frederick Hoffman, of Newark, read a paper on The Statistical Laws of Tuberculosis, pointing out the necessity for comprehensive statistical investigations along a uniform basis with a view to the establishment of reliable data concerning the laws and tendencies of this disease. He said that the mortality from tuberculosis had progressively declined in American cities for more than a century, a change attributable largely to the steady improvement in the modes of life of the masses, their housing, etc. The most marked decrease has been during the decade beginning with 1890. At the beginning of this decade the mortality from consumption in the United States was 25 per 10,000. At the close it was but 19 per 10,000 of population. He called attention to the fact that the death rate was extremely high among the colored population, being 49 per 10,000 among this class against 17 per 10,000 among the whites. This wide variation in the mortality seemed to be due to racial differences and remained practically the same even under the more favorable conditions under which the negro population lives at present. Statistics showed that the average mortality in males of all occupations was about 24 per 10,000, the mortality for 10,000 for different professions and callings being given as follows: Clergymen, 12; lawyers, 14; physicians, 17; hotel and boarding house keepers, 21; tradesmen and merchants, 17; saloon and restaurant keepers, 29; barbers and hairdressers, 37; laborers, 37; bookkeepers, 40; servants, 43; printers, 44; cigar makers, 48, and stone cutters 54 per 10,000. The mortality from consumption is lowest among the Jews. The author urged the necessity for active and widespread co-operation with a view to diminishing the largely preventable amount of disease and mortality from tuberculosis. He urged the necessity for a careful study of the facts as set forth in the statistics with a view to inaugurating reforms that would prevent the disease, which is much more efficient and economical than its cure.

On Tuesday evening Dr. Lawrence F. Flick, of Philadelphia, delivered a lecture on the house infection of tuberculosis. On Wednesday evening Dr. Mazyck P. Ravenel, of Philadelphia, discussed bovine tuberculosis as a factor in human tuberculosis, Dr. D. E. Salmon, chief of the Bureau of Animal Industry of the Department of Agriculture, at Washington, also presenting Some Aspects of the Study of the Tuberculosis of Animals; Thursday evening, Dr. S. A. Knopf delivered a popular lecture on Pulmonary Consumption and the Possibility of its Eradication Through the Combined Action of a Wise Government, Well Trained Physicians and an Intelligent People, and Dr. George J. Adami, of Montreal, closed the series of popular addresses on Friday evening, his subject being Facts, Half Truths and the Truth about Tuberculosis. On Saturday Dr. William H. Welch and Dr. Charles H. Potter gave lantern demonstrations showing the improved methods in tuberculosis treatment as indicated in the character of the hospital provisions made for tuberculous patients.

THE EXHIBITS.

The mornings throughout the week were devoted to demonstrations and explanations of the various exhibits. These exhibits fell under the following heads:

1. *Those of Charitable and Nursing Associations.*—Prominent among these was the exhibit of the Charity Organization Society of New York city, with its interesting and convincing photographs of the consumptive poor, and its beautiful plans for municipal sanataria and tent hospitals. The Visiting Nurses Association on the Tuberculosis Committee of Baltimore, showed a model room for consumptive patients and many interesting photographs. The Chicago Tuberculosis Committee presents charts and diagrams showing the relations of tuberculosis to pneumonia, to changes in the weather, etc.

2. *Statistical Exhibits.*—Here may be mentioned the beautiful charts and diagrams of the Maryland State Board of Health and of the Prudential Life Insurance Company, showing the variations in the occcurrence of tuberculosis in different races, sexes, and classes of people. The Minnesota State Board of Health also showed statistical diagrams.

3. *Plans, Diagrams, and Descriptions of Various Sanatoria.*—Among them the Sanatorium of the State of Rhode Island, the Cook County, Dr. Brooks's Nordrach Ranch, Loomis, Adirondack Cottage, Stonywold, Gabriel's, and the Hospital for Diseases of the Lungs, Philadelphia. The Manhattan State Hospital, East, sent a complete model of a tent sanatorium, which was most interesting.

4. *Appliances for Use in Connection with the Treatment of the Disease.*—These included the various chairs, lounges, tents, tent cottages, etc.

5. *Pathological Exhibit.*—Here were models from the Army Medical Museum, and pathological specimens (microscopic and macroscopic) from the Johns Hopkins Hospital, the Baltimore Medical College, the University of Maryland, Saranac, etc. Dr. Ravenel showed specimens (cultures and slides) of the human bovine, and other forms of tubercle bacilli, and Dr. Potter presented some beautiful photomicrographs.

6. *Literature of Tuberculosis.*—Here were shown the "hundred best books" on tuberculosis—the mile stones on the road, as it were—and also prints of the best known clinicians, observers, and investigators. Dr. Knopf, of New York, sent 73 different publications written by himself, all on tuberculosis, and in many different languages.

7. *Exhibits of Various Cities and States with* reference to the municipal care and control of tuberculosis. The Baltimore Department of Health exhibited its outfit for the collection of sputum specimens, and a map showing the distribution of cases of phthisis in Baltimore. The Department of Health of New York city sent a table of statistics, showing what has been accomplished in the last twenty years. Also specimens of all the notification cards, registration and filing cards, report and complaint blanks, inspector's and nurse's cards, disinfection orders, etc. Photographs of the interior and exterior of the Riverside Sanatorium and of the New Clinic for the Treatment of Pulmonary Diseases were shown. Also house maps of the more densely crowded portions of the city, showing how certain houses become infected and how case after case of phthisis will occur there.

Only a few of the numerous exhibits have been mentioned; this for lack of space alone. The exposition was most unique and interesting. Its value will lie in the dissemination of information among those actively engaged in the struggle against the disease, and in awakening interest among the medical profession as a whole and especially among the laity.

THE NEW YORK NEUROLOGICAL SOCIETY.

Abstract of a Portion of a Stated Meeting, held December 1, 1903.

(Concluded from page 237.)

Dr. S. F. HALLOCK thought if we carefully investigated the psychical side in the early history of many cases of epilepsy we should obtain a strong argument for the organic origin of the disease.

Dr. JOSEPH COLLINS said that he personally felt no urgency in putting epilepsy into the camp of organic diseases, neither did he think Dr. Starr had presented any reasons for such urgency. That we might find epilepsy to be an organic disease he hoped, and he also hoped that if such discovery were made we should find the means of coping with this disease, yet Dr. Starr seemed to take a hopelessly antagonistic view on this point. Personally, he had never been taught to look upon Jacksonian epilepsy as an organic disease, the point upon which Dr. Starr seemed to found his main argument. He supposed that about 25 per cent. of the cases of idiopathic epilepsy presented Jacksonian attacks, but this phenomenon he looked upon as only an indication that the irritation proceeded from a certain portion of the brain. He understood that this was Hughlings Jackson's view. He knew of no organic disease which came on in the first decennium of life and continued practically for the full natural term of life; in other words, a disease that did not cut life short. He did not know of any cases of epilepsy which had been studied in the intervals of the attack, except where the observations had been interfered with by medicinal treatment to such an extent as to render these observations of no value. It had been stated this evening by several persons that changes in the brain in epilepsy had been found with a certain degree of constancy by well recognized neuropathologists. He would say that these changes were not to be compared in any way with those which occurred in the cell bodies of the neurones in a case of poisoning by bromide of potassium, administered accidentally to a patient in Toronto a year or two ago. He thought Dr. Starr must be persuaded to modify his statement regarding the incurability of epilepsy before the publication of his paper, because it would otherwise give rise to an almost immeasurable amount of despair. He did not think there was any real justification for such pessimism. Personally, he knew that cases of epilepsy did get well, or at least practically so, and he believed we were already able to cope with epilepsy with fair success.

Dr. THOMAS PROUT said that he had studied a good deal of pathological material sent him from the Craig Colony by Dr. L. Pierce Clark. The cases dying in status epilepticus presented a union lesion of the cortex. In ordinary idiopathic epilepsies he found the same lesion in the cells of the cerebral cortex, but in lesser degree, and he looked upon these changes as characteristic of epilepsy. A case reported by Wright had attracted considerable attention, but this observer's methods were exceedingly faulty. The autopsy in his reported case was made fourteen hours after death and the body temperature was 108° F.

Dr. ADOLF MEYER asked Dr. Starr what attitude he took concerning the fact that he founded his conclusions upon the occurrence of focal symptoms in such a large number of cases of epilepsy. What would he say with regard to the fact that the removal of such lesions failed to cure the epilepsy. The word organic, as commonly used, implied something far more serious than the disease as described by Dr. Starr. The persistence of the epilepsy after the removal of the organic lesion would seem to indicate that there was a general disorder present.

Dr. W. M. LESZYNSKY said that after a number of years of clinical experience he certainly disagreed with Dr. Starr in his pessimistic views as to the curability of epilepsy. It could hardly be doubted that a certain proportion of the cases of idiopathic epilepsy were cured. Reference was made to two cases in which the patients had promptly improved and had been practically free from epileptic attacks for several years after the bromides had been discontinued, and proper attention had been given to the general health.

Dr. MAX G. SCHLAPP said that it should not be forgotten that epileptiform convulsions could be produced by many different things; hence, to take a symptom or a group of symptoms and dignify them with the title "organic disease" seemed to him to be going too far. We knew that in children convulsions could be brought on easily by slight irritation of the peripheral nervous system, and to say that these convulsions were produced by an organic lesion in the central nervous system was not justified by the transitory nature of these symptoms. The difference between a Jacksonian epilepsy and an ordinary epilepsy was perhaps to be found in the position of the lesion. If the irritation was beyond the motor centre it was possible that the irritation would spread throughout the cortex, giving rise to unconsciousness and various central disturbances. The lesions described by Dr. Prout as occurring in epilepsy were found in other conditions. The principal lesion found, according to the Nissl method, was chromatolysis, and might be present in connection with various forms of poisoning.

Dr. EDWARD D. FISHER said that he had long believed epilepsy to be an organic disease. The fact that we could produce convulsions similar to what we understood as epilepsy did not necessarily mean that they were really epileptic. The characteristic of epilepsy was its persistence; it was the general mental state as well as the convulsion which constituted epilepsy. We should sharply distinguish between idiopathic epilepsy and epilepsy due to any other non-irritating cause. He did not think that Dr. Starr meant to give any definite pathology for epilepsy, but merely to state that it was an organic disease. He could not agree entirely with him, however, regarding the incurability of epilepsy, although he would admit that it was probably the most nearly incurable disease known. He could not conceive of a disease which went on year after year with exactly the same symptoms as at the beginning, without their being back of it an organic lesion.

Dr. Starr closed the discussion. He said that he was exceedingly obliged to the society for its full and free discussion of this important topic. He was willing that his statements about the incurability of epilepsy should not be published; nevertheless, he believed, with Dr. Fisher, that epilepsy was one of the most incurable diseases we were called upon to treat. It was true that the various speakers had spoken of one or two recoveries, yet those present must have seen hundreds of cases of epilepsy. He thought this substantiated fully the position he had taken with regard to the general incurability of epilepsy. He had had no idea of establishing a pathology for epilepsy. He certainly regarded, and believed most neurologists regarded, the Jacksonian cases as organic. The same sources of irritation which gave rise to epileptic attacks were present constantly in other individuals, and hence, there was something else in epileptics. He believed that in epileptic persons there was, in addition to the toxæmia, some underlying defect, as Dr. Dana had said. It was certainly very important to study epileptics in the intervals of the attacks, and when not under medicinal treatment; he had done this frequently, and believed it was being constantly done by others.

Book Notices.

The Practice of Obstetrics. Designed for the Use of Students and Practitioners of Medicine. By Clifton Edgar, Professor of Obstetrics and Clinical Midwifery in the Cornell University College; Attending Obstetrician to the New York Maternity Hospital. With 1,221 Illustrations, Many of Which Are Printed in Colors. Philadelphia: P. Blakiston's Son & Co. 1903. Pp. xvi-1111. (Price in Cloth, $6.00 net).

It is impossible to review in a short space this exhaustive treatise on midwifery. Dr. Edgar has made his book encyclopædic in character. Every chapter gives evidence of great thoroughness of study, and one feels, as he concludes each division of the book, that the author has embodied in it all that can be said on the subject without subjecting his book to padding. Two characteristics, we think, especially mark the book: a wonderful attention to the minutest details, and a vivid illustration of the use of personal experience. In addition, it contains a wealth of illustration, well chosen and well executed.

While it lies beyond our scope to go minutely into particulars, it is desirable to point out some of the author's teachings. Edgar advises the use, whenever feasible, of external examinations for obstetrical diagnosis, and urges the limitation of vaginal examinations as far as possible. By illustrations drawn from photographs with smaller accompanying diagrams, he exemplifies the technics of external manipulation in an admirably clear manner. He counsels the employment of rubber gloves for internal examinations, as well as for the performance of obstetrical operations, and fails to see what objections can be urged against this simple and safe measure. Citing some of his own work, he points out vividly how vaginal examinations and vaginal and intrauterine douches can be given without contact with the vulva.

The author approves of rotation of the head in occipitoposterior positions, when it has reached the perinæum, and says, very truly we think, that this is a popular method in New York. Brodhead's contribution to this subject has been largely instrumental to this end, beyond a doubt. To prove that this rotation of the head has no injurious effect upon the child—especially since the body turns with it—Edgar has illustrated the rotation of the head of the living child to 110 degrees.

Like other authorities, no definite ætiological factor is ascribed to eclampsia. That it is due to an intoxication of some sort on the part of the maternal organism, is not doubted; but it is no longer believed to be due to uræmia, or to disturbed renal function alone. The whole discussion in this book is especially clear and complete, the differentiation between the "toxæmia of pregnancy" and eclampsia being well brought out.

The chapters on pelvic measurements and pelvic deformities are extensive, exceedingly lucid, and beautifully illustrated. The discussion of anæsthesia in labor is temperate, and we share the author's condemnation of spinal anæsthesia with its present risks for the patient. This book was probably published too early to include the scopolà-murine-morphine narcosis; at any rate, it is not mentioned.

Again, the chapter on posture is taken up in an original and scientific manner, and, like the remainder of the book, is well illustrated. This chapter alone is worth much for the student and the practitioner, since the posture of the patient is an important element, the benefits of which are usually not employed, even if they are known.

We have referred to the wealth of detail which Dr. Edgar has given us. A few citations more will be of interest in this direction. This is the only English book with which we are acquainted which gives in detail Prochownik's diet for keeping down the size of the fœtus. Every minute point from the cleansing of the finger nails to the performance of Cæsarean section is given fully and with a profusion of illustration. Thus, the paragraphs and chapters on vulval douches, the immediate care of the child, the attention to dress and comfort during pregnancy, on sexual relations, pelvic anatomy, and fœtal positions, on the various forms of dystocia, and especially on the puerperium, are each remarkably full, and many of them might pass as monographs.

On most points, the author takes a firm position. He is against hysterectomy for puerperal sepsis, for the same reasons which actuate most men—the impossibility of performing the operation when it will be serviceable, or when the suitable diagnosis of limitation of the septic process to the uterine tissues can be made. We note that sexual intercourse shortly before labor is not mentioned as one of the causes of sepsis.

Edgar calls the malignant growths developing after abortions and hydatiform pregnancies, "deciduoma malignum." While this term undoubtedly will undergo a change in the next few years, it is perhaps just as well to adhere to this name for the present, although Biquel's suggestion of "malignant placentoma" seems well adapted to these neoplasms.

We are glad to note that while steel instruments, like Bossi's, are not entirely condemned, they are believed by the author to be inferior to the bags used for the same purpose. The simple gauze dressing applied to the umbilical cord is also the best method of dressing, and is commended by the author.

We think we have cited enough to show that this is an unusual book. We have scarcely the space to point out the many original features—the limiting of embryological discussion to that which affects the growth of the embryo, the fœtal membranes, and the fœtal circulation; the grouping of the illustrations of the mechanism of labor in various positions along the margins of the pages of descriptive text; the classification and grouped illustrations of monstrosities; and many other elements of unusual and meritorious character.

The illustrations, most of them original, are not placed in the book as padding. They are unique in number, mode of execution, and in the didactic value they contain. They certainly set a pace for future writers on this subject, and add much to the value of this interesting work. A copious index, preceded by an appendix showing the card system of keeping records and histories, completes the book.

The student, the practitioner, and the specialist may each read this work with benefit, for it represents ripe experience, great industry and an application of detail to the obstetric art which make it one of the most important of English obstetric works.

BOOKS, PAMPHLETS, ETC., RECEIVED.

Du Traitement de la Phthisie Pulmonaire par le Sérum Antistreptococcique de Menzer. Par Le Docteur E. OSTROVSKY, Lauréat de la Faculté de Paris, Médecin Consultant à Menton. Recensions-Exemplar. Paris: G. Steinheil, Editeur, 2 Rue Casimir-Delavigne. 1903. Pp. 151.

Mechanism of the Paroxysmal Neuroses. By FRANCIS HARE, M. D., Consulting Physician, Brisbane General Hospital; Inspector-General of Hospitals, Queensland. Reprinted from the *Australasian Medical Gazette* of July, August, September, and October, 1903. Sydney: W. E. Smith, Bridge Street. 1903. Pp. 33.

A Reference Chart of Diseases of Nervous System and Muscles. By EDWARD CURTIS HILL, M. So., M. D., Member of the Faculty, Denver and Gross College of Medicine (Medical Department, University of Denver).

Gynæcological Nursing. By NETTA STEWART, Sister in the Extramural Gynæcological Wards of the Royal Infirmary, Edinburgh. New York: William Wood & Co. MDCCCCIII. Pp. 174.

The Nutrition of the Infant. By RALPH VINCENT, M. D., Member of the Royal College of Physicians, Physician to the Infant's Hospital; Late Senior Resident Medical Officer, Queen Charlotte's Lying-in Hospital. New York: William Wood & Co. MDCCCCIV. Pp. xviii-295.

Miscellany.

A Propos of General Wood.—The *New York Times* for Sunday, January 31st, gives the following story of General Wood on the authority of "a Boston physician:"

"I remember an instance in direct proof of what I mean when I say that his successes are mainly due to his magnificent courage, his determination to do what he believes to be right, even in the face of certain punishment. In 1884, then a recent graduate from the Harvard Medical School, he was an interne at one of the Boston hospitals. An interne, I may say in explanation, is required by rule to send for the visiting surgeon in all cases requiring immediate operation, and is himself forbidden to do the work.

"One day an infant was brought in, suffering from membranous croup. The case was so far advanced that any delay would almost certainly result in death for the little one. Dr. Wood did not hesitate a moment. He began to work at once, carefully, fearlessly, promptly, and successfully. Five minutes later, and while both mother and patient were still in the room, the surgeon, who should have had the case according to rule, walked in. The young doctor explained, but would not apologize, as he was asked to do. He had done right, and he was not going to tell any man he was sorry for it, he said. The result was that he was first suspended and then dismissed. And I call that courage."

A University Ode for the University of Maryland.—We have been favored by Dr. Eugene F. Cordell, professor of the history of medicine at the University of Maryland, with the following university ode adopted on January 21st by the General Alumni Association of the University of Maryland:

Alma parens, jam annorum
Honoribus coronata!
Caput charum candidumque
Dii largé benedicant.

Tibi quæ dedisti nobis
Dona verbis permajora,
Sicut die longè acta
Rursus fidem obligamus.

Diem benè recordamur
Qua stetímus trepidantes
In theatro constipato
Ut honores accepturi.

Quamvis tempus tractavérit,
Aulas tuas post relictas,
Nos omnino malé—semper
Aspéctu tui recreamur.

Quid non tibi faceremus,
Mater? fama est eadem
Conglómeremus bona, vitam
Prodúceremus aurea victu.

Sis præclara! Sis perpetua!
Inopinatæ gloriæ surgas,
Surgant turresque ad astra,
Radiisque sol collustret!

An Extraordinary Spear Wound.—The *Army and Navy Gazette* (London) for December 5, 1903, says: "An interesting account of a unique pig-sticking accident which occurred at Allahabad is contributed to the *Indian Medical Gazette* by

Captain J. D. Graham, Indian Medical Service. An officer who was out pig-sticking came up with the beast, which was on his off side, and stuck it. It swerved across to the near side, and the spear, striking the pony's off shoulder, was wrenched out of the rider's hand, and also shaken clear of the pig. It was flung butt to the ground, and, the point rising in the air, penetrated the pony's near shoulder, passed through its chest and ribs, and out at the flap of the saddle; thence it entered the fleshy muscles at the back of the rider's left thigh, passing out about six inches and a half higher up. The pony stopped still, and the lance was extracted after the shaft had been cut. The officer recovered under Captain Graham's care, but the pony died of pneumonia a week later."

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Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the surgeon-general, Public Health and Marine Hospital Service, during the week ending January 29, 1904:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
California—Berkeley	Dec. 31-Jan. 7	1	
California—Los Angeles	Dec. 26-Jan. 2	1	
California—San Francisco	Jan. 10-17	2	
Colorado—Colorado Springs	Jan. 8-16	1	
Colorado—Denver	Nov. 28-Dec. 26	9	
Illinois—Cairo	Jan. 21	4	
Illinois—Chicago	Jan. 16-23	2	
Illinois—Danville	Jan. 16-23	4	
Indiana—Evansville	Jan. 16-23	2	
Louisiana—New Orleans	Jan. 9-16	4 3 imported.	
Maine—Smithfield	Jan. 21	1	
Maine—Stacyville	Jan. 21	11	
Maryland—Baltimore	Jan. 16-23	1	
Michigan—Detroit	Jan. 16-23	2	
Michigan—Grand Rapids	Jan. 16-23	1	
Michigan—Port Huron	To Jan. 23	3	
Missouri—St. Louis	Jan. 9-23	21	
New Hampshire—Manchester	Jan. 16-23	2	
New Hampshire—Nashua	Jan. 16-23	1	
New Jersey—Plainfield	Jan. 16-23	1 imported	
New Jersey—Trenton	Jan. 16-23	8	
New York—Buffalo	Jan. 8-23	4	
New York—New York	Jan. 16-23	5	1
Ohio—Bucyrus	Jan. 8-23	22	
Ohio—Cincinnati	Jan. 15-22	5	1
Ohio—Cleveland	Jan. 15-22	3	
Ohio—Dayton	Jan. 16-23	5	
Pennsylvania—Allentown	Jan. 16-23	1	
Pennsylvania—Johnstown	Jan. 16-23	1 1 from suburban district.	
Pennsylvania—Philadelphia	Jan. 16-23	106	13
Pennsylvania—McKeesport	Jan. 16-23	5	
Pennsylvania—Reading	Jan. 18-25	4	
Pennsylvania—Titusville	Jan. 16-23	1	
Pennsylvania—Williamsport	Jan. 16-23	4	
South Carolina—Charleston	Jan. 16-23	3	
Tennessee—Nashville	Jan. 16-23	3	
Utah—Salt Lake City	Jan. 8-16	7	
Wisconsin—Milwaukee	Jan. 16-23	19	

Smallpox—Foreign.

Place.	Date.	Cases.	Deaths.
Austria-Hungary—Prague	Dec. 19-26	8	
Brazil—Pernambuco	Dec. 1-15		15
Brazil—Rio de Janeiro	Dec. 20-27	40	40
Canada, New Brunswick—New Castle	Jan. 21	1 Imported from Portland.	
France—Paris	Jan. 2-9	16	
Great Britain—Birmingham	Jan. 2-9	1	
Great Britain—Glasgow	Jan. 8-15	44	3
Great Britain—Leith	Jan. 2-9	1	
Great Britain—Liverpool	Jan. 2-9	1	
Gt. Britain—Newcastle-on-Tyne	Jan. 2-9	6	
Great Britain—Nottingham	Dec. 26-Jan. 9	14	1
Great Britain—Sheffield	Dec. 26-Jan. 2	1	
Great Britain—South Shields	Jan. 2-9	1	
Great Britain—Sunderland	Jan. 2-9	7	1
India—Bombay	Jan. 15-29		5
India—Karachi	Dec. 20-27	2	1
Italy—Catania	Dec. 31-Jan. 7		1
Mexico—Mexico	Dec. 13-Jan. 10		4
Russia—St. Petersburg	Dec. 26-Jan. 2	31	
Spain—Santander	Jan. 4-11	8	
Turkey—Smyrna	Dec. 20-Jan. 3		11

Yellow Fever.

Place.	Date.	Cases.	Deaths.
Brazil—Rio de Janeiro	Dec. 20-27	3	3
Jamaica—Kingston	Dec. 26-Jan. 9	2	2
Malta	Dec. 26-Jan. 2	4	1
Mexico—Merida	Jan. 3-16	1	1
Mexico—Vera Cruz	Jan. 8-16	2	
Venezuela—Maracaibo	Dec. 20-27	1	1

Plague—United States.

Place.	Date.	Cases.	Deaths.
California—San Francisco	Jan. 10		1
California—San Francisco	Jan. 11		1
California—San Francisco	Jan. 13		1

Plague—Insular.

Place.	Date.	Cases.	Deaths.
Hawaii—Honolulu	Jan. 10		1

Plague—Foreign.

Place.	Date.	Cases.	Deaths.
Brazil—Pernambuco	Nov. 15-Dec. 15		9
Brazil—Rio de Janeiro	Dec. 20-27	9	3
India—Bombay	Dec. 15-29		129
India—Karachi	Dec. 20-27	7	6
Mauritius	Dec. 24-31	53	29

Cholera.

Place.	Date.	Cases.	Deaths.
Java—Batavia	Dec. 5-12	14	3
Turkey in Asia—Diarbekir	Dec. 15-20	53	28
Turkey in Asia—Hitt	Dec. 13-15	8	4
Turkey in Asia—Kerbela	Dec. 13-20	447	443

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers of the Public Health and Marine Hospital Service for the fourteen days ending January 28, 1904:

ALLEN, G. C., Pharmacist. Upon being relieved from temporary duty at Louisville, Ky., by Pharmacist G. O. Ferdinand, to rejoin station at New Orleans, La.

ANDERSON, J. F., Passed Assistant Surgeon. Granted leave of absence for six days from January 25, 1904; under paragraph 191 of the regulations.

FERDINAND, G. O., Pharmacist. To proceed to Louisville, Ky., and report to the Medical Officer in Command for duty and assignment to quarters.

FOSTER, S. B., Acting Assistant Surgeon. Granted leave of absence for ten days from January 17th.

GREENE, J. B., Passed Assistant Surgeon. Granted leave of absence, on account of sickness, for fifteen days from January 26th.

HOLT, E. M., Pharmacist. Relieved from duty at Louisville, Ky., and directed to proceed to Washington, D. C., and report at Bureau for temporary duty.

MCCLINTIC, T. B., Assistant Surgeon. Granted leave of absence for six days from January 25, 1904, under paragraph 191 of the regulations.

ROSENAU, M. J., Passed Assistant Surgeon. Granted one day's leave of absence, January 16, 1904, under paragraph 189 of the regulations.

SCHUG, F. J., Acting Assistant Surgeon. Granted leave of absence December 22, 1903, to January 5, 1904, on account of sickness.

VON EZDORF, R. H., Passed Assistant Surgeon. Granted leave of absence for thirteen days from January 25th.

WALKER, R. T., Acting Assistant Surgeon. Leave of absence granted Acting Assistant Surgeon Walker for twenty days from January 13, 1904, revoked.

WERTENBAKER, C. P., Passed Assistant Surgeon. Granted leave of absence for five days from January 21st. Detailed to make inspection of places in Mexico and the Texas border recently infected with yellow fever.

Boards Convened.

Board convened to meet at Washington, D. C., January 25, 1904, for the physical examination of officers for promotion and applicants for admission into the Revenue Cutter Service. Detail for the board—Assistant Surgeon General W. J. PETTUS, chairman. Assistant Surgeon A. J. MCLAUGHLIN, recorder.

Board convened to meet at Washington, D. C., January 26, 1904, for the physical examination of such officers of the Revenue Cutter Service and applicants for admission thereto as may present themselves. Detail for the board—Assistant Surgeon General L. L. WILLIAMS, chairman. Assistant Surgeon A. J. MCLAUGHLIN, recorder.

Board convened to meet at the marine hospital, Port Townsend, Wash., February 1, 1904, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Passed Assistant Surgeon J. H. Oakley, chairman. Passed Assistant Surgeon M. H. Foster, recorder.

Promotions.

Assistant Surgeons W. C. Billings, J. W. Kerr, and G. M. Corput commissioned as passed assistant surgeons, to rank as such from December 29, 1903, December 31, 1903, and January 6, 1904, respectively. January 12, 1904.

Appointment.

George O. Ferdinand, of New York, appointed pharmacist of the third class. January 21, 1904.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending January 30, 1904:

Dean, Elmer A., Captain and Assistant Surgeon. Relieved from duty at Fort Strong, Mass., and ordered to duty at Fort Riley, Kan.

Fuller, Leigh A., Captain and Assistant Surgeon. Reported for duty at the General Hospital, Fort Bayard, N. M.

Hansell, H. S., First Lieutenant and Assistant Surgeon. Assignment to duty in Manila, P. I., revoked, and instead ordered to proceed to Peking, China, and report in person to the Commanding Officer of the U. S. Legation Guard, for duty.

Henderson, A. B., First Lieutenant and Assistant Surgeon. Reports from Silver City, N. M., awaiting retirement.

Hutton, Paul C., First Lieutenant and Assistant Surgeon. Relieved from further duty at Peking, China, and ordered to the General Hospital, Fort Bayard, N. M.

Kirby-Smith, R. M., First Lieutenant and Assistant Surgeon. Granted leave of absence for twenty days, to take effect January 27, 1904, with permission to apply for an extension of seven days.

Reno, William W., First Lieutenant and Assistant Surgeon. Returned to Fort Crook, Neb., from temporary duty at Fort Riley, Kan.

Shepard, John L., First Lieutenant and Assistant Surgeon. Returned to the U. S. A. General Hospital, Presidio of San Francisco, Cal., from temporary duty.

Turnbull, Wilfrid, First Lieutenant and Assistant Surgeon. Granted two months' leave of absence, with permission to go beyond the sea.

Wells, George M., Major and Surgeon. Left Fort Bayard, N. M., *en route* to San Francisco, Cal., for transportation to Manila, P. I.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending January 30, 1904:

Arnold, W. F., Surgeon. Sick leave extended two months.

Morse, E. T., Pharmacist. Detached from the Navy Yard, Portsmouth, N. H., and ordered to the naval laboratory, navy yard, New York.

Payne, J. H., Jr., Passed Assistant Surgeon. Detached from the *Wabash* and ordered to the Naval Hospital, Jan Juan, P. R.

Shipp, E. M., Passed Assistant Surgeon. Ordered to the Naval Hospital, New York.

Spear, R., Passed Assistant Surgeon. Ordered to the Naval Hospital, Washington, D. C.

Stone, M. V., Assistant Surgeon. Retired from active service on account of disability incident to the service.

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Births, Marriages, and Deaths.

Born.

Kirkpatrick.—In Manila, Philippine Islands, on Tuesday, December 22nd, to Dr. Thomas J. Kirkpatrick, United States Army, and Mrs. Kirkpatrick, a son.

Lloyd.—In Lydgate, Nova Scotia, on Saturday, December 12th, to Dr. C. D. Lloyd and Mrs. Lloyd, a son.

Thompson.—In Charleston, South Carolina, on Friday, January 22nd, to Dr. Edgar Thompson, United States Navy, and Mrs. Thompson, a son.

Married.

Bruno—Lagorio.—In Chicago, Illinois, on Monday, January 18th, Dr. Giovanni B. Bruno and Miss Marie Lagorio, daughter of Dr. Antonio Lagorio.

Curtis—Blair.—In Honolulu, on Monday, November 16th, Dr. Ralph Gardner Curtis and Miss Jane Mae Blair.

Ehrenfest—Schwab.—In St. Louis, Missouri, on Thursday, January 14th, Dr. Hugo Ehrenfest and Miss Sophie Schwab.

Floy—Clark.—In New York, N. Y., on Monday, January 25th, Dr. Frederick H. Floy and Mrs. Susie Skillman Clark.

Hodges—Kline.—In Montgomery, Pennsylvania, on Thursday, January 21st, Dr. Wyllys R. Hodges and Miss Mary E. Kline.

Hynes—Treanor.—In Boston, Massachusetts, on Wednesday, January 27th, Dr. Edward Gibson Hynes and Miss Florence Marie Treanor.

Schofield—Wilson.—In Brooklyn, N. Y., on Wednesday, January 27th, Dr. Charles Edward Schofield and Miss Bessie Davis Wilson.

Stryker—Loud.—In Brooklyn, N. Y., on Monday, January 25th, Dr. Edgar de Mott Stryker and Miss Anna Marcia Loud.

Died.

Bennet.—In Brooklyn, N. Y., on Monday, January 25th, Dr. George H. R. Bennet, in the sixty-seventh year of his age.

Benham.—In Cartersville, Georgia, on Thursday, January 21st, Dr. William I. Benham, in the eighty-second year of his age.

Brady.—In Deckerville, Michigan, on Saturday, January 23rd, Dr. John J. Brady, in the thirty-eighth year of his age.

Crowe.—In New York, N. Y., on Sunday, January 24th, Dr. Selden Whittaker Crowe, in the sixty-eighth year of his age.

Dysart.—In Paris, Missouri, on Sunday, January 17th, Dr. B. G. Dysart, in the seventy-first year of his age.

Hendrixson.—In Columbus, Ohio, on Monday, January 18th, Dr. Hugh Hendrixson, in the seventy-first year of his age.

Lambert.—In Windsor, Ontario, on Friday, January 22nd, Dr. Robert Lambert, in the seventy-seventh year of his age.

Lund.—In Marinette, Wisconsin, on Friday, January 22nd, Dr. N. J. Lund.

Merryman.—In Atlantic City, New Jersey, on Monday, January 25th, Dr. Moses Merryman.

Mott.—In Boston, Massachusetts, on Sunday, January 24th, Dr. J. Varnum Mott, in the fifty-fourth year of his age.

Nash.—In New York, N. Y., on Sunday, January 24th, Dr. Gaius A. Nash, in the seventy-ninth year of his age.

Neville.—In Philadelphia, Pennsylvania, on Friday, January 22nd, Dr. William Henry Harrison Neville, in the sixty-third year of his age.

Plummer.—In Harrodsburg, Kentucky, on Wednesday, January 20th, Dr. Henry Plummer.

Scally.—In Baltimore, Maryland, on Thursday, January 21st, Dr. John H. Scally, in the thirty-fourth year of his age.

Starr.—In Philadelphia, Pennsylvania, on Friday, January 22nd, Dr. Samuel Starr, in the sixty-fourth year of his age.

Staunton.—In Charleston, West Virginia, on Thursday, January 21st, Dr. Joseph Marshall Staunton, in the eighty-fifth year of his age.

Weed.—In Mount Vernon, N. Y., on Tuesday, January 26th, Dr. Robert M. Weed, in the fiftieth year of his age.

Wilson.—In Philadelphia, Pennsylvania, on Tuesday, January 19th, Dr. Needham M. Wilson, in the sixty-eighth year of his age.

New York Medical Journal
AND
Philadelphia Medical Journal.
CONSOLIDATED.

A Weekly Review of Medicine

VOL. LXXIX, NO. 7. SATURDAY, FEBRUARY 13, 1904 WHOLE NO. 1315.

Original Communications.

THE CONSERVATIVE TREATMENT OF SOME SURGICAL DISEASES OF THE RENAL PELVIS AND THE URETER BY THE URETER-CYSTOSCOPE.*

BY F. KREISSL, M. D.,

CHICAGO, ILL.,

PROFESSOR OF GENITOURINARY SURGERY, CHICAGO CLINICAL SCHOOL; ATTENDING SURGEON, COOK COUNTY HOSPITAL.

For several years I have employed the ureter-cathetercystoscope for topical applications in the upper urinary tract, in such diseases as ordinarily are considered surgical ones, when a medical and dietetic treatment has proved ineffective. From my observations I have come to the conclusion that the efficiency of the cystoscope as a therapeutic means has been grossly exaggerated, although it cannot be denied that, when judiciously employed, it has its useful, but very limited, sphere.

It is, before all, evident that frequent catheterizing of the ureters at short intervals is not the insignificant act that it is commonly considered by a few enthusiasts. The passage of a foreign body over any part of the urinary tract is a source of trauma which will be followed by more or less reaction, depending on the calibre of the appliance, the condition of the tract, and the degree of delicacy used in the manipulations in the latter. In most cases where pathological lesions exist, the passage of an instrument intensifies a previously existing ureteritis or pyelitis, either reflexly, or by causing an acute congestion. The reaction following the catheterizing or sounding of a healthy ureter is like that following a similar operation on the urethra, only more accentuated in the former; and, therefore, greater care and good judgment are required in its employment.

The method has also many limitations caused by various abnormal conditions along the route the catheter or bougie has to traverse, among which I enumerate: Greatly reduced capacity of the bladder, stenosis of the ureteral orifice, kink in the ureter, an appreciable distortion or twist of the ureter, and plugging of the catheter by pus or blood clots, which is not less disturbing with Albarran's large-sized catheters, than with Casper's and Nitze's small-calibred instruments.

The conditions which might call for the employment of this method are: Hydronephrosis, pyelitis, pyonephrosis, ureteritis, pyelonephritis, renal retention and colic obstructions of the ureteral lumen by calculi, clots of blood or pus, strictures or displacements of the ureter, with their results, encroachment on the ureter by various pathological conditions from without.

In several of these conditions temporary relief can be obtained by the endoureteral intervention, and in a very small fraction permanent results will be observed. This is not surprising at all, when we review the pathology of the upper urinary tract and the nature of the various lesions in which surgical interventions become imperative. The majority of the cases of pyelitis are the result of an infection of a hæmatogenous or metastatic character. In most of them we actually find pyelonephritis, and the pyelitis is usually secondary. The infective process commences in the kidney substance, whence it spreads into the renal pelvis, and thence into the ureter, eventually causing a descending pyelonephritis.

The ascending type of renal infection is represented by a much smaller fraction, and the majority of cases in this group, when coming under our observation, do not permit of any local intervention, such as frequent topical applications to the ureter and renal pelvis; nor can they be benefited by such procedures. I have in mind the ascending infection originally caused by obstructions, inflammations, tuberculosis, tumors and calculi in the lower urinary passages; in most of them the lesions and textural changes in the tissues of the upper urinary tract are too far advanced to allow a fair prospect of repair by topical applications; most of them are associated with, and complicated by, renal and cardiac lesions peculiar to advanced years of life, where any trauma to the uropoietic system is followed by grave reflex symptoms. In a fair proportion of cases of this group we shall see the secondary lesions disappear without further topical treatment, after having successfully removed the primary cause.

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* Prepared for the second annual meeting of the American Urological Association, New Orleans, May 8, 1903.

In but a limited number of pathological conditions will the uretercatheter and the flexible probe be successfully employed for temporary or permanent relief. Good results will occasionally be observed in uncomplicated chronic ascending pyelitis and ureteritis, if there are no permanent textural changes in the walls of either of them. My experience has taught me not to expect much satisfaction when the capacity of the renal pelvis, upon rapid filling, is increased to 50 c. c. and over. A mild but stubborn chronic pyelitis, with no history of an ascending infection and no evidence of a still active hæmatogenous or metastatic primary cause, will eventually yield to pelvirenal lavage, and a topical antiseptic and astringent medication. But, in order to be effective, these applications will have to be employed daily or every other day; and since such repeated manipulations are not without consequence, especially in the male urethra, I have adopted the rule to leave the uretercatheter in the ureter for at least a week at a time, rather than cause the patient frequent and considerable pain and enhance the chance of producing traumatic local lesions or very unpleasant reflex symptoms. That the presence of a properly placed catheter in the upper urinary ways is absolutely harmless, even if maintained for several weeks, has been demonstrated by Casper, Albarran, and myself.

Hydronephrosis caused by an obstruction encroaching upon the calibre of the ureteral lumen can be relieved by the uretercatheter, if the latter can be carried beyond the offending impediment. Upon its nature will depend the permanency of the relief, which I must say is the exception.

Renal retention, due to kinking or curvature of the ureter or to pressure of a prolapsed kidney upon the ureter, cannot be permanently benefited without surgical interference, yet there might be urgent reasons, such as pregnancy or diseases of the circulatory apparatus, contraindicating the same, and in such cases catheterization will prove as a useful palliative measure. For the same reasons as expressed before, I would here also recommend the leaving of the catheter *in situ* for several days or weeks; particularly because the degree of pressure from without or the nature of the kink of the ureter frequently requires more force in passing the tip of the catheter over the obstruction than I should consider harmless for the integrity of the ureteral wall.

The expectations entertained several years ago for the successful local treatment of strictures of the ureter by dilatation have not materialized, and from my own observations I would suggest the acceptance of radiant reports on this subject with more than a grain of salt. After passing a urethral stricture of the smallest calibre with a filiform bougie, in a case of complete retention, you will often observe immediate spontaneous urination, which sometimes prevails for weeks and months, until by some exciting cause, such as overindulgence, exposure, abnormal constitution of the urine, etc., the obstruction again becomes complete. All this occurs, likewise, in a ureteral stricture; with the difference that a proportion of strictures of the urethra are still amenable to dilatation on coming under observation, while this has never been the case with the few ureteral coarctations on record. It is only necessary to look at the post mortem findings of such strictures to understand why radical relief can only be expected by ureterotomy or resection and ureteroplastic operation, while catheterizing *à demeure* might at best assist in emptying an overdistended renal pelvis and postpone the radical step until a more favorable time. Very brilliant results can be obtained by lavage of the renal pelvis when gravel has accumulated therein. I admit that internal medication has always successfully dealt with this condition, but it takes quite a while in this way to break up the mass of agglutinated crystals and carry away the fragments, while the direct introduction of a solvent through a catheter and profuse flushing of the renal pelvis and the calices accomplishes the result more rapidly and thoroughly. The precaution is necessary not to introduce in the renal pelvis more than 25 or 30 c. c. of fluid at a time; at any rate, not more than the patient can bear without experiencing distress in the kidney region.

A very small proportion of calculi impacted in the ureter is amenable to a conservative procedure. That soft concretions in the ureter can be broken up by sounds has been demonstrated in a case reported by Casper. It seems also possible to facilitate the passing of a small ureteral calculus under favorable conditions, as reported in the cases of Albarran, Rottsher, Kelly, and the author of this paper, but the majority of these cases will demand surgical intervention. However, if, in the presence of symptoms of ureteral calculus and obstruction, a skiagraph fails to demonstrate a large stone, sounding, followed by lubricating injections, ought to be tried before an operation is decided on. Inasmuch as in all these cases opiates and diuretics had been used previous to and following the cystoscopic manipulations, I am not absolutely convinced that the favorable termination was altogether due to the latter, but they might have been at least of material assistance.

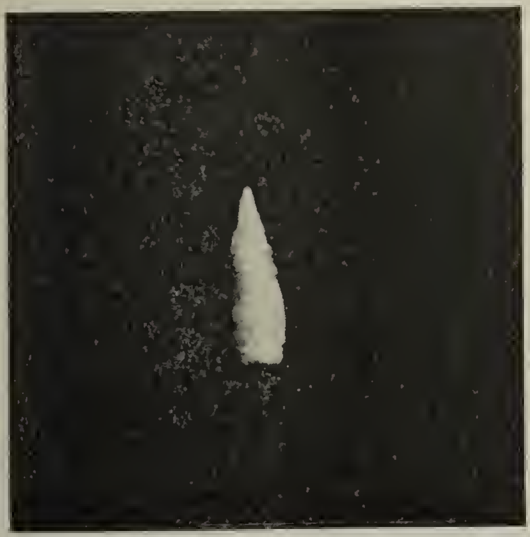

FIG. 1.—Calculus impacted at the second narrowing of the left ureter (actual size).

Figure 1 represents the actual size of a calculus impacted at the second narrowing of the left ureter. The patient was seen by me during a severe renal colic, which was immediately relieved by catheterizing of the ureter. The stone was passed spontaneously a few days afterwards.

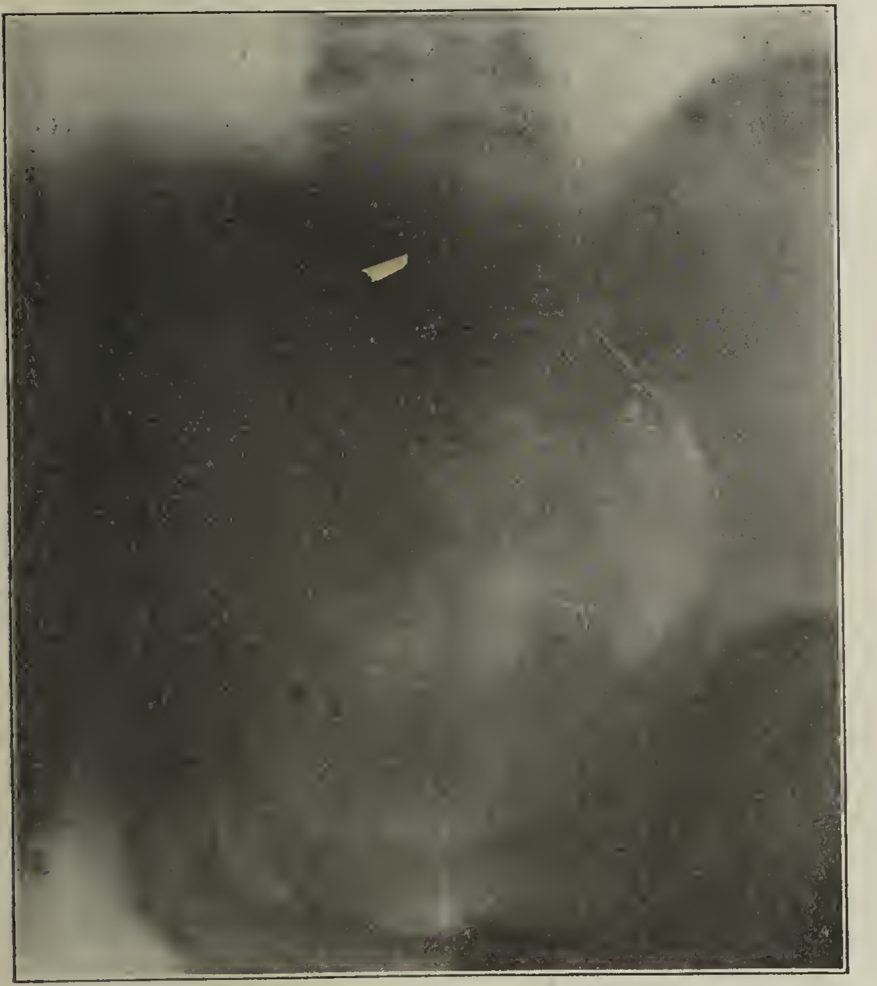

FIG. 2.—Skiagraph showing calculi in both ureters.

Figure 2 is a skiagraph showing calculi in both ureters, near the vesical end. In spite of repeated catheterizing and lubricating injections, the stones—much smaller than the one in Fig. 1—remained *in situ*, as a second skiagraph, taken several weeks afterwards, demonstrated. They caused more or less renal and ureteral colic for nearly two months, until they were finally expelled.

By breaking up with the catheter pus or blood clots plugging the ureter, a renal colic is occasionally relieved, but we must bear in mind that, in the majority of these cases, the original lesion producing these symptoms calls for surgical intervention. Yet the immediate benefit afforded by the catheterization will be appreciated by both the patient and the surgeon, the latter gaining time to watch the case and to decide upon further steps, the former being rapidly relieved from pain, and oftentimes saved from the danger of an impending or existing reflex anuria.

The method of treating certain forms of renal and ureteral fistula by draining the urine directly from the renal pelvis through a uretercatheter, in this way obviating tedious and oftentimes dangerous secondary operations, is neither generally known nor much used. If the necessary precautions of aseptic instrumentation are strictly observed, it is absolutely harmless to leave a catheter *à demeure* in the upper urinary ways for several weeks.

From my experience, I am also convinced that fistula following the various operations on the ureter and renal pelvis will be rarely observed if a catheter is left in the renal pelvis and ureter for the first three days after the operation.

1006 STEWART BUILDING.

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Rochester State Hospital Report. — The eleventh annual report of the State Charities Aid Association, just issued, contains an interesting report from the committee on the Rochester State Hospital, composed of Dr. Robert G. Cook, of 242 Alexander Street; Mrs. A. H. Harris, of 28 North Goodman Street, and Professor Samuel A. Lattimore, of University of Rochester. The committee report reads in part as follows:

"During the last year members of this board have visited the Rochester State Hospital seven times, and in September one member spent several hours at the new camp on the shore of Lake Ontario. The new buildings have not yet afforded any relief from the overcrowding which has been noted in our previous reports, so that the natural increase of the insane in this district has made it more noticeable than before. On September 30, 1903, the population of the hospital was 671, an increase of forty-five over that of the previous year, while the estimated capacity of the hospital remains at 500. During the summer, however, the camp at the lake has relieved the hospital of thirty patients at a time."

PERSONAL EXPERIENCES WITH THE ADMINISTRATION OF NITROUS OXIDE AND OXYGEN FOR PROLONGED ANÆSTHESIA.

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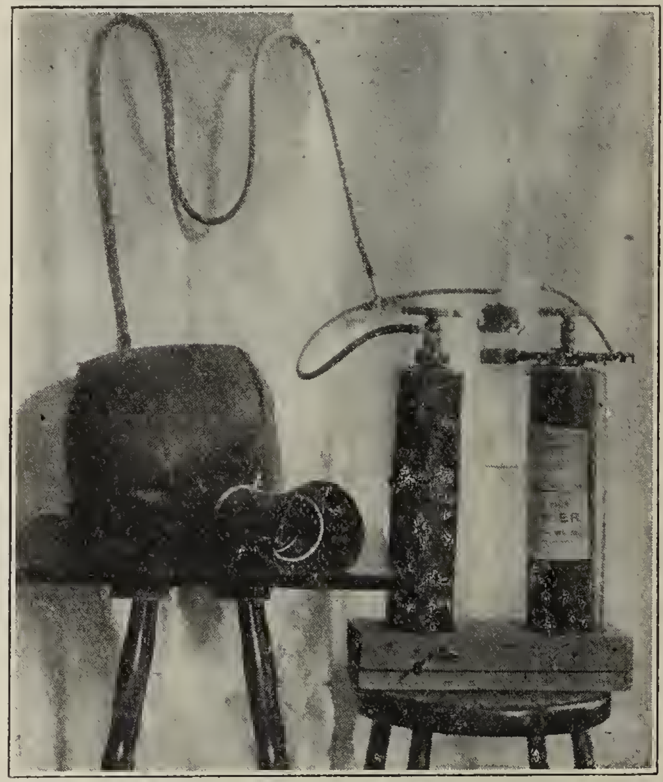
Although the writer has used during the past year, as anæsthetics, chloroform, ether, laughing gas and ether, and ethyl chloride, interest has been felt mainly in the occasional administration of laughing gas and oxygen in selected cases for various periods of time, ranging from fifteen minutes to one hour. It will be seen that, in the majority of the cases cited below, the two gases alone sufficed, but that in many instances it was necessary or expedient to add a small quantity of ether for a short period of time. The writer believes that this method of continuing anæsthesia has a real but limited place in surgery. Interest in anæsthetics has been maintained to a large degree of late and articles advocating new agents and new sequences in giving the older anæsthetics continue to appear. This is due to the fact that the ideal agent has not yet been found. Deaths occur from chloroform administration about once in 2,000 cases, from ether about once in 10,000, and from nitrous oxide about once in 200,000 cases(1). Safety is the first and most important factor, and no agent can compete as yet with laughing gas in this matter. Certainly, ethyl chloride cannot be considered ideal for prolonged use, although as a preliminary to ether it is of considerable value. Girard (2) noted the following in a large series of cases where ethyl chloride narcosis was prolonged. Four patients could not be anæsthetized at all. In nineteen cases it took from five to twenty-eight minutes to obtain unconsciousness. Vomiting occurred frequently and the pulse regularly increased in rapidity, sometimes to one hundred and sixty beats to the minute. In seven cases in which the urine was examined after inhalation, all specimens showed albumin, which did not always disappear in twenty-four hours. In contrast to this in the following cases, we find narcosis possible in all but alcoholic subjects in from three to five minutes, and a pulse range usually between ninety and one hundred; complete recovery with practically no aftereffects in five to fifteen minutes. In one case (Case IX. See table) in which chloroform had previously caused hæmaturia for three days following the narcosis, a very faint trace of albumin only was seen on the afternoon of the second day following the use of nitrous oxide, oxygen, and ether.

The writer has employed for the most part the Goldan apparatus for giving this combination, because it is light, easy to handle, and quickly cleaned. The Bennett apparatus has an expiratory valve, however, which absolutely prevents to-and-fro breathing into the rubber bag, thus eliminating all carbon dioxide. With the Goldan instrument there is considerable rebreathing of the same mixture of gases, but if the patient is occasionally allowed a breath of pure air the narcosis is as satisfactory. If desired, an inexpensive expiratory valve may be inserted in the rubber mask of the Goldan apparatus. As may be seen in the illustration, the rubber tubing is attached to a T-shaped piece of metal tubing, and from this T, additional tubing runs on the one side to the nitrous oxide cylinder and on the other side to the oxygen cylinder, an arrangement which was suggested by Goldan. By turning the valves at the cylinders the gases escape and become mixed in the rubber bag, and it is only by carefully regulating the quantity of each gas that the anæsthesia may be continued. Too much oxygen allows the patient to awake partially and to struggle; too much nitrous oxide allows him to become cyanotic and rigid. That this is the most difficult method of anæsthesia and the one above all others requiring great attention, is quickly evident to him who uses it for the first time. But the hearty thanks of the patient who recovers consciousness in a few minutes and feels well except for a dull pain in the region operated upon, amply repays the effort of the anæsthetizer.



Expiratory valve attached to rubber mask of Goldan apparatus.

The preparation for giving this combination means much more than in giving ether or chloroform. In addition one must first be absolutely sure that the apparatus is in good condition; that the valves can be freely turned; that there is no leakage; and that an abundance of both gases is at hand. If the valves of the cylinders are of the kind that allow the gas to escape with a sudden strong puff, as many

CASES IN WHICH NITROUS OXIDE AND OXYGEN WERE EMPLOYED.

	Condition or Disease.	Operation and Operator.	Time of Operation.	Patient.	Remarks.
I........	Necrosis of tibia.	Incision, scraping and drainage. [HARVEY GAYLORD.]	30 minutes.	Male, aged 35 years.	January 20, 1903. Anæsthesia satisfactory. Pulse 100. One minute after inhaler was removed patient began to talk, and a few minutes later felt perfectly well and free from pain. Thirty-six gallons of nitrous oxide used.
II.......	Cold abscess of hip.	Incision and curetting. [HARVEY GAYLORD.]	25 minutes.	Male, aged 34 years (an imbecile).	January 20th. Pulse between 90 and 100. Narcosis followed by hysterical crying for about 30 minutes. No other sequelæ. Twenty gallons of nitrous oxide used.
III......	Recurrent carcinoma of breast.	Slow injection into vein of 460 c. c. of formalin solution, 1-5000. [HARVEY GAYLORD.]	One hour.	Female, aged 67 years.	February 12th. Previous operation under ether two years previously. Moderate arteriosclerosis and some dyspnœa present. Pulse slowed gradually from 120 to 100, and tension increased. Recovery in five minutes. Nervousness but no other sequelæ. When asked if she preferred gas to ether she said, "Mercy, don't talk to me about ether, this is so much better." This case is noteworthy because of her poor physical condition, her age, the presence of arteriosclerosis, the injection of the formalin solution, the use of nitrous oxide for one hour, and yet a rapid recovery without after effects. Death followed two months later from cachexia.
IV......	Varicose veins of leg.	Excision of internal saphenous vein. [HARVEY GAYLORD.]	50 minutes.	Male, aged 56 years.	February 12th. Pulse 80 to 90. Sweating excessive. No after effects. Thirty-four gallons of gas used.
V......	Simple fractures of each forearm.	Examination and dressing in plaster-of-Paris. [ROSWELL PARK]	30 minutes.	Male, aged 20 years. Very large and heavy.	February 20th. This man slept soundly after removing the inhaler, and awoke in a natural manner when shaken.
VI.......	Vulvovaginal abscess.	Incision and drainage. [ROSWELL PARK]	10 minutes.	Female, aged 25 years.	February 27th. No after effects.
VII......	Necrosis of tibia	Incision, scrap'g, and drainage. [ROSWELL PARK]	20 minutes.	Male, aged 10 years.	February 27th. No after effects.
VIII.....	Contraction of thigh adductors, follow'g Little's disease.	Tenotomy. [BERNARD BARTOW.]	One hour.	Female, aged 9 years.	February 21st. Before operation the pulse was 120, the circulation poor, the extremities blue and cold. The narcosis was very satisfactory.
IX and X.	Sarcoma of capsule of left knee joint.	(*a*) Removal of tumor. [HARVEY GAYLORD.]	45 minutes.	Male, aged 12 years.	March 20th. Copious sweating throughout, Consciousness regained in two minutes. He said, "Halloa! have you started yet? Gee, but that laughing gas is great."
		(*b*) Amputation at the middle of the thigh. [HARVEY GAYLORD.]	1 hour 10 min.	Same patient.	March 22nd. Amputation was necessary, because of invasion of the joint by the new growth. The gas was exhausted after one hour, and ether was substituted, half an ounce being given. No after effects except a trace of albumin on the afternoon of the second day following. A previous chloroform anæsthesia had caused hæmaturia for three days.

do, it is wise to have the rubber tubing of the cylinder of such a size that it readily slips off its attachment under such sudden pressure and so can be replaced. If this precaution is not taken it may happen that the rubber tubing will burst or that some of the water from the water bottle will be blown through the tubing to the inhaling bag.

It is important to have an assistant or nurse at hand, because in an operation of more than fifteen minutes duration, towels wet with hot water must be frequently wrapped about the valve and upper end of the cylinder, to prevent freezing of the gas at the tap. Nothing is more discomforting than to have the cylinder and tubing become covered with frost and the gas to remain locked in the cylinders while the valve is wide open. The patient begins to struggle and every one condemns the anæsthetizer, because there are laws of physics regarding the escape of gases which are under heavy pressure.

A supply of ether must be within reach, so that two or three drachms may instantly be added when necessary. That is to say, when relaxation is not quite sufficient or when the blood is too dark to allow the operator to dissect intelligently. The ether is administered on the gauze in the cylindrical portion between the mouth-piece and the rubber bag, just as in giving the combination of gas and ether.

A hypodermic of morphine before a long operation aids in relaxing the patient. It is not at all an essential and it is not to this that patients owe their freedom from after effects. In about half the cases detailed below morphine was given.

If the narcosis is to be started in one room and the patient is then to be transferred to the operating room, the cylinders have to be moved also. This may be readily accomplished by having a small stand made to hold the cylinders upright. This stand can be placed on a stool at the side of the anæsthetizer.

The inhaling bag is moderately distended with

CASES IN WHICH NITROUS OXIDE, OXYGEN AND ETHER WERE EMPLOYED.

	Condition or Disease.	Operation and Operator.	Time of Operation.	Patient.	Remarks.
XI......	Rectovesical fistula, following prostatectomy.	Excision and suturing. [ROSWELL PARK]	20 minutes.	Male, aged 71 years.	February 19th. Arteriosclerosis moderate and pulse intermittent. Partly owing to the lithotomy position, cyanosis increased and the rectal tissues could not be clearly distinguished. Ether was substituted. No after effects.
XII......	Chronic endometritis.	Curetting. [ROSWELL PARK]	25 minutes.	Female, aged 35 years. Large and heavy.	February 28th. Five drachms of ether added to increase relaxation. In five minutes she said, "Well, doctor, are you ready to begin?" She had no idea that the operation had been performed.
XIII.....	Contracted hamstring tendons.	Stretching and plaster-of-Paris dressing. [ROSWELL PARK]	25 minutes.	Male, aged 18 years.	March 4th. Half an ounce of ether used during the first few minutes. Then the gases alone. Recovery immediate.
XIV.....	Carcinoma of right breast.	Excis'n of breast and axillary contents. [ROSWELL PARK]	50 minutes.	Female, aged 50 years.	March 10th. Ether given during dissection along the axillary vein. After effects in proportion to the ether inhaled.
XV......	Inguinal hernia.	Bassini operat'n. [ROSWELL PARK]	30 minutes.	Male, aged 19 years.	March 10th. Ether given during dissection only. After effects as usual.
XVI.....	Gallstones in cystic duct.	Excision of gallbladder and duct. [ROSWELL PARK]	One hour and a quarter.	Male, aged 60 years. Very large frame.	April 12th. This patient had had an attack of heart trouble some months before, and his general condition had been very bad, so that the operation had been repeatedly postponed. Four ounces of ether given during abdominal dissection. No after effects. Recovery rapid.
XVII....	Recurrent appendicitis.	Removal of appendix and small cyst of ovary. [ROSWELL PARK]	25 minutes.	Female, aged 45 years.	April 28th. No after effects except nervousness. Five drachms of ether also used.
XVIII...	Cellulitis of arm.	Incision and dr'nage. [JOHN PARMENTER.]	12 minutes.	Male, aged about 45 years.	July 2nd. Two drachms of ether also given. Recovery in one minute, with almost no after effects.

nitrous oxide and then a small quantity of oxygen is admitted. The mask is applied to the face of the patient and the valve opened. The bag promptly begins to collapse as the patient breathes. The stopcock of the oxygen cylinder is now turned far enough to allow a steady, but rather slow, bubbling of that gas through the water. From this time on the anæsthetizer keeps one hand on the stopcock of the nitrous oxide cylinder admitting the gas to the bag by occasional short puffs, while the other hand steadies the mask and head of the patient. The attention is directed to the condition of the patient and the regulation of the flow of gases. Very soon the percentage of oxygen must be increased until the bubbling through the water is very rapid. In male patients it may be necessary during the first ten minutes to pour a little ether in the inhaler if there is struggling. Some cases become cyanotic very easily and then it is best to turn the valve of the inhaling bag, remove the apparatus entirely, allow the patient two breaths of pure air, and then to reapply the inhaler and open the valve. The warning given by Hewitt, that no air should be admitted at any time, applies more particularly to his method and to his apparatus which contains an expiratory valve. The typical appearance of the patient, when fully anæsthetized, is quite similar to that of a case of apoplexy. The breathing is stertorous and the expiration is forcible. A hand placed on the abdomen can feel a well marked contraction of the abdominal muscles during each expiratory effort. The face and conjunctivæ are congested. The pupils are contracted. The skin and lips are cyanotic to a varying degree. The pulse is tense and usually varies from ninety to one hundred and ten, slowing its rate when more nitrous oxide is inhaled. Sweating is always present and is sometimes very copious. As is the case with other anæsthetics, a smaller quantity will keep the patient unconscious after the first fifteen minutes. More and more oxygen is to be admitted until the proportion of oxygen is increased to ten or fifteen per cent. At any time, removal of the inhaler allows the patient, after a few breaths of air, to lose his apoplectic appearance and to relax quickly into a condition resembling normal sleep. In fact, the patient in Case V did sleep soundly for twenty minutes. Ordinarily the patient will move in about five minutes, open his eyes and begin to talk intelligently. They have not the slightest recollection of what has passed and almost invariably feel well even when four or six drachms of ether have also been inhaled.

ADVANTAGES.

1. Safety.—Undoubtedly nitrous oxide is the safest anæsthetic known, with its record of two or three deaths in 500,000 cases. This record is based upon short administrations for the most part, but there is no reason why its prolonged use should be more dangerous. It is not so direct a poison as chloroform, and the asphyxia it causes gives ample warning and opportunity to the surgeon to provide oxygen. Physicians and some surgeons become easily frightened when it is pushed to the extreme and the patient is black and rigid, with dilated pupils. This never happens when the above combination is used. A moderate blueness is seen and a contracted pupil. The use of gas and ether was at first condemned in Buffalo by a few, because the transition from gas to ether was improperly managed by inexperienced internes. The same criticism would inevitably follow the advent of gas and oxygen.

2. *Absence of Shock.*—The absence of shock in this form of anæsthesia is of great importance in certain cases, a point to which Goldan alludes.

3. *Absence of After Effects.*—Patients who have previously been given ether, or even chloroform, dread a second experience, and reference to Cases III, IX, and XII, serves to emphasize the pleasure they experience. People of means are very willing to pay an extra fee for something which is very real to them.

4. *Women and Children are by far the Most Suitable Cases.*—It is usually necessary to add a little ether for male adults and it is absolutely impossible to render some alcoholics unconscious with nitrous oxide alone.

DISADVANTAGES.

1. *Difficulty of Administration.*—The expensive apparatus, the cost of materials, the weight of the outfit, and the troublesomeness of administration will mean but one thing—that the use of this method will be confined to cities of some size, where one or two men are ready to do the work for the wealthier class of patients.

2. *Contraindications.*—Lesions of the vascular apparatus, especially arteriosclerosis, are the main contraindications to the use of nitrous oxide, because of the tense pulse which accompanies its use. Hare (3) has reported two cases of apoplexy due to nitrous oxide where arteriosclerosis was present. The writer has, however, anæsthetized patients between the ages of sixty and seventy-one. For nose and throat patients, apparatus has been devised with a nasal tube to allow the operator to work uninterruptedly. This is hardly necessary, because the gas and ether combination is very satisfactory for these cases. Operations on the head allow the anæsthetizer too little room to make nitrous oxide narcosis available. The rigidity and cyanosis, often seen in adults, compel the temporary change to ether. For example, in abdominal operations such as those in Cases XIV, XV, and XVI, the gases may be employed from the beginning until the surgeon has completed his incision. Then ether can be given with the same apparatus until the wound is to be sutured. From that time gas is again available. In this way a minimum of ether is inhaled and a minimum of after effects is seen.

The following extracts from Goldan and Hewitt (4) are of interest:

> I might say that relaxation in abdominal cases can often be obtained, providing a small device which I have never before seen mentioned, is employed; that is, flex the legs and thighs fairly well. This will effectually produce relaxation of the abdominal wall in many cases, which would be absolutely tense otherwise, and another anæsthetic would become necessary. In those abdominal cases where gas will not sufficiently relax, I would recommend a method found useful where it was undesirable to subject the patient to too long etherization: Induce and maintain anæsthesia, with gas alone, or combined with oxygen during the preparation of the patient on the table. Continue the gas to incision of the peritonæum; then turn on ether sufficient to obtain relaxation. After the peritonæum is sutured, discontinue ether and employ gas to the end of the operation. After effects produced by nitrous oxide are rare. Consciousness is usually, though not always, immediately regained. Headache, sometimes intense, lasts for hours. Nausea and vomiting are sometimes intense. Hysteric attacks occasionally occur. Glycosuria was observed by me in three cases following the use of nitrous oxide alone. While, for various reasons, nitrous oxide is not generally applicable, yet in cases where for any reason it is undesirable to give ether or chloroform, or where the anæsthetic factor combined with the operation would be more, probably, than the patient could survive, it is particularly indicated and satisfactory, and very rarely fails.

Hewitt says:

> The anæsthetist must regulate the admission of oxygen in accordance with the type of his patient, and with the symptoms that the patient displays. If very little or no oxygen be given, the ordinary phenomena of nitrous oxide narcosis will present themselves, viz.: blueness, lividity or duskiness of the features, epileptiform muscular twitchings of the trunk, extremities, and face, and obstructive stertor. If too much oxygen be admitted, there will be no alteration in color, no epileptiform convulsive movements, and no stertor, but violent mental and muscular excitement (laughing, shouting, kicking, stamping and struggling) will attend the administration. There are thus two extremes—two ends of the scale—and each extreme must be avoided. The anasthetist has, in fact, to steer a middle course, and to keep a sharp look-out. A little practice will enable him to avoid the Scylla of asphyxia on the one hand, and Charybdis of excitement on the other. He will find, after a time, that he is able to detect even slight deviations from the proper course, almost before such deviations have taken place. Generally speaking, a gradual and progressive increase in the percentage of oxygen is advisable. The best results will be obtained by starting the inhalation, as already mentioned, with from two to four per cent. of oxygen, and then progressively increasing this proportion to eight or nine per cent. We should endeavor to bring about an anæsthesia characterized by softly snoring breathing, a good pulse, a color as near the

normal as possible, an insensitive ocular conjunctiva, relaxed eyelids, a fixed condition of the globes, and the absence of muscular rigidity in the extremities.

The average quantity of materials used by the writer is below Goldan's figures. Sixty gallons of nitrous oxide usually suffice for one hour. In hospital cases it is more convenient to use the large tanks of oxygen in which the gas is under light pressure. For private cases the small cylinders of a red color, containing only forty gallons of oxygen, are easier to manage. In general, the cost of materials for one narcosis of one hour's time should not exceed $3.00.

CONCLUSIONS.

The use of nitrous oxide and oxygen for prolonged anæsthesia is satisfactory, but limited. The wealthy class alone can demand it, because of the cost of materials and the larger fee for the engagement of an experienced anæsthetist. The bulky and expensive apparatus, and the difficult method of administration are not inviting, and the occasional lack of smoothness in the narcosis discomfits the surgeon. Hence the employment of this method will be reserved for anæsthetists in the larger cities, in the case of operations upon the extremities or trunk where the condition of the patient demands an anæsthesia free from danger and practically free from after-effects. The deservedly increasing popularity of the gas and ether combination predicts a similar popularity of the use of gas, oxygen and ether, when the gases are used until the incision is made and after the suturing is begun, and the ether provides complete relaxation and freedom from cyanosis during the operation proper. The contraindications are chronic alcoholism and well-marked arteriosclerosis or cardiac lesions.

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3. Hare. *Bristol Med. Chir. Jour.,* December, 1901. Gould's *Year Book.* 1903.

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The Cincinnati, O., Board of Health has appointed sixteen examiners at sixty dollars a month to have charge of the special examination work of the department. The first nine of the following list are also district physicians commanding an additional salary of thirty-five dollars a month: Dr. W. T. Lindsay, Dr. F. J. Tischbein, Dr. Ernest Jacobs, Dr. W. W. Bailey, Dr. Morris May, Dr. R. W. C. Francis, Dr. E. F. Nippert, Dr. L. C. Schrickel, Dr. A. B. Devers, Dr. W. R. Brown, Dr. C. S. Evans, Dr. Charles W. Cullem, Dr. Frank Fee, Dr. William Muhlberg, Dr. Clifton L. Donnell, and Dr. Harry H. Hines.

ORIGINAL RESEARCH REGARDING HUMAN PERSPIRATION, ETC.

By DR. JULIUS H. HOELSCHER,

CHICAGO.

ATTENDING PHYSICIAN ALEXIAN BROTHERS AND GERMAN HOSPITALS; PROFESSOR OF INTERNAL MEDICINE, CHICAGO CLINICAL SCHOOL; PROFESSOR OF CLINICAL MEDICINE, COLLEGE OF PHYSICIANS AND SURGEONS; CONSULTING PHYSICIAN, LAKEVIEW HOSPITAL, ETC.

This paper deals with analyses of human sweat in normal and abnormal subjects. I submit the following arrangement: twenty-five passive, normal sweats; twenty-two passive, normal sodium salicylate sweats; twenty-five passive, normal pilocarpine sweats; ten passive, normal acetanilid sweats; seven passive, normal quinine sweats; and miscellaneous sweats.

The chemical analysis is limited to the determination of reaction, specific gravity, total solids, organic and inorganic, urea and nitrogen; also uric acid, sugar, bile, etc., to a few specimens.

The incentive for undertaking this work is based on the fact that we are constantly using the skin for eliminative purposes in many abnormal conditons, such as uræmia, rheumatism, diabetes, neurasthenia, autointoxication, septicæmia, etc.

The following method was adopted to procure normal sweat, without loss by evaporation, and as free as possible from skin impurities. The skin was thoroughly cleansed with alcohol and ether; soap not being used for apparent reasons. The next step consisted in enveloping the body with sterilized gauze; over this an oilcloth was secured, completely covering the body, leaving only the head exposed; thus prepared, the subject was exposed to dry heat of a temperature not exceeding 120° F., for from one to two hours, or until it became apparent that the heat was becoming unbearable. We noticed a great difference between the numerous individuals, some responding freely at once, others only after the third exposure; in many instances, also, the thin individual bore more exposure than the robust. When the point of toleration had been reached, the soaked gauze was quickly removed and submitted to pressure; in this way we obtained from three ounces to thirty-two ounces of sweat.

The individuals used for sweating were all of a normal type, on full diet, and while they were, in some instances, convalescents from mild, acute, local lesions, they were not classed as normal until completely well.

The following table gives the highest and lowest percentage of ingredients of each series of sweats:

		Solids. Per cent.	Inorganic solids. Per cent.	Organic solids. Per cent.	Nitrogen. Per cent.	Nitrogen urea. Per cent.	Urea. Per cent.
Normal	Highest	1.5168	0.8088	0.7080	0.08400	0.04320	0.09240
	Lowest	0.4832	0.2176	0.2656	0.04312	0.03112	0.06160
Sodium salicylate	Highest	1.6826	0.8426	0.8400	0.08306	0.03950	0.08463
	Lowest	0.4533	0.2733	0.1800	0.03080	0.02340	0.05020
Pilocarpine	Highest	1.9333	0.3226	1.6107	0.08500	0.06560	0.14000
	Lowest	0.5106	0.2626	0.2480	0.05130	0.02760	0.06860
Quinine	Highest	1.1133	0.6000	0.5133	0.06000	0.03560	0.07620
	Lowest	0.4533	0.2400	0.2133	0.03730	0.02000	0.04310
Acetanilid	Highest	1.1000	0.5333	0.5667	0.06440	0.03200	0.06890
	Lowest	0.5706	0.3200	0.2506	0.04200	0.02950	0.06320
Nephritis	Highest	1.3133	0.3000	1.0133	0.28760	0.24080	0.50660
	Lowest	0.9260	0.5130	0.4130	0.05410	0.04150	0.08800
Rheumatism	Highest	1.7733	0.7400	1.0333	1.66100	0.10370	0.22000
	Lowest	0.5866	0.3000	0.2866	0.04200	0.03050	0.06530

Briefly, first twenty-two normal, sodium salicylate, passive sweats resulted as follows:

1. In ten the organicc solids were higher than the inorganic.
2. Eleven out of twenty-five passive, normal sweats contained more organic solids than inorganic.
3. Twenty-three out of twenty-five passive, normal, pilocarpine sweats contained more organic solids than inorganic.
4. Two out of ten acetanilid sweats contained more organic than inorganic solids.
5. Seven quinine sweats contained less organic than inorganic solids.

Note that the pilocarpine sweats, with a few exceptions, contained more organic than inorganic solids; that the quinine sweats exceeded in inorganic solids; that the salicylate sweats were about evenly divided, relative to organic and inorganic solids; that the passive sweats slightly favored the inorganic solids; that the acetanilid sweats favored the inorganic solids.

From the chemical analysis it is apparent that the drugs herein mentioned have more or less selective action.

The first sweat obtained from a case of acute articular rheumatism during the height of the disease, contained a large excess of solids.

The first sweat from a case of acute uræmic poisoning contained a large excess of solids; this sweat feature is always present where the renal lesion forbids sufficient elimination; those wherein the urinary excretion is nearly or quite normal have not brought to light any marked sweat features from a chemical point of view; this statement, however, must be accepted as purely provisional until further investigations have been made.

Here I will interpose a comparison, including the added totals of six normal, passive sweats, compared with six nephritic and six sodium salicylate, acute rheumatic, passive sweats, given in percentages as follows:

	Inorganic. Per cent.	Organic. Per cent.	Nitrogen. urea. Per cent.	Total nitrogen. Per cent.
Six cases normal	3.6406	2.6045	0.18356	0.29835
Six cases nephritis	4.73354	9.09804	1.90274	2.32336
Six cases rheumatism	9.83698	12.16181	0.90195	2.02510

Note the preponderance of organic and inorganic solids in rheumatism when compared with the nephritic sweats, and the striking difference when compared with the normal, passive sweats. Among the clinical features it should be mentioned that the induction of passive hot air sweats, coincident with the administration of the drugs mentioned in this article, lessens the toxic effects of the drugs; thus, cinchonism was rarely noticeable enough to cause distress; the sialogogue effect of pilocarpine was rarely observed, and this applies with equal force to the toxic effects of pilocarpine; acetanilid, in ten grain doses, was not followed by marked cyanosis or prolonged depression. The drugs used were given in the following doses: quinine, 10 grains; acetanilid, 10 grains; pilocarpine, from ⅛ to ¾ grains; sodium salicylate in 30 grain doses.

A brief review of the physiological action of the hot air bath will not be out of place. Without other aids the following conditions occur: 1, Hyperæmia and congestion of the skin, which then contains more fluids and becomes a better conductor of heat; 2, the skin becomes moistened by sweat, which in turn favors abstraction and increased excretion of heat; 3, the pulse rate increases coincidently with diminished arterial tension; 4, the bodily temperature becomes slightly elevated; 5, there is now increased respiration, which Sihler asserts to be due to the warming of the blood, thereby augmenting the consumption of oxygen and the excretion of carbon dioxide, the latter being due to increased tissue changes. Landois states that a man weighing sixty kilogrammes enlarges about sixty-two c. c. when his temperature is raised from the normal to 104° F.; this enlargement is associated with expansion of the peripheral tissues and increased cutaneous congestion at the expense of internal depletion.

The administration of antipyretics in full doses, combined with the passive, dry-heat sweats in normal subjects, does not modify the physiological effects just mentioned. In fact, these drugs apparently lose their antipyretic effects. This fact opens up an interesting question; it would not be in keeping with the object of this paper, however, to discuss it fully. But in all cases where quinine, sodium salicylate, and acetanilid were given, and within thirty minutes were followed by the application of the hot air bath, the temperature became elevated from 1° to 5° F. above normal, reaching its highest about ninety minutes after the drug administration, and coincidently with profuse sweating. Removal from the hot air bath caused the temperature to fall rapidly.

Toxic experiments were made in a few instances; I submit those that were made, with the understanding that much work remains to be done in the future regarding this item.

In the first experiment I injected subcutaneously 5 c. c. into a guinea pig weighing 50 grammes. No effect was noticed beyond the usual symptoms of fright. The sweat was from a normal case.

In the second experiment 9 c. c. of sweat from a case of chronic articular rheumatism was injected intraperitoneally into a guinea pig weighing 270 grammes. In the next twenty minutes I noticed muscular tremor, rapid respiration, the ears slightly cyanosed; all these symptoms disappeared within an hour.

In the third experiment I injected 20 c. c. of normal sweat into a guinea pig weighing 300 grammes, subcutaneously. No effect whatever followed.

In the fourth experiment I injected 9 c. c. of chronic malarial fever sweat into a 270 gramme guinea pig, directly over the lumbar spine, subcutaneously. Result: Immediate effect, breathing laborious, ears cyanosed; pig fell on its side and lay still about six minutes, when, in attempting to get up, it was discovered that the hind extremities were toally paralyzed. This condition was followed by atrophy of the hind limbs, and in six weeks death ensued.

In the fifth experiment I injected 30 c. c. of sweat from a case of chronic nephritis into a fifteen ounce guinea pig, subcutaneously. The pig was quiet for three hours, refused to drink or eat, had occasional muscular tremor or rigor, but recovered fully in twenty-four hours.

In the sixth experiment I injected 20 c. c. of sweat from a case of chronic malarial toxæmia and hæmoglobinæmia, subcutaneously, into a ten ounce guinea pig. No effect or departure from the normal was observed.

In the seventh experiment I injected 32 c. c. of sweat obtained from a case of post malarial anæmia, subcutaneously, into a guinea pig weighing eight ounces and a half. Within ten minutes there were a well-defined rigor, rapid respiration, and cyanosis of the ears; the pig seemed stupid and did not respond actively to pin prick. The rigor persisted thirty minutes and the pig fully recovered in an hour.

In the eighth experiment, subcutaneous injection of 50 c. c. of normal, passive, pilocarpine sweat into a guinea pig weighing twelve ounces produced no apparent effect.

In the ninth experiment I injected, subcutaneously, 55 c. c. of malarial sweat obtained during the height of temperature rise in a case of quotidian malarial fever after a well-defined malarial chill. The guinea pig weighed eleven ounces. The immediate effect was a light rigor, followed by coma and death, which occurred within ten hours. A post mortem disclosed no abnormal conditions, except hyperæmia and some cloudy swelling of both kidneys. I believe the sweat in this instance was toxic and the cause of death.

In the tenth experiment I injected, intraperitoneally, 45 c. c. of sweat from a case of splenic myelogenic leucæmia, into a guinea pig weighing nine ounces. No abnormal effect whatever followed this injection.

This completes the toxic experiments made with the assistance of Dr. Friedberg. No conclusions can be drawn from them, except that it requires large doses to produce any effect. In no instance was the sweat sterilized, because it was assumed that extreme heat would modify the sweat composition and thereby cause fallacious results; the skin was thoroughly cleansed before the sweat, however, and only sterilized gauze was used in all experiments.

Assuming that the extraction of considerable fluid from a body in a short space of time altered the specific gravity of the blood, the chloroform-benzol method for determining the specific gravity of the blood was used before and after profuse sweating. We did not note any marked difference. While the method is not infallible, I believe it will at least show any important difference. Thirteen cases were submitted to this test.

Among the anomalous results of dry heat application I will cite the following case:

A young woman fell victim to acute septic intoxication and acute septic nephritis. The pulse was constantly over 120 per minute, weak and compressible; the temperature ranged from 96° to 97° F.; the urine did not exceed four ounces in twenty-four hours and contained casts, albumin, blood corpuscles, bile pigments, and acetone. The whole condition was rendered more desperate by a violent uræmic gastritis; it was imperative to eliminate effectively. She was placed in contact with hot water bottles; in the course of an hour the temperature rose to 102° F., the pulse became stronger and did not exceed 95 a minute; instead of inducing free perspiration, however, the patient excreted from six to eight ounces of urine after each application; this treatment was continued twice daily until recovery ensued.

The case plainly illustrates the intimate relation between the kidneys and the skin, and is mentioned only for the sake of interest. It is well known that the renal secretion is often increased by diaphoretics; though, as a general rule, the reverse is true. Note, however, in the case just cited that the dry heat increased the pulse strength and lessened its frequency, contrary to the results observed in normal individuals.

We are familiar with the fact that mercurial inunctions can be used with more satisfaction when combined with passive sweats. Thus, I had a case of secondary syphilis which was extremely sensitive to mercurial salts; I prescribed mercurial inunctions, however, and about eight hours thereafter a passive sweat; so treated, I was able, not only to continue the inunctions, but to give mercurial salts internally as well, without occasioning mercurial poisoning. You will recall that one observer asserts that the skin eliminates more mercury than the kidneys. I am aware that this method is not new, but mention it on account of its importance from a clincal and therapeutical standpoint.

Lastly, five specimens were obtained and analyzed only for uric acid; in two it was found. While the number of specimens so examined is small, yet it is safe to say that uric acid is not a constant ingredient of sweat. Two of the specimens were from a large, robust individual afflicted with chronic rheumatoid arthritis, and both contained uric acid in small quantities. One third of a grain to a quart in one specimen, and far less in another. Thus, one specimen contained .00042 grammes of uric acid in 240 grammes of sweat; the other, .0021 grammes in 200 grammes of sweat.

It is interesting to note that both were obtained from a case of chronic arthritis. The three that revealed a total absence were obtained from a normal individual.

While I am aware that the experiments just cited are far from completing our knowledge regarding perspiration, I, however, offer the following deductions and items of interest:

First, the hot air bath causes an aseptic fever, or temperature elevation despite the antipyretic action of acetanilid, sodium salicylate, and quinine sulphate, thus opening up the question—why do these drugs fail to reduce the increased temperature? I must confess that I am unable to explain fully this arbitrary fact. Acetanilid has no effect on the normal temperature of a healthy adult, and acts as an antipyretic (in regular ten grain doses) in fever only. In general, it lessens pulse rate, decreases heat production and sometimes increases arterial tension.

The hot air bath causes a temperature rise of aseptic type in the healthy adult; also increases the pulse rate, lessens blood pressure, and increases oxidation and the elimination of carbonic acid. Perhaps an excessive dose of acetanilid may reduce the temperature.

It is of physiological interest, however, to know that the bodily temperature may be raised to 104° F., which defies the action of antipyretics in active doses.

Secondly, that the hot air bath is of decided value in acute and chronic uræmia is shown by the fact that the perspiration contains a considerable excess of urea and nitrogen. As a matter of course, it should not be used to the exclusion of all other means, but rather as an important adjunct. Aside from the immediate eliminant effects, the secondary effect on the nutrition should not be forgotten.

Thirdly, in articular rheumatism in conjunction with the salicylates, the hot air bath gives more rapid results and lessens cinchonism. In this connection I will recall the fact that the sweat of acute articular rheumatism contains a considerable excess of nitrogen and urea, which is not unusual in infections of the body.

Fourthly, certain types of myocarditis seem to be benefited by the hot air bath. The following case will serve as an example:

Mr. X., forty-eight years old, no history of acute, chronic or hereditary disease. Family history negative. Present illness not of acute onset, but developed gradually after many years of rather liberal indulgence in eating, and the habitual use of alcoholic liquors. These, together with a rather sedentary mode of life, resulted in excessive bodily weight and accumulation of fat. Gradually the feet became swollen, and ordinary muscular efforts caused dyspnœa, indigestion, insomnia, hæmorrhoids, and general debility increased from week to week until he sought medical advice. Briefly, the examination revealed well-defined dilatation of both ventricles; no apparent arteriosclerosis; the liver margin was four finger breadths below the costal arch and the spleen was enlarged. Concisely stated, all the symptoms, past and present, pointed to chronic myocarditis; and since it is not the object here minutely to describe myocarditis, I will simply cite this case in connection with the hot air bath treatment. During a period of four months all the customary methods of treatment were followed by temporary success. Finally, for the fourth time, the œdema recurred and induced us to use the starvation and hot air bath method, as follows:

Absolute exclusion of all food for five days; internally we continued the infusion of digitalis and squills. Once daily, a hot air bath, followed by active friction in a comfortably warm water bath. The first bath caused increased dyspnœa, decided tendency to faintness, and only moderate sweating. The second bath found the patient more tolerant, and thereafter no unpleasant symptoms occurred. Suffice it to say that the œdema diminished rapidly, that the pulse, though irregular, gained in volume, the dyspnœa was lessened, the urinary excretion increased in quantity, and, finally, in about four weeks the patient was able to take short walks. During the last year he has given attention to business, and has been out of doors nearly every day.

I could cite other cases of the same type that seemed to improve most rapidly with the hot air bath treatment. The good result in cases of this type is probably due as much to the indirect effect on tissue changes as to any immediate eliminative effect. It cannot be doubted that the artificial raising of bodily temperature alone, aside from any effect on the circulatory organs, means much when regarded purely from a physiological viewpoint.

Fifthly, pilocarpine should never be used without the aid of hot applications to the body. So combined, there is no sialagogue and less toxic drug effect, and far more sweating than otherwise.

Sixthly, three cases of catarrhal jaundice were sweated; all the modern tests failed to disclose the presence of bile pigments in the sweat; only the epithelial débris containing bile deposits.

Seventhly, modern sugar tests failed to reveal the presence of sugar in sweat obtained from diabetics.

Eighthly, a case of chronic constipation and indicanuria did not disclose the presence of indol or skatol in the sweat.

Ninthly, regarding the function of eliminating normal and abnormal substances, the skin is not to be compared with the kidneys.

Tenthly, free sweating seems to favorably affect the course of psoriasis. This statement, however, needs to be sustained by more research. Equally so, the effect on other skin diseases.

Lastly, 1,000 c. c. of sweat contain about eleven and one half grammes of solids (nearly three drachms), one half inorganic and one half organic; about six decigrammes (nine grains) of urea; and about .47 centigramme (eight grains) of nitrogen.

The cooperation of Dr. Friedberg and Dr. Nicholson made it possible to carry on this work. I offer our results, fully aware that much remains to be done in this field.

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New Quarantine Hospital at Buffalo.—Health Commisisoner Greene has determined to make a move at once in the matter of obtaining the construction of a new quarantine hospital. This time, it is said, there will be no blocking of the plan to build the hospital, and the structure is to be erected on the site of the present dilapidated building used for smallpox patients. The entire common council is committed to the plan of building a new hospital by virtue of endorsing the act whereby the city is empowered to issue bonds to the amount of $50,000 to provide funds for building a new institution.

ARTIFICIAL FLUORESCENCE OF LIVING TISSUE IN RELATION TO DISEASE.

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In an informal address to the Technology Club on January 13th, while speaking in a general way of the use of radium in medicine, I also brought forward, experimentally, the procedure of producing fluorescence in certain solutions *after* they had been administered to the patient. The clinical aspects of the subject were, of course, not elaborated upon and may be here properly presented.

This plan I originally published in the *Electrical World and Engineer*, of June 20, 1903, and in the *Medical Record*, of August 8, 1903, after having employed it in practice for more than a year. In general, the proposition may be stated as follows, namely, to combine the properties, possessed by radium and the x rays, of penetrating human tissue, with the facts of fluorescence of fluid solutions, and thus to establish a system by means of which we can flood the entire living organism with a fluorescible solution used medicinally, and, at the same time, by directing the radium or x ray upon a given organ or seat of disease, or upon the whole body, set up, at the desired areas within the tissues, the violet, ultraviolet and other rays.

This procedure obviously means the illumination of the interior of tissues, as well as of the body as a whole, with light, that is to say, with that portion of the visible spectrum represented by the color of the particular fluorescence called into being, be this blue, violet, or green. The catchword "liquid sunshine" has been humorously applied, and certainly it may be asserted that equivalents of portions of sunshine are, in this instance, artificially produced within the patient. And we may fairly argue that chemical and other effects are thus brought into very intimate internal relations with vital processes.

The procedure above referred to involves two distinct factors:

1. The safe introduction of solutions or mixtures capable of fluorescence or phosphorescence.

2. The employment of an agency, externally or internally, capable of exciting fluorescence in the introduced solutions, mixtures, and substances.

The administration of the fluorescible materials, solutions, and medicines may be by the mouth, by introduction in bulk within cavities, such as the stomach and intestines, by hypodermic injections into the circulation or locally into a tumor, by cataphoresis, or by simple topical applications of washes and ointments.

The agency for excitation is preferably radium but the Röntgen radiation may less preferably be used in the usual manner from the outside; or we may employ any of the various forms of arc lights used in the Finsen ray treatment, or simply (in illuminating cavities) an ordinary electric light or any source of artificial light which can conveniently give its light locally.

The static spark or disruptive discharge, when condensers are employed and particularly if iron electrodes are used, causes vivid fluorescence of fluorescible fluids. This spark, as well as the brush discharge and the high frequency discharges, may be used to excite fluorescence of tissue already impregnated or smeared externally with these fluids.

A most important variation in technique is to administer first a fluorescible solution, and after that has had time to absorb, then to administer radioactive water or other radioactive solutions.

I have used principally in practice solutions of quinine bisulphate and of æsculin, excited, after absorption into the patient's blood, by radium and by the Röntgen ray. I prefer the radium as a source of excitation.

Solutions which may be used as medicines, and which are rendered actively fluorescent by radium and the x ray, are preeminently those of quinine and æsculin. Other solutions whose desirability may be considered are fluorescin, resorcin, orcin, eosin, fraxin, uranin, rhodamin, and petroleum jelly. Salicin fluoresces to a moderate degree.

While quinine solutions outside of the body only fluoresce when acid, æsculin, fraxin, fluorescin, resorcin, and eosin, fluoresce in alkaline solutions, so that this question apparently need not trouble us. Since the blood is an alkaline fluid, it would seem that æsculin and other alkaline solutions were preferable, but on the other hand, experiment has shown that the ultimate products of quinine, as found in the excretions, are still capable of fluorescence. Æsculin itself passes through the organism without being decomposed. Its fluorescence is increased by the presence of sodium chloride. In general, another point of practical interest is that fortunately all these fluorescible solutions are best capable of fluorescence when in very dilute form.

In my experiments before the Technology Club, I submitted the following individual solutions, each in eight ounces of distilled water in glass bottles.

No. 1. Quinine bisulphate, one sixth of a grain, slightly acid; fluoresces light blue.

No. 2. Æsculin, a trace, alkaline; fluoresces blue.

No. 3. Fluorescin, a trace, alkaline; fluoresces green.

No. 4. Eosin, a trace, alkaline; fluoresces green.

No. 5. Orcin, a trace, and a trace of chloroform, alkaline (According to the new and unpublished researches of Professor R. Witthaus, fluoresces green.)

No. 6. Resorcin, plus chloral, alkaline; fluoresces green.

These eight-ounce bottles of fluid, submitted to the x ray in complete darkness became decidedly fluorescent, giving off a light of considerable luminosity; so much so that they could be plainly seen by the entire large audience. The blue-violet fluorescence of quinine and of æsculin was particularly well marked.

Portions of these fluids placed in cellulose tubes or ordinary test tubes, and submitted to the influence of a radioactivity of 20,000, exhibit fluorescence. An absolutely convincing experiment is to employ cellulose tubes (thus eliminating the possibility of the fluorescence of glass) and test the various solutions with a radium tube of 1,000,000 radioactivity, first wrapping the radium tube in black paper to eliminate the question of the visible light of the radium salt.

It should be stated here that the audience hall was completely dark, and that in such experiments the operator should be in darkness for from five to ten minutes before attempting to observe the phenomena of the more delicate tests.

By daylight, of course, the above named fluids exhibit their well known beautiful fluorescent colors.

While many fluorescible substances, here named or not, may be utilized, quinine and æsculin, by reason of their safe dosage and the high degree of blue violet fluorescence, are chiefly available, and I have used quinine bisulphate, giving the patient a dose of five grains, and æsculin in the dose of about one grain given in dilute solution now for more than a year. The fluorescible agent should be administered once daily, preferably a few hours before treatment. It is readily apparent that small doses of the medicine are amply sufficient. I prefer the use of æsculin.

In the preliminiary experimental work, I have been greatly indebted to Professor R. Witthaus, of the Cornell University Medical College, for suggesting and preparing the various fluorescible solutions.

Mr. Theodore Arndt, of Bagoe & Co., has been kind enough to look up the literature of æsculin and reports as follows: " Æsculin is a glucoside almost identical in composition with fraxin. It is derived from the inner bark of the hippocastaneum æsculus. It appears to have no physiological action when taken internally. It is excreted by the kidneys and intestines—a long time is required, however, for its complete excretion—before being decomposed. The æsculin in the powdered form is also excreted in the fæces. This is probably the most highly fluorescent body of which we have any knowledge, imparting fluorescence to a solution as dilute as one in a million." Quinine bisulphate is also fluorescent in dilutions as great as one part in fifty thousand.

Fraxin, when much diluted, exhibits a clear blue fluorescence by daylight, especially when very slightly alkaline. Quinine æsculinate is also a desirable form of administration, and salicin has some advantages.

The phenomenon of fluorescence is not easily explained, though it is evident that certain substances, alone or in solution, act as a "step up" or "step down" transformer into visible rays, of the ethereal stresses set up by the radium or x ray radiations or other exciting causes.

While the visible spectrum of sunlight, for example, extends only from the red to the violet inclusive, the chemically active rays not alone extend from red to violet, but are more active in the ultraviolet region and active onward to the Röntgen ray region. The Finsen rays include the blue, indigo, violet, and ultraviolet region.

It is, therefore, more than probable that the fluorescence of quinine and æsculin, as produced by various exciting sources, exhibits ultraviolet as well as violet rays. It is stated that, in the case of quinine sulphate, the air is ionized by this fluorescing liquid, and that this is due to the rays of ultraviolet light.

What the exact spectrum of quinine and æsculin, when excited by radium or by the x ray would be, I have as yet been unable to find out.

It has been suggested that Nature meant that the vital processes of the living body should take place in the dark, and that, therefore, the interior of the living human being would be intolerant of the presence of light.

In this connection I note that Dr. A. F. A. King, of Washington, in an article upon Sunlight and Malaria,[1] states that the experiments of Dr. Rhoads and Dr. Pepper demonstrated over thirty years ago "that in malarial disease the fluorescence of the blood is diminished, and that quinine restores the fluorescence to its normal standard, and *pari passu* with this increase of fluorescence the fever disappears and the patient gets well (see *Pennsylvania Hospital Reports* for 1868, pp. 269-280; also *Philadelphia Medical Times*, January 23, 1875, p. 259, etc.)"; and that "the normal fluorescence of the blood was discovered by Dr. Henry Bence Jones in 1866 (see *Medical Times and Gazette*, London, August, 1866, pp. 163-167); he also found in all the organs and blood of men and guinea pigs, a fluorescent substance, which possessed all the chemical and optical properties of quinine, which he called 'animal quinoidine.' It was by following the experiments and discoveries of Jones, that Rhoads and Pepper were able to present to the world the twelve cases of ague in which they demonstrated that quinine cured by increasing fluorescence in the blood of fever patients. I am glad to have resurrected these cases and experiments from the oblivion in which they seem to have been engulfed for so many years."

As to sunlight as an exciting cause of fluorescence, it is to be noted that light passed through a red screen, as for instance, the blood, fails to excite fluorescence, while the x and radium radiations readily penetrate this screen. While, to use the Finsen ray, we must eliminate this blood screen by pressure, to enable the ultraviolet ray to act, by the method I am proposing, violet and ultraviolet radiation springs to life within the very tissues themselves and acts at its point of origin. We have at our command as many phototherapic effects as there are colors of fluorescent fluids. We may thus avail ourselves of red, orange, yellow, brown, green, blue, violet, ultraviolet rays, in accordance with their well known effects in the treatment of various morbid conditions.

It will be seen that this method is capable of general application, and is not restricted in its usefulness to any specific disease. The first diseases which suggest themselves as suited for treatment by this means are tuberculosis, cancer, chronic malarial affections, Hodgkin's disease, and all those affections which are associated with the presence of a specific microbe; also nervous diseases, like epilepsy and insanity, as well as diseases of the skin, etc.

As relates to the now classical treatment by the x ray alone, it is generally conceded that the action on the surface far excels the action upon the interior. Superficial face cancer (rodent ulcer) yields promptly to it, recurrent carcinoma of the breast—even, as I have seen, when consisting of ulcerations as large as my hand—has been perfectly cured, superficial carcinomatous nodules of the skin will positively melt away. Why, then, does the same disease, when situated more deeply, not yield equally well? It suggests itself that the tissue itself has sifted out from the radiation that portion of it which has been arrested and absorbed upon the surface and near the surface, and that the remaining portions were not of the kind that cured. That there are such remaining portions of radiations is amply demonstrated by the fluoroscope, which detects them after their passage through the tissue. But, obviously, the rays that go through do not do the work of rays that do not.

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[1] *Vermont Medical Monthly*, June 25, 1902.

I think it is fair, therefore, to argue that when, for instance, I have secured a complete cure of deep seated carcinoma of the breast or of abdominal malignant disease, the controlling factor of success has been the ultraviolet or other light liberated in the mass of the tumor, or of the cavity, rather than the x ray. It is evident that the rays that go through do not do the work of rays that do not.

I feel personally certain that in the treatment of internal cancer, artificial fluorescence has secured for me results which I could not have secured by radium or by the x ray alone, and by the use of radioactive water internally administered to a patient already saturated with a fluorescible substance, we have the advantage of what might be justly termed a "constitutional" treatment, capable of attacking disease diffused throughout the system.

In my earlier publications (June and August, 1903) I pointed out the applicability of this method in superficial conditions, such as cancerous ulcers, lupus, indolent ulcers, the various skin affections, etc. I have observed that petroleum jelly is rendered highly fluorescent by proximity to radium. If we simply immerse a tube of radium (10 milligrammes of 1,000,000 radioactivity) in a corked receptacle holding petroleum jelly and remain with it for a few minutes in a dark room, we may observe, not only a pale blue luminous area in the neighborhood of the radium, but also, after a few hours, scintillations and flashes of light when the petroleum jelly is stirred or otherwise submitted to mechanical disturbance. Petroleum jelly may thus be used for a topical application, either previously prepared, or applied unprepared then bringing radium near to it, to excite its fluorescence. Likewise, I employ other solutions, already alluded to, in the same manner. I have used this petroleum jelly application in a large variety of cases with surprisingly good results. We have here undoubtedly brought radioactive gas, and also helium, into therapeutic action.

Petroleum jelly or similar insulating viscid materials, not only become, in this instance, charged with radium and helium gases, but also highly charged with negative electricity (using 1,000,000 radioactivity), as may be proved by putting the petroleum jelly in a celluloid tube, corking it tightly, and leaving it, say ten hours (with the radium tube immersed). After removing the radium tube, flashes like the flashes of the aurora borealis will be emitted when the cork is withdrawn, and for quite a long time thereafter, and are renewable also by further rubbing of the celluloid with silk.

An instance of artificial fluorescence of the natural fluids of our bodies is seen in the case of the contents of the eyeball. The fluids glow as do those artificially impregnated as I have described, and thus the optic nerve is cognizant of the light.

It may be that other fluids of our bodies are rendered similarly artificially fluorescent, and that the curative effects of radium, of the x ray, and of the arc light, etc., thus far unexplained therapeutic phenomena, may be due to this cause alone. The action would be to restore to the body that natural fluorescence (as known to exist in the blood) which had been lost.

Artificially produced, fluorescence and phosphorescence of human tissues and their fluids would, therefore, seem to be a well-grounded therapeutic procedure.

Continued experimentation along these lines has satisfied me that radium of high radioactivity produces results which cannot be attained by the x ray.

(To be concluded.)

FLUORESCIN IN TRANSILLUMINATION OF THE STOMACH.

By ROBERT COLEMAN KEMP, M. D.,

NEW YORK,

CONSULTING PHYSICIAN, GASTROINTESTINAL DISEASES, TO THE MANHATTAN STATE HOSPITAL, WEST, WARD'S ISLAND; PHYSICIAN TO THE DEPARTMENT OF GASTROINTESTINAL DISEASES, ST. BARTHOLOMEW'S CLINIC, ETC.

For some time past attention has been directed to the internal administration of a fluorescent medium, such as quinine, in order to enhance the action of the x ray. Much work has been performed in this direction, by Cannon, Morton, and others. The present article has nothing in common with this. In the course of various experiments with transillumination of the stomach, of which Einhorn is the originator, I found that the employment of a fluorescent medium, such as quinine bisulphate in solution, gave better results than plain water. The patient drinks a liquid fluorescent medium and is conducted into the dark room. The electric light bulb is then inserted like the stomach tube. The stomach should be free from food. For the past three months demonstrations of the use of fluorescent media for stomach transillumination have been given at my clinics at the Manhattan State Hospital, West, Ward's Island, and the method was described in December at a meeting of the Post-Graduate Society. I am indebted for valuable assistance to my associates, Dr. Traub and Dr. Graham-Rogers, and for many suggestions, to my friend, Professor Achilles Rose, of the Post-Graduate Medical School. The space allotted to this article will allow me to give only a brief abstract of the work.

Among fluorescent substances available as media in transillumination of the stomach may be mentioned:

1. Quinine.—Quinine bisulphate is preferable, as it is more soluble. Dissolve ten grains of quinine bisulphate in eight ounces of water. Drop into this solution five minims of dilute phosphoric acid, which seems to increase fluorescence. Have the patient drink this, and follow it by a glass of plain water (eight ounces). The color of the solution in daylight is a faint violet, the reaction acid, and the fluorescence is slight as compared with the other media now to be described. The transillumination with quinine, however, is far superior to that with water.

2. Horse-chestnut.—Æsculus hipposcastanum, or cortex hippocastani, is a native of Asia, but grows also in Europe (see U. S. *Dispensatory,* 1900). It contains

Æsculin, a bitter principle, obtained from a decoction of the rind. The crystals are shining white, prismatic, inodorous, bitter; slightly soluble in cold water, more so in boiling water, soluble in alcohol and in alkaline solutions. It is non-toxic, as it has been administered in fifteen grain doses for malaria. Morton and others have demonstrated its fluorescent properties with the x ray. A very minute dose will fluoresce in an alkaline solution. The preparation is practically impossible to secure at present. Dr. Achilles Rose has suggested a decoction of the fresh horse-chestnut shells as a fluorescent medium. But the most marked fluorescent medium is

3. Fluorescein (Fluorescin).—This substance has a formula of $C_{20}H_{12}O_5$. It is manufactured from phtalic anhydride (a naphthalin product), five parts, and resorcin seven parts, heated to 200° C. It is a red or dark red, powder, soluble in alcohol, and gives yellow red color and a green fluorescence. It is soluble in alkalies, giving a yellow-green fluorescence. It colors the cornea green, and has been employed to detect ulcers. It has been used as a dye. A solution ten grains in one ounce of water containing sodium bicarbonate is non-irritant. The foregoing facts are taken from the *U. S. Dispensatory,* and are all that I have been able to find in the literature. Merck & Co., the manufacturers, could give me no further information. The following are the results of researches on my own part:

A dog and a rabbit were injected subcutaneously with alkaline and alcoholic solutions of fluorescin, two grains and one grain, respectively. No toxic effects were noted, either within an hour or after twenty-four hours' observation; in fact, the injections caused no symptoms whatsoever and no local irritation. These experiments were conducted at the Physiological Laboratory of the College of Physicians and Surgeons. In consequence of these experiments I took a small amount of the fluorescent fluid internally, with no disagreeable results. I deemed it necessary to investigate further the qualities of fluorescin, the correct strength for maximum fluorescence, and the effect of hydrochloric acid on the medium. To Mr. F. N. Ferry, the chemist of St. Bartholomew's Clinic, I am indebted for assistance and suggestions in my experiments, which were conducted in the Clinic Laboratory. He also called to my attention the value of glycerin in increasing fluorescence. Fluorescin is slightly soluble in water, slightly fluorescent in this medium, and of neutral reaction. With half a grain to one grain of fluorescin in a pint of water, the solution being rendered alkaline by sodium bicarbonate, as we increase the strength of the fluorescin fluorescence *diminishes* and colorization of the fluid begins. Maximum fluorescence appears in a pint of alkaline solution in which from one eighth to one quarter of a grain of fluorescin has been dissolved. The best result is obtained with one eighth of a grain, or a trace more. Sodium bicarbonate, twenty to forty grains to the pint of water gives good results. Glycerin, one to two drachms, increases fluorescence. Hydrochloric acid diminishes fluoresence and may even neutralize it, unless the acidity of the stomach is first corrected. From experiments and clinical investigations we obtain successful transillumination of the stomach with fluorescin by the following technique:

The patient should be examined with the stomach free from food—in the morning, breakfast being omitted, or in the afternoon, luncheon. A glass of water (eight ounces) in which from fifteen to twenty grains of sodium bicarbonate have been dissolved, should first be administered. In a second glass of water (eight ounces) dissolve from fifteen to twenty grains of sodium bicarbonate, one drachm of glycerin, and one eighth of a grain of fluorescin, or between one eighth grain and one quarter grain.

The patient is then conducted into the dark room and the electric light introduced. The picture obtained is much superior to that produced by the method with plain water. It shows the size and location of the stomach and tumors of the anterior stomach wall, and the light is so excellent that I believe it would aid in differentiation of tumors of the liver and intestines. In addition, subjects with thick abdominal walls or much adipose tissue can be thus satisfactorily examined—which was often impossible heretofore. Two patients have been so transilluminated at my clinic at Ward's Island, with brilliant results. No symptoms whatsoever followed.

The fluorescent medium increases in activity on exposure to light, and one can prepare it ahead, and leave it so exposed for several hours before use. Fluorescin is very light and powders can be readily divided into one quarter grain and again subdivided. The fluorescin solution leaves a yellow-red stain on the hands. Hammer, Tracy, Morton, and others suggest the internal administration of radioactive solutions in disease. Morton states that they increase fluorescence. With this in view, I suggested to Dr. Morton the use of a radioactive solution in combination with a fluorescent medium, for transillumination of the stomach, and as soon as a safe radioactive solution is secured, Dr. Morton has agreed to demonstrate it at my clinic. In addition, Tracy suggests the value of normal saline solution as a radioactive medium. As a matter of preliminary experiment, I find that a pint of normal saline solution—with fifteen grains of sodium bicarbonate and one eighth grain of fluorescin—can be satisfactorily employed for transillumination.

As a suggestion to the genitourinary specialists, let me say that the use of a fluorescin solution, such as I have described, is worthy of investigation for the purpose of cystoscopy; and, in addition, bladder ulcers might possibly thereby be detected, just as ulcers of the cornea can be. The matter is worthy of experiment.

Unfortunately many members of our profession are inclined to belittle, or condemn methods of which either they are entirely ignorant or they have had no experience. I can only give these doubting Thomases a cordial invitation to our demonstrations, and state, in conclusion, that I believe the use of fluorescent media to be a considerable advance in the technique of stomach transillumination, and the method with fluorescin to be an ideal one. Unless the Rose's belt is to be applied, it is unnecessary to aspirate the fluorescent medium.

107 East Fifty-seventh Street.

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Touro Infirmary, New Orleans, La.—Dr. Jacob Warren Newman has undertaken the duties of house surgeon at this institution.

TRUNECEK'S SERUM.*

By SWITHIN CHANDLER, M. D.,

PHILADELPHIA.

In these days we have our opposition as had the medical men of the past—The "Do Nothing Society," "Anti-vivisectionists," new schools and charlatans, were among the annoyances of those days, and to some extent they still exist, aided and abetted by the deluded followers of Christian Science, Mental Healing, New School of Christ, Dowie, and those who say, "Think how dirt would affect a fine machine; then what ground have you for giving medicine, which will act upon this great and finely adjusted machine, the human body?" These people seem to forget the dirt in food we eat, as well as the poisons contained in it.

These parasites of ours may be a blessing in disguise, for instead of retarding our growth, they really stimulate our sometimes satisfied brains to harder and more scientific work, and our triumphs over ignorance are shared by humanity at large.

One such triumph may be the results accomplished by a new serum, which Levi, of Paris, has graciously called Trunecek's serum, after its advocate and originator. In this serum I believe we have that which will aid us in our progress, and in regard to which, through your kind invitation, I shall read this paper.

The composition of the serum is as follows:

Sodium sulphate	0.44 gramme;
Sodium chloride	4.92 grammes;
Sodium phosphate	0.15 gramme;
Sodium carbonate	0.21 gramme;
Potassium sulphate	0.40 gramme;
Distilled water to	100 c. c.

With the exception of the greater concentration in the inorganic salts, the above analysis, as pointed out by Levi, corresponds to that of blood serum by Hoppe-Seyler.

According to Alfred Gordon, Levi has changed this into another form, thus:

Sodium chloride	10 grammes;
Sodium sulphate	1 gramme;
Sodium carbonate	0.40 gramme;
Sodium phosphate	0.30 gramme;
Calcium and magnesium phosphates,	āā. 0.75 gramme.

M. ft. cachets No. xiii.

"Each cachet equals 15 c. c. of serum, or 150 blood serum."

One great use of these salts in the blood is to keep it normal in reaction, and thus to prevent blood and endothelium deterioration and deposits. We know that the deposit in arteriosclerosis is mainly calcium phosphate; we, therefore, naturally try this prevention of deposits, and find that it dissolves the calcium phosphate, and that its use in arteriosclerosis is a logical one. So far, its use has confirmed this view, but has not proved it.

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* Read before the Associated Physicians and Surgeons of the Charity Hospital.

Again, we employ it in disturbances in blood reaction, as in rheumatism, aphasia (functional), deafness, roaring in the ears, and general circulatory disturbances, in which diseases it gives good results. For further information along this line I would refer you to Trunecek, Levi, and Gordon. My part is to report the results of the use of this Trunecek serum in my experience, by giving it by mouth.

Trunecek gave it by hypodermic or intravenous injection. Levi, later, administered it by enema and internally, and reports many cases in which were used both his own and the Trunecek method. Gordon reports cases of internal treatment by capsules.

By hypodermic injection the dose is 2 c. c. daily. By mouth, in my cases, 16 c. c. twice daily.

Thus far I have used it in arteriosclerosis, asthma due to the same, rheumatism, cerebral circulatory disturbances, ringing in the ears, anæmia, and senile fibrosis before operation. Some of the cases and the results of the use of the serum are as follows:

CASE I.—Mrs. S., forty-six years old, was afflicted with rheumatism in the right arm and right side of the trunk, right leg, and left thigh, and had been so afflicted for four years. She also had dizziness, posterior headaches, and various pains over her body. The serum, in four drachm doses, was given morning and night, and she was put on a diet. In two weeks all pains had disappeared, and recovery ensued.

CASE II.—A man, aged thirty-two years, troubled with persistent headache, frontal and posterior, vertigo, and fainting spells, shortness of breath, some albumin and much uric acid in the urine. At times blindness affected his eyes, and he staggered. Serum, in four drachm doses, was administered twice daily, and at the end of four weeks all symptoms had disappeared and have not returned.

CASE III.—Was that of a girl, Miss C. She was perfectly well, with the exception of a constant ringing in the ears, thought to be caused by taking quinine, but there was no connection with this. All excretions were normal, and no cause for it was discovered. This ringing completely disappeared in twenty-two days after using the serum, and now, seven weeks afterward, she has had no return of the trouble.

CASE IV.—Miss B. was a shop girl suffering from anæmia. She had taken iron and the general treatment for her disease for two years, with no marked result. Three months after taking the serum she was greatly improved, and had returned to work. The general treatment was also administered, but no relief came until the serum was taken in conjunction with the treatment.

CASE V.—Mr. S. had marked arteriosclerosis, sick stomach, disturbance of cerebral circulation, was very weak, pale, and emaciated. Cataracts had formed in both eyes, he trembled even when at rest, was afflicted with eczema in legs and hands, and had abundance of uric acid, albumin, and phosphates in urine. After using the serum, these have all cleared up. In four months he had gained in weight, the arteries were much improved, and the eczema was nearly well. He took a trip to the mountains, and upon his return in three weeks, as far as symptoms guided him, he said he was well. The arteries, while still atheromatous, were markedly more elastic.

CASE VI.—Mrs. J., a woman aged forty years, was sent for an operation with a note from her family physician stating, "I do not know if you will operate, as her arteries are like pipe-stems." She certainly needed the operation, but in her condition could not run the risk. I advised her physician to administer the serum, in four drachm doses, three times daily. At the end of four weeks he again sent her to me, with the remark, "If I had not felt those arteries before, I would have said some mistake had been made." The symptoms were so marked by the disease requiring operation, that the softening of the arteries was the only improvement we could definitely state had taken place, but this improvement was so decided that we advised operation, and the patient withstood chloroform and the operation, and made a beautiful recovery.

The above are but a few of the cases, and are stated briefly on account of the time allowed.

We would not have you think that there were no failures. Some absolutely gave no result, while others improved, but the proportion of the recovery and general improvement was so great as to make us believe that scientifically Nature had given us a mighty aid.

The serum undoubtedly gave fine results in rheumatism and arteriosclerosis, and we found it a very useful drug in arterial hardening and tenseness in cases that required operation, and we have reason to advise its employment.

The injections may be more prompt, and in some cases more advisable, and in some cases the enema might be employed to better advantage. The cachets have their advantages also, but are more costly. If the same results can be obtained by administering the serum by mouth, and in my hands this method of administration certainly has proved its efficiency, that is the easiest and best manner, as will readily be seen, in which it may be given.

2010 CHESTNUT STREET.

Lectures and Addresses.

A BRIEF REVIEW OF THE ÆTIOLOGY OF YELLOW FEVER.

AN ADDRESS BEFORE THE AMERICAN SOCIETY OF TROPICAL MEDICINE.*

By JAMES CARROLL, M. D.,

HONORARY MEMBER OF THE AMERICAN SOCIETY OF TROPICAL MEDICINE; MEMBER OF THE SOCIETY OF AMERICAN BACTERIOLOGISTS; OF THE AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS; OF THE WASHINGTON ACADEMY OF SCIENCES; OF THE AMERICAN PUBLIC HEALTH ASSOCIATION, ETC.; FIRST LIEUTENANT AND ASSISTANT SURGEON, U. S. ARMY.

(*Concluded from page 245.*)

To Dr. Carlos Finlay, of Havana, belongs the credit for advancing the mosquito theory of the transmission of yellow fever. Soon after the announcement in England of Dr. Patrick Manson's discovery, that the mosquito served as the intermediary host for filariæ, Dr. Finlay conceived the idea that the same insect served as the intermediate bearer of the parasite of yellow fever. He began his attempted inoculations with the mosquito in June, 1881, and continued the work for a number of years, applying mosquitoes to one hundred persons. Of these, thirteen suffered attacks of yellow fever after periods varying from two to twenty-five days from the time they were bitten. Only three came down within the usual period of incubation. In no single instance could the attack that followed have been the result of the experimental application of the mosquito, because these insects when applied had been kept only from two to five days after biting a patient. In a single exception the insect had been kept six days. The four cases in which yellow fever developed within seven days were bitten, in Havana, at a time when yellow fever was epidemic in that city, and the mortality rate was high. I have been severely criticized by my Cuban friends for the statements I have already made in this connection,[21] and on sentimental grounds only; I still adhere to them, for I believe the facts as stated to be true, and they are of some historic interest. In the recently published report of the yellow fever commission of the Pasteur Institute the conclusion is reached that the infected mosquito is not dangerous until after the lapse of at least twelve days from the time she ingests the virulent blood.[22]

In December, 1900, under the direction of Dr. Reed, an experimental station (Camp Lazear) was established in a secluded spot one mile from Columbia Barracks. Two thoroughly mosquito-proof buildings were constructed about eighty yards apart, one to be used for experiments with fomites, the other to demonstrate that an infected house could only be one that contained infected mosquitoes. The camp was placed under strict quarantine, the occupants were required to sleep beneath mosquito nets, and all precautions were taken to guard against introduction of the infection. The first successful experiment was made in the mosquito house, which was tightly sealed and had been divided by a complete wire screen partition into two compartments, each with a separate entrance. Into one of these compartments fifteen contaminated mosquitoes were turned loose and a non-immune entering the room three times on the same day was bitten fifteen times. Within four days he was down with yellow fever. Two other non-immunes who slept for thirteen nights in the other compartment, separated from the mosquitoes only by the wire screen partition, were not affected. In this camp ten cases[23] of yellow fever in all were produced by the bites of mosquitoes; no other cases occurred than those that were inoculated for the purpose, and in every instance the period of incubation was within six days. One case was produced by the bites of three insects thirty-nine days after they had fed upon a yellow fever patient; two of these insects applied to a non-immune fifty-one days after contamination brought about an attack of yellow fever, and again infected another individual fifty-seven days after they had fed upon the patient. It appears from this that contaminated mosquitoes may retain the power to infect as long as they live.

It was also demonstrated in four cases that yellow fever could be conveyed by means of the subcutaneous injection of 2.00 c c., 1.5 c. c., 1.00 c. c., and 0.5 c. c. of blood drawn directly from the venous circulation of a patient in the first and second days of the disease.

At the same time another series of experiments was undertaken, which show that yellow fever cannot result from exposure to fomites. A tightly sealed building, completely protected by wire screen doors and windows, heated to summer temperature, kept dark and provided with moisture, was stocked with a large supply of articles of bedding and clothing that had been used for cases of yellow fever, some of which were fatal.

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* Delivered at the University of Pennsylvania, Philadelphia, January 11, 1904.

[21] The Transmission of Yellow Fever. James Carroll. *Journal of the American Medical Association,* May 23, 1903.

[22] Marchoux, Salimbeni, et Simond, *Annales de l'Institut Pasteur,* Tome xvii, No. 11, November, 1903.

[23] Reed, Carroll, and Agramonte, The Ætiology of Yellow Fever, an Additional Note. *Journal of the American Medical Association,* February 16, 1901; and Experimental Yellow Fever. *American Medicine,* July 6, 1901.

The articles were purposely soiled with black vomit and the discharges from a number of patients. Three non-immunes then slept in this room for twenty nights. Each night before retiring they unpacked these soiled articles from boxes, handled and shook them, and then hung them up on nails about the room. Every morning upon rising, they removed the blankets, sheets, etc., from the walls, handled them as before, and then repacked them in the boxes, where they remained until the following night. Additional supplies of recently soiled articles were added from time to time as rapidly as they could be procured, and the procedure was then repeated by two other non-immunes for three weeks. These were in turn succeeded by two more for a similar period, and notwithstanding that some of these men slept in the garments and bedding in which yellow fever patients had died, while others slept with their faces in contact with blood drawn from yellow fever patients in the early stage of the disease, none of them contracted yellow fever. Four of these men were shown by subsequent inoculation to be susceptible to the disease. Upon these experiments we based our conclusion that yellow fever could not be contracted by exposure to fomites, and upon them were also based the measures subsequently instituted by Dr. Gorgas, the result of which has been the complete eradication of yellow fever from Havana for over three years. Cases are frequently imported there from Mexico, but by carefully guarding the patients against mosquitoes any extension is easily prevented and they are handled without fear.

In the spring of 1901, Dr. John Guiteras, of Havana, infected a non-immune by the application of an insect from our stock. In August of the same year, he succeeded in infecting seven additional subjects by means of the mosquito, and three of these persons died.[24] One of the fatal cases was an American woman, a nurse employed at Las Animas Hospital, who offered herself for the experiment. The high rate of mortality in these cases removed all doubt as to the virulent nature of the attack induced by the bite of the mosquito, and the autopsy upon the first fatal case, which it was my privilege to perform, established the presence of the characteristic lesions.

In the summer of that year (1901), Dr. William H. Welch, of the Johns Hopkins University, called the attention of Dr. Reed[25] to the experiments of Loeffler and Frosch, in which they had shown that the specific infectious agent of foot and mouth disease in cattle would pass through a porcelain filter and was therefore too small to be discovered with our microscopes.

The occurrence of an outbreak of yellow fever, in 1901, in Santiago de las Vegas, near Havana, offered an opportunity to obtain cases for the purpose of testing whether the organism of yellow fever could also be passed through a standard bacteria-proof filter, and it was decided, upon my suggestion, to test at the same time the effect of moderate temperature upon the infectious property of the serum.

I reached Havana on August 11th, and was quartered at Las Animas Hospital, which was provided with a good laboratory, and where inoculation experiments were being conducted by Dr. Guiteras. On the day of my arrival Dr. Guiteras's first patient was taken sick, and with his consent, I prepared to draw blood on the following morning. When the time arrived Dr. Guiteras and the director of the hospital, Dr. John Ross, decided against the procedure, and I was not permitted to use any of the seven cases that occurred within a few days. This was a great disappointment, because my time was limited for official reasons and cases had become very scarce in Havana in consequence of the measures that had been instituted against the mosquito. The excitement following the fatalities that occurred later among Dr. Guiteras's cases rendered it exceedingly difficult for me to procure willing subjects. Permission to apply mosquitoes to the last six subjects had also been refused, but through the courtesy of the chief surgeon, Colonel Valery Havard, I was permitted to use some of Dr. Guiteras's infected insects. I had been told by Dr. Guiteras and Dr. Ross that further inoculations with the mosquito were not justifiable, and should not be made, but as it was practically impossible to obtain a suitable case otherwise, I determined to proceed. I was firmly convinced, and I am still, that in healthy subjects inoculated with yellow fever, judicious treatment will insure a lower death rate than obtains with typhoid fever. Fortunately, all our purposely inoculated patients recovered.

On September 16th, with his free consent, I applied four mosquitoes to a Spanish immigrant. One of these insects had bitten the subject of a fatal case fifty-three days previously, and the other three had also bitten the subject of a fatal case thirty-four days before. This man's attack was severe, but he made a perfect recovery. I drew blood on the second day, but an accident, caused by a careless assistant, compelled me to abandon the experiment. I was prepared to draw blood again on the third day, but the patient protested and I did not wish to alarm him.

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[24] *American Medicine*, November 23, 1901, p. 811.

[25] Reed and Carroll, The Ætiology of Yellow Fever, a Supplemental note. *American Medicine*, February 22, 1902.

My second case occurred October 13th, in another Spaniard to whom I had applied, four days previously, eight mosquitoes, eighteen days after they had bitten the last patient. Blood was drawn from him on the second day, the serum separated, diluted with an equal quantity of sterilized water, and passed through a new, sterile Berkefeld filter. Three c. c. of the filtrate were injected into each of three non-immunes on the following day, with the result that, in a little over four days, two of them were attacked with yellow fever. The integrity of the filter was tested and found to be perfect. The test was made by passing through it a bouillon culture of *Staphylococcus aureus*.

Another set of experiments had been undertaken with the clot that remained after the serum had been drawn off. A little sterile water was added and the whole whipped up in a sterile mortar with a sterilized egg-beater. A double water bath had been arranged and kept at a temperature of 55° C. A portion of the fluid blood mixture in a test tube was then immersed in the bath, and shaken several times until it became warm; the immersion was then continued for ten minutes longer, after which the tube was removed and plunged into cold water. Three recently arrived Spanish immigrants were each given 1.5 c. c. of this heated mixture subcutaneously, and another received 0.75 c. c. of the portion that had not been heated. The man who received the unheated blood mixture was attacked with yellow fever five days and two hours later; the three who had received the same material in double the quantity, after being heated, remained in perfect health.

You will recall that only two of the three persons who received the injection of filtered serum were infected. The third was perfectly well on the seventh day, shortly after the expiration of which he was given a subcutaneous injection of 1.5 c. c. of blood drawn directly from one of the positive cases produced by the serum filtrate that had failed to infect him. The blood that he now received was drawn early in the fourth day of the attack. Just twenty-four hours later he was taken ill with a mild but typical attack of yellow fever. Much as I desired to pursue the work further, my limited time had almost expired, and I was under the necessity of returning to the United States.

Since we began our work in 1897, we have obtained the following original results:

1. *Bacillus icteroides*, Sanarelli, and the hog cholera bacillus are practically identical.

2. Yellow fever is transmitted by the mosquito *Stegomyia fasciata*.

3. This mosquito may convey the disease as early as on the twelfth day after biting the patient, and it may retain the power to do so as long as it lives.

4. Yellow fever can be transmitted by the hypodermic injection of blood drawn from a patient in the first, second, or fourth days of the disease.

5. Yellow fever is not communicated by fomites.

6. The infectious agent of yellow fever can be passed through a filter that is impermeable to ordinary bacteria.

7. The infectious property of blood drawn from yellow fever patients is destroyed by a temperature of 55° C., maintained for ten minutes.

Our demonstration of the power of the mosquito to convey the disease has been confirmed by Guiteras,[26] in Havana; Parker, Beyer, and Pothier,[27] in Vera Cruz; Marchoux, Salimbeni, and Simond,[28] in Brazil; and Ribas and Lutz,[29] in San Paulo, Brazil. The French commission confirms the statement that the infectious agent passes through the Berkefeld filter, and reports also that it passes through the Chamberland bougie F, but is retained by the bougie B. They found that in defibrinated blood, kept under vaseline oil, the virus was still active after five days, but inactive at the end of eight days; that the virus was rendered inert by exposure to a temperature of 55° C. for five minutes; that a relative immunity could be conferred by the injection of *(a)* the serum heated at 55° C. for five minutes; *(b)* defibrinated blood kept under vaseline oil at the laboratory temperature for eight days; that the serum of convalescents possessed both preventive and therapeutic properties; that a mosquito could become infected only by biting a patient in the first three days of the disease; that it was not dangerous until after the lapse of at least twelve days thereafter; that the bite of the infected mosquito did not necessarily produce yellow fever (in a susceptible person); that the bite of an infected mosquito, when without effect, did not confer immunity; that the disease was not produced by contact with the patient, his excreta, or personal effects; that the only known means of infection was the bite of *Stegomyia* or blood injection; that yellow fever could only be contracted where *Stegomyia* was present; that the prophylaxis of yellow fever rested entirely on measures directed against the mosquito; that the period of incubation could be prolonged to thirteen days, and that they had not been able to find the specific agent of the disease. They also record the fact that 0.1 c. c. of virulent serum injected under the skin is sufficient to produce an attack of yellow fever.

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[26] *American Medicine*, November 23, 1901, p. 811.

[27] *Bulletin No. 13*, Yellow Fever Institute of the Public Health and Marine Hospital Service, Washington, 1903.

[28] *Annales de l'Institut Pasteur*, Tome xvii, No. 11, November, 1903.

[29] *Revista Medica de Sao Paulo*, Tomo vi, No. 4, February 28, 1903.

The case in which a period of incubation of twelve days and two hours was observed, was a man who had been given 5. c. c. of heated serum twelve days previously and again seven days before inoculation another injection of 10. c. c. of heated serum. His remarkably mild attack followed the injection of 1. c. c. of blood drawn from a severe case in third day of illness. This gives a probable significance to the case reported by Parker, Beyer, and Pothier[30] in which a mild attack followed the subcutaneous injection of 0.033 c. c. of filtered serum after an incubation period of nine days and twelve hours. It also directs attention to the case reported by us[31] in which a mild attack followed twenty-four hours after the injection of 1.5 c. c. of blood drawn early in the fourth day of the disease. The subject of this experiment had been given 1.5 c. c. of the filtered serum seven full days before, without result. He reported some vague symptoms on the fourth day, but his temperature did not rise above 99.4° F.; after the expiration of the seventh day he was interrogated and said that he "had never felt better in his life," and his bright, active appearance fully sustained the assertion. It seems probable that the serum injection that did not produce an attack may have exerted some influence in shortening the period of incubation after the injection of blood seven days later.

Sternberg[32] states that, in 1887, Dr. Ruis, of Vera Cruz, injected a hypodermic syringe full of blood drawn from a patient in the eighth day of the disease into a non-acclimated individual. The result was negative.

In conclusion, I desire to invite your attention to some determined attempts at self inoculation with black vomit, blood serum, etc., from yellow fever patients, that were made one hundred years ago, by a student of the University of Pennsylvania, named Stubbins Ffirth, who embodied a description of them in a graduation thesis[33] presented to the provost, trustees, and professors of the university, on June 6, 1804. During the yellow fever epidemics of 1802 and 1803, in this city, he made numerous attempts to inoculate himself by depositing fresh black vomit and blood serum obtained from patients in the early stage of the disease, into incisions made in his arms and legs. Besides numerous other experiments he inserted four drops of such serum into an incision in his leg. One must read this interesting treatise in order to appreciate fully the determination of the investigator who administered black vomit to animals, injected it into their circulation, and deposited it in his own tissues. He inhaled the fumes from six ounces of this material, which he heated over a sand-bath in a small room; the residue was then made into pills and swallowed. Failing in this, he further tried to inoculate himself with blood serum, saliva, perspiration, bile, and urine, and finally concluded that yellow fever was neither infectious nor contagious. Since the French commission has told us that 0.1 c. c. of virulent serum is sufficient to infect, we can safely say that Stubbins Ffirth came very near to proving the inoculability of yellow fever more than a century ago.

Therapeutical Notes.

Oatmeal in Diabetes.—In reference to the Therapeutical Note on this subject published in our issue for February 6th, Dr. Henry Rafel writes that Von Noorden's views were delivered at a scientific congress at Karlsbad in 1902. He adds: "The reason I write you is the following from the article [in the *Berliner klinische Wochenschrift*]: 'Von Noorden calls attention to the fact that light cases without diaceturia generally stand the oatmeal cure badly. . . . In returning to the ordinary diabetes fare great caution is necessary.' Danger of coma! That's a rather important little point."

A Carminative Enema.—Martinet, according to *Journal de médecine de Paris* for January 17th, prescribes:

℞	Tincture of assafœtida	5 grammes (75 minims);
	Anise water	50 grammes ($1^{2}/_{3}$ ounces);
	Decoction of marshmallow	100 grammes ($3^{1}/_{3}$ ounces).

M. For one dose.

Vaginitis.—*Revue française de médecine et de chirurgie*, for January 18th, quotes from *Bulletin therapeutique:*

℞	Salol	3 to 8 grammes (45 to 120 grains);
	Glycerin	250 grammes ($8^{1}/_{8}$ ounces).

M. Use every second day a tampon soaked in the preceding.

Another prescription is:

℞	Acetanilid	1 gramme (15 grains);
	Tannic acid	½ gramme (7½ grains);
	Extract of golden seal	25 centigrammes (3¾ grains);
	Sugar of milk	10 grammes ($^{1}/_{3}$ ounce).

M. For one suppository; smear with petrolatum before using.

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[30] *Bulletin No. 13*, Yellow Fever Institute, 1903, p. 36.

[31] Reed and Carroll, The Ætiology of Yellow Fever, a Supplemental Note. *American Medicine*, February 22, 1902, Cases IX and X.

[32] Buck's *Reference Handbook of the Medical Sciences.* New York, 1889, Vol. viii, p. 48.

[33] *A Treatise on Malignant Fever, with an Attempt to Prove its Non-contagious Nature.* By Stubbins Ffirth, House Surgeon of the Philadelphia Dispensary. Printed for the Author by B. Graves, No. 40 North Fourth street, Philadelphia, 1804.

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CAPILLARY BRONCHITIS.

Exact nomenclature is requisite for correct diagnosis and successful treatment. In medicine there is certainly much in a name, for, to some extent at any rate, we have to treat the disease as well as the patient. If we misname a disease, therefore, we are liable to mistreat it.

It has been a marked tendency of modern times to multiply technical terms and to differentiate new diseases. This is partly counteracted by the opposite tendency to eliminate certain terms from medical momenclature. Any attempt to simplify our classifications when founded upon substantial ground should be encouraged. Among the terms that have been deliberately dropped during the past fifteen or twenty years is capillary bronchitis. Most modern authors, particularly the pædiatric, do not employ the term in their recent editions. It is not to be found in the works of Holt and Rotch, and Osler uses it only as a synonym for bronchopneumonia. The reason for this is the demonstrated fact that extensive involvement of the capillary bronchi probably never exists without the involvement of the alveoli. In other words, capillary bronchitis of sufficient extent to cause distinctive symptoms is always accompanied by pneumonia. Then, why should the practitioner confuse, and perhaps mislead, himself by using the name of a mild disease when a more serious one is present? Its use can only lead to confusion and error.

The term capillary bronchitis was devised when clinical observation was the only method of studying disease in infants. During the past two or three decades a class of clinician-pathologists has arisen whose members have made autopsies by the thousand upon the youngest patients. They all discard the term as tending to mislead the practitioner, for they always find pneumonia in the so-called cases of capillary bronchitis.

The descriptions of capillary bronchitis given in the text-books of twenty years ago are perfect pictures of diffuse bronchopneumonia, as we understand the disease to-day. Meigs and Pepper described it as a disease with a high mortality rate, running its course in favorable cases in from seven to ten days. The chief point of diagnosis between capillary bronchitis and bronchopneumonia made by the older writers was inability to detect consolidation. We now know that expert clinicians sometimes find this impossible, even in extensive bronchopneumonia, when numerous small and scattered areas are involved. Frequently, all that can be detected are bunches of fine râles here and there throughout the chest. The stethoscope is necessary in many cases to pick out these small areas, for they easily elude the unaided ear. In very many cases the diagnosis must be made from the symptoms, rather than from the physical signs. Careful daily examination of the whole chest with the stethoscope, however, will rarely fail to reveal these small areas of fine râles, where more or less distinct bronchial sounds may after a time be heard.

The older theory that the capillary bronchi might be extensively involved without involving the alveoli was erroneous. It must presuppose two conditions which do not exist: first, that the disease starts from a common centre and travels with equal rapidity in all directions toward the periphery; second, that the alveoli are all at the same distance from this centre. As a matter of fact, inflammation starting in the bronchi will have reached some of the alveoli before it has gone half way to others.

In several discussions, of late, the older term has still been adhered to. The argument has been based on clinical evidence alone. The statement has been made that there are some attacks of illness in young children too severe to be called ordinary bronchitis, but not bad enough for pneumonia. This is a kind of argument that has led to much confusion and uncertainty in medical writing and practice. There are but few diseases which may not appear in very mild form. As well might one say that a very small potato is not really a potato, as to say that a very mild diphtheria is not really diphtheria, or mild pneumonia is only capillary bronchitis. A small potato is, nevertheless, a potato and, if planted in good soil, is capable of producing very large potatoes. A mild scarlet fever is, nevertheless, scarlet fever and is capable of producing a virulent attack in another child, even though the doctor calls it rose rash. This propensity to call mild cases of disease by some other name does great harm. The patient usually receives less careful attention from doctor and attendants than he would were the more serious sounding name used, and is apt to take harm during convalescence. In the case of the infectious diseases this custom may be the cause of spreading them broadcast. Mild cholera is known as cholerine, mild typhoid fever as continued malarial fever, mild scarlet fever as scarlet rash, mild diphtheria as ulcerated sore throat, mild smallpox as varioloid. It is better for the patient and better for the community that these names, one and all, together with capillary bronchitis, should be abandoned. They can serve no good purpose, but often befog the mind of the practitioner and lead him into error and may cause widespread injury.

WHAT DOES THE OPTICAL SOCIETY WANT?

An optician has the right to manufacture and sell spectacles and eyeglasses exactly as a druggist enjoys the right to compound and sell drugs. He may sell a pair of glasses to any person who desires to buy, just as a druggist may sell any drug, with the exception of certain specified ones, to any person calling for the same. These rights have never been questioned, and there is not the slightest probability that they ever will be. Often in cases of disease, either of the eye itself or of some other part of the body, the central vision is interfered with slightly or not at all, and a thorough examination of the eye is necessary to detect the true condition, but no optician has yet been held legally responsible for the damage done by lulling into a fancied security with a pair of glasses the victims of such diseases. It is very doubtful if an optician could be held responsible if such persons selected the glasses themselves, with or without his help, so long as he did not claim to be competent to recognize the conditions which caused them to complain of their eyes. Some opticians, however, go so far as not only to assert, but to advertise, that they are competent to recognize these conditions, and even approach the medical profession to ask its members to send to them patients with obscure nervous troubles, that they may assist the physician in the diagnosis and treatment of the causes of these troubles. Yet many, if not all, of the ablest and most competent opticians acknowledge that they are unable even to guess when a lesion of the fundus is present, at least until vision has become materially impaired. We have fairly stated the rights of the opticians and also the manner in which some of them have been trying to practise, and are practising, medicine. It is proper, then, that we should ask, What does the Optical Society seek to gain from the legislation it now asks for? Does the bill it is now presenting to the Legislature require that all who henceforth engage in business as opticians shall know how to grind lenses, shall be trained to adjust eyeglass frames properly on the face, or be skilful in any other department of the optician's art, as the pharmacist is required to know the drugs he handles, and how to compound and prepare them? There is not a word of this in the bill, and yet the number of opticians who can properly adjust a pair of glasses to the face is pitifully small. Such a bill would raise the standard of requirements for those who would engage in that pursuit and would be truly " in the interest of scientific advancement and for the good of the public." But this bill is not of that nature. We must look further to find what the society wants.

The examination of eyes for glasses, performed by persons who exhibit diplomas which seem to certify to their competency to do such work, is, to say the least, not well done. What can be expected of young men who have attended a school where fitting of glasses is supposed to have been taught, have paid their fees, listened attentively to their teachers for the two or more weeks required on the schedule, purchased outfits and received diplomas as graduate opticians? Those who apply to them suppose that they have received all necessary instruction in regard to a subject of which they are still in dense ignorance. Innocently they make the grossest mistakes, and the president of the Optical Society merely voices both professional and non-professional opinion when he says "that the compulsory education of those engaged in fitting spectacles and eyeglasses will prove a pronounced public service." Yes, but the proprietors of the schools which graduate these incompetent opticians are prominent in the councils of the Optical Society. Do they want to take their students' money and then render it impossible for them to use the outfits they have purchased? It is hardly likely, for this would close the schools and reduce the incomes of some prominent members. What, then, does the society desire? The president says that the bill does not invade the domain of medicine, and therefore he asks the support of the physicians of the State. The first section of the bill states that its object is to render it legal for all persons who shall pass an examination before a board chosen from the Optical Society to employ "any means, other than the use of drugs, for the measurement of the powers of vision and the adaptation of lenses for the aid thereof." To do this, as every person has a right to demand it should be done, such persons must be able to determine whether an imperfect vision is due to disease, an injury, an error of refraction, or a congenital fault. Granted an excellent knowledge of the branch of physics, or natural philosophy, called optics, an additional knowledge of the eye as an organ of the living body is necessary, in order to distinguish between these conditions. This knowledge can be obtained by medical study. It forms one of the special branches of study at the medical schools, and there alone is it taught. The needed education of those engaged in fitting glasses is medical, but there is nothing in the bill which indicates any desire on the part of the society that future generations of opticians should be graduates in medicine, or exhibit evidence of study of this branch of medicine.

The natural interpretation of the words of the bill is, that it is for the purpose of allowing certain men to practise a certain branch of medicine without submitting to the examinations now required by law of everyone who would engage in such practice, and of empowering them to formulate inadequate examinations to be passed by those who would hereafter become their competitors. But the president says that the plain wording of the bill is misleading "as the measure does not invade the domain of medicine." If the society wishes to elevate the standard of technical requirements for permission to engage in legitimate optical business, let it introduce a bill which would promote so desirable a purpose; but if it merely wishes to legalize the present illegal practice of medicine by some of its members, then let the president state openly that such is the case, by rewriting the first section of the bill, and not try to secure support from the physicians of the State under false pretences?

THE RÔLE OF THE MOSQUITO IN THE PROPAGATION OF FILARIASIS.

It is now some time since Manson and Bancroft demonstrated that mosquitoes which had bitten subjects afflicted with filariasis, ingested the embryos of the parasite along with the blood, and that the embryos then passed through the walls of the insect's stomach becoming lodged in the thoracic muscles. According to these authorities, mosquitoes thus infected, died on the surface of the water and the embryos of the filaria, thus set at liberty, penetrated the body of man either by means of the water drunk, or by the watercress and other aquatic salads which are usually partaken of uncooked. Inoculation was also thought to take place by means of a solution of continuity of the integuments when the subject bathed in contaminated water.

This theory appeared true, and in point of fact the filaria had occasionally been found in the suspected water, by Magalhaes, in Curioca, which supplies Rio de Janeiro with water, as well as by

Cobbolæ in the waters of Egypt. Such instances are, however, infrequent; besides, it was quite difficult to understand how the larvæ could wander from the digestive tract to the cutaneous lymphatics. The recent researches of Low, however, have definitely decided the question.

It was formerly believed that, having bitten an individual infected with the filaria, the mosquito died very shortly after on the surface of the water; but Bancroft allowed several mosquitoes to bite a patient whose blood was loaded with the embryos of the parasite, and was able to keep the insects alive for some time, so that they could easily inoculate with the parasite should they bite a healthy subject. Some of these mosquitoes he killed immediately after they had ingested the embryos from the blood, while others were killed one, two, or three hours later. He also killed one every twelve hours for twenty-three days, and the insects were studied by Manson and Low. The latter made a number of microscopical preparations which showed the transportation undergone by the embryos in the body of their host.

The embryo found in the human blood is, as is well known, enclosed within a hyaline membrane, but when in the stomach of the mosquito it loses this envelope within a few hours after ingestion. Within twenty-four hours the embryos perforate the walls of the stomach and immigrate to the muscles of the thorax when they pass to the larval state. Like those of trichina, the larvæ of filaria become lodged between the muscle fibres, where they rapidly develop to such an extent that at the end of the eleventh day they measure from 20 to 25 μ in breadth and more than a half a millimetre in length.

After the lapse of eighteen days the larvæ leave the thoracic muscles, work their way into the prothorax, reach the anterior part of the head, and thence penetrate into the anterior cavity of the labium.

The mosquito is then *à point* for inoculation; he is so to speak charged, and should he bite a healthy human subject, the larvæ become directly introduced into the tiny wound thus produced. Once under the skin they enter the lymphatics and there remain until adult development is reached.

The *Culex ciliaris* is the genus of mosquito that has offered the study of transformation of the filiaria. The proof that all types of mosquito cannot serve as a host for the embryo, is derived from the researches of Myers, carried out at the hospital of Formosa. This experimenter placed a patient afflicted with filariasis in a room containing a large number of mosquitoes. These were examined the next day and were found filled with embryos. The embryos, however, died before commencing their evolution, showing that the mosquito of Formosa was not a favorable soil for the development of the parasite. On the other hand, countries where filariasis abounds are infested by the *Culex ciliaris*, and Lewis found that fourteen per cent. of the insects examined contained larvæ.

Consequently, it would appear that each genus of mosquito has its own part in the propagation of disease; the anopheles spreads malaria, the culex inoculates with filariasis. As to yellow fever, all types of mosquito seem to be able to inoculate man with the specific bacillus. The plague is spread by rats, and their inhabitants the flea, but from the studies of Sansino it has been shown that both fleas and bedbugs do not offer a proper soil for the development of the larvæ of the filaria, as the embryos die shortly after their ingestion. CHARLES GREENE CUMSTON.

WHO MAY USE ALCOHOL WITH SAFETY?

E. Devaux, in *Bulletin médical*, for January 23, 1904, notes that dry temperaments (the "herpetics" of Lancereaux) furnish the most remarkable cases of longevity; the osmotic tension of their cells is relatively high and, if they furnish the largest number of total abstainers, it is because their temperament renders them indifferent to alcohol.

Arthritics, the "hypertense individuals" of Huchard, have an organism highly mineralized; their cellular osmotic tension is excessive; their tissues, plunged in an osmotic medium relatively too high, are in constant struggle to preserve their isotonic equilibrium, and this struggle, constantly renewed against dehydration, against dessication, terminates in sclerosis. Alcohol, however, is sclerogenous; therefore the arthritic who becomes a victim to alcohol is fatally destined to early scleroses of every description; to him alcohol is a poison and a virulent one.

On the other hand, the scrofulous, whose cellular osmotic tension is relatively low and whose mineralization is slight, whose osmotic changes are remarkably slow, have feeble vital energy and an inferior organic solidity. This type is always benefited by salt baths (like alcohol, although in a lesser degree, diffusible, irritant, and dehydrative) because they raise the cellular osmotic tension. Is it illogical to think that the more or less generous vintages taken during meals can fail to act as a tonic to these people? Alcohol dehydrates! Precisely; the scrofulous tissues are bathed in a dilute plasma, and for them alcohol is the remedy *par excellence*.

Devaux thinks that alcohol, therefore, may be systematically denied to arthritics and as systematically prescribed to the scrofulous. We must not, however, suddenly withdraw his alcohol from an arthritic or proceed to drown a scrofulous subject in his remedy; temperaments are slow in the remaking.

THE JOURNAL OF INFECTIOUS DISEASES.

The first number of this important addition to the list of scientific medical periodicals, dated January 2, 1904, lies before us. It has been founded by the Memorial Institute for Infectious Diseases, and is under the editorship of Dr. Ludvig Hektoen and Dr. Edwin O. Jordan, in conjunction with Dr. Frank Billings, Dr. F. G. Novy, and Dr. W. T. Sedgwick. It contains articles on The Cultivation of Trypanosoma Brucei, by F. G. Novy and Ward J. McNeal; Studies in Pyroplasmosis Hominis (" Spotted Fever," or " Tick Fever," of the Rocky Mountains), by Louis B. Wilson and William H. Chowning, with a map, charts, and half-tone and colored illustrations; A Report of Two Cases of a Peculiar Form of Hand Infection, Due to an Organism Resembling the Koch-Weeks Bacillus (half-tone illustrations), by John R. McDill and William B. Wherry; The Pathological Anatomy of " Paratyphoid Fever," Report of a Fatal Case, with Bacteriological Findings (with colored illustration), by H. Gideon Wells and Lee O. Scott; Agglutination of Streptococci, Especially those Cultivated from Cases of Scarlatina, by Human Sera, by George H. Weaver; The Effects on Streptococci of Sera of Coldblooded Animals, by Gustav F. Ruediger; The Action of Certain Salts on Complement in Immune Serum, by Wilfred H. Manwaring; An Experimental Study of Thyreotoxic Serum (half-tone illustrations), by Milton M. Portis; A Contribution to the Casuistry of Placental and Congenital Tuberculosis (half-tone illustrations), by Aldred Scott Warthin and David Murray Cowie; Changes in the Bacterial Flora of Sewage During Storage, by C. E. A. Winslow and D. M. Belcher; and On Some Cultural Relations and Antagonisms of *Bacillus Coli* and Houston's Sewage Streptococci; with a Method for the Detection and Separation of these Microorganisms in Polluted Waters, by S. C. Prescott and S. K. Baker. The journal is to be " devoted to the publication of original investigations dealing with the general phenomena, causation, and prevention of infectious diseases, both of known and of unknown origin," and will be issued in numbers at irregular intervals, each annual volume to contain a minimum of five hundred pages. Both as an exemplar of, and a factor in, the progress of scientific medicine, it is worthy of the highest commendation.

SOAP AND THE BEARD.

The average man, if he ever considered the question at all, if asked why soap was rubbed into the beard before shaving, would probably reply " to soften it." Some scientist has recently examined microscopically an ordinary dry hair from an unshaven chin and on another duly saponified *secundum artem* by our ancient confrère, the barber. The result of this treatment is apparently the conversion of the hair into a firm elastic tube containing a quantity of drying soap, the whole affording the necessary resistance to a cutting edge. Soap does not soften the beard, therefore, but partly stiffens it. Readers of *The Talisman* will remember how Saladin surpassed Richard I's performance with a two-handed sword on a mace, by severing with his Damascus scimitar a veil floating in the air. In the days of Damascus blades, doubtless, soap was unnecessary to the barbers of Bagdad, and assumed its present prominence in our scheme of civilization only when some oriental Yankee threw a panic into the steel industry by the invention of potmetal.

THE ALBANY MEDICAL ANNALS.

With the January number the *Albany Medical Annals* celebrates its jubilee of twenty-five years' honorable and useful existence. The issue consists of 208 pages, and is every way worthy of the occasion, as will be seen from the fact that it contains original contributions by F. C. Curtis and Willis G. Tucker, Albert Vander Veer and Edgar A. Vander Veer, Samuel B. Ward, Henry Hun, George Blumer, George L. Streeter, Hermon C. Gordinier, Joseph D. Craig, Andrew MacFarlane, Richard Mills Pearce, H. Judson Lipes, Arthur W. Elting, Spencer L. Dawes, Clement F. Theisen, Henry Larned, Keith Shaw, Herbert D. Pearse and Henry L. K. Shaw, and Alvah H. Traver. Dr. Arthur G. Root contributes clinical and pathological notes. It is freely illustrated with halftone and colored plates.

News Items.

Society Meetings for the Coming Week:

MONDAY, *February 15th.*—New York Academy of Medicine (Section in Ophthalmology): New York County Medical Association; Hartford, [illegible] dical Society; Chicago Medical Society.

TUESDAY, *February 16th.*—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, *February 17th.*—Woman's Medical Association (New York Academy of Medicine); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); New York Society of Dermatology and Genitourinary Surgery (private); New York Academy of Medicine (Section in Genitourinary Diseases).

THURSDAY, *February 18th.*—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of the City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, *February 19th.*—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Postgraduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynæcological Society; Manhattan Medical and Surgical Society (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending February 6, 1904:

	Week end'g Jan. 30.		Week end'g Feb. 6.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	814	19	852	18
Diphtheria and croup	461	53	475	62
Scarlet fever	435	27	413	24
Smallpox	..	..	5	..
Chickenpox	156	..	108	..
Tuberculosis	316	149	347	175
Typhoid fever	24	7	24	13
Cerebrospinal meningitis	..	6	..	6
Totals	2,206	261	2,224	298

Merger of Two Medical Journals.—The *International Medical Magazine* has become amalgamated with the *Archives of Pædiatrics,* the combined journals assuming the name of the latter.

German Hospital Society of Brooklyn.—The following officers have been elected for the current year: President, F. C. Heltman; vice-president, Francis A. Deck; second vice-president, Philip Correll; treasurer, Louis G. Burger; financial secretary, Luder Schulenburg; corresponding secretary, C. H. A. Wagner.

Kings County Hospital Alumni Association.—The eleventh annual dinner and reunion of this organization will be held Thursday evening, February 25, 1904, at the Oxford Club, Brooklyn. Following are the officers: President, Dr. Charles B. Bacon; vice-president, Dr. Linn Emerson; secretary and treasurer, Dr. William Madden; historian, Dr. Earle Mayne.

The Medical Society of the Borough of the Bronx will hold its twelfth annual banquet at the Hotel Manhattan on Monday evening, the 15th instant, at 7.30. Among the invited guests are: Dr. Frederick Holme Wiggin, Dr. Thomas Darlington, Dr. Mabon, of Bellevue Hospital; George S. Rice, deputy chief engineer of the subway; Honorable Mr. Raines, John F. Erdman, Dr. William F. Gottheil, and the Reverend Mr. Kephart.

The New York Academy of Medicine, 17, 19, and 21 West Forty-third Street.—The Section on Ophthalmology will meet Monday evening, February 15, 1904, at 8.15 o'clock. Order.—Presentation of Cases: 1. Acromegaly with Bitemporal Hemianopsia and Hemiopic Pupillary Reaction, by F. J. Parker, M. D.; 2. Paralysis of Divergence, by H. W. Wootton, M. D. Demonstration of Specimens: Aneurysm Pressing on the Chiasm, by Coleman W. Cutler, M. D. Paper: Preliminary Report of a New Method for the Application of Local Anæsthesia in Operations on the Eyeball and Eyelids, especially in Trachoma, by J. Guttmann, M. D. Discussion by Drs. H. Knapp, J. E. Weeks, W. Cowen, and others. A. Duane, M. D., chairman, 49 East Thirtieth Street. H. W. Wootton, M. D., secretary, 35 West Forty-fifth Street.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g Feb. 6.		Week end'g Jan. 30.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	54	16	65	17
Diphtheria	66	14	57	10
Scarlet fever	92	8	88	10
Typhoid fever	88	13	126	10
Consumption	..	64	..	56
Cerebrospinal fever	..	..	..	..

St. Agnes Hospital.—This institution is said to have benefited to the extent of $27,500 by the will of Mrs. Mary Sharkey, who left the balance of an estate of $40,000 to various Roman Catholic seminaries, guilds, and individuals in the priesthood.

Less Smallpox in Philadelphia.—For two weeks the number of new cases of smallpox reported in Philadelphia has been much less, as compared with preceding weeks. The number of new cases from several other contagious diseases has also been less.

Mt. Sinai Hospital Association.—A new hospital will soon be in course of erection, following the purchase of property for that purpose by the Mt. Sinai Hospital Association of Philadelphia, which is composed of prominent Jewish citizens of Philadelphia, with Jacob D. Lit as president.

Dinner to Dr. Chandler.—Many prominent physicians of Pennsylvania, Delaware, and Maryland were present in Philadelphia at a dinner given to Dr. Joseph H. Chandler, of Centreville, Del., last week. Dr. Chandler is the president of the Joseph H. Chandler Medical Club, of Delaware.

Philadelphia Crusade Against Disease.—Within a very short time the Director of Public Health and Charities of Philadelphia will appoint about forty medical inspectors to have charge of definite precincts in Philadelphia. A revision in the method of reporting infectious and contagious diseases is also expected, as well as the regulation of the milk supply, from a sanitary viewpoint.

The Nervous System and Its Relation to Muscular Activity was the subject lectured upon last week at the Drexel Institute, of Philadelphia, by Dr. Albert P. Brubaker, Adjunct Professor of Physiology, at the Jefferson Medical College, of that city.

Methodist Episcopal Hospital, Philadelphia, Pa.—The board of managers of this institution have awarded a contract for the erection of a new $16,000 dispensary. The plans comprise a two story and basement structure, 40 by 80 feet, of brick, laid in Flemish bond with black headers. The building will have a slate roof, and is to be equipped with the latest sanitary appliances.

Bequests of the Late Mrs. Edward K. Landis.—Among the bequests of this unfortunate woman, murdered by her husband who subsequently committed suicide, are: Auxiliary of the West Philadelphia Hospital for Women, $300; Bethesda Home, Chestnut Hill, $300; Home of the Merciful Saviour for Crippled Children, $200; Home for Incurables, $300; Home for Children, $300.

The Phipps Institute Lecture.—The next lecture in the international course on Tuberculosis, under the auspices of the Henry Phipps Institute, will be given by Dr. Herman M. Biggs, chief of the department of health of New York, on Monday evening, February 15th, the subject being The Administrative Control of Tuberculosis. The profession in general is cordially invited to attend this lecture.

Crusade Against Impure Whiskey.—The Dairy and Food Commission of Pennsylvania is said to be inaugurating a campaign against the use of wood alcohol, capsicum, and various poisonous coloring materials used in the manufacture of whiskey. There appears to be a difference of opinion as to how far foreign substances may be added to whiskey, without transgressing the law, and still take away some of the raw taste, which the distilled product is said to possess, when it emerges from the distillery.

GENERAL

A Case for Diagnosis.—The daily papers inform us that the Russian admiral in charge in the far east is suffering from the effects of a severe nervous depression. One of our readers asks, "Is it not possible that his disease is in reality chorea?"

The Macomb County Medical Society, at its annual meeting in Detroit, Mich., on January 29th, elected the following officers: President, Dr. Knight, of Mount Clemens; vice-president, Dr. William Greenshields, of Romeo; secretary, Dr. Joseph Croman, of Mount Clemens.

Wesleyan Memorial Hospital, of Atlanta, Ga.—The trustees of this institution at their meeting on January 28th decided to appeal to all Methodist churches to help in the erection of a large and representative hospital in Atlanta, for which a charter will be secured so that the organization will be legal.

Statement of Mortality in Chicago, Ill., for the Week Ending February 6, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on estimated mid-year populations of 1,950,000 for 1904 and of 1,820,000 for 1903:

	Feb. 6, 1904.	Jan. 30, 1904.	Feb. 7, 1903.
Total deaths, all causes	596	549	596
Important causes of death:			
Acute intestinal diseases	13	14	21
Apoplexy	14	13	13
Bright's disease	48	24	37
Bronchitis	31	40	28
Consumption	54	57	54
Cancer	26	19	22
Convulsions	18	14	17
Diphtheria	12	7	13
Heart diseases	45	56	42
Influenza	12	7	7
Measles	..	..	4
Nervous diseases	25	23	31
Pneumonia	151	121	127
Scarlet fever	6	3	9
Suicide	9	5	9
Typhoid fever	5	5	11
Violence (other than suicide)	25	27	18
Whooping cough	..	..	3

Sisters' Hospital, of Buffalo.—The annual election of officers of the medical and surgical staff of this institution has resulted as follows: President, Dr. James J. Mooney; vice-president, Dr. Charles S. Jewett; secretary, Dr. Alfred E. Diehl.

Cambridge Hospital, of Cambridge, Mass., has received $5,000 by the will of the late James A. Woolson; at the decease of the widow, the hospital will come into possession of a further sum of $25,000.

Franklin Square Hospital, of Baltimore, Md.—Dr. Harry C. Johnson has resigned his position as resident physician, and will begin private practice at Luckett's, Va.; he will be succeeded by Dr. Oscar H. McNemar, hitherto assistant resident physician.

Land for Hospital in Kansas City, Mo.—Simeon B. Bell, of Rosedale, has given the University of Kansas 440 acres of land in Cass and Jackson counties, Mo., upon which to erect a hospital. The value of the gift is estimated to be $25,000.

White Plains, N. Y., Hospital.—The board of managers of this institution announce a gift of $25,000 for the erection of a new building. The donor is said to be a wealthy New York woman, who makes the gift as a memorial of a beloved deceased relative.

The Curie Laboratory.—Although Mr. Curie has been honored with a professorship in the faculty of sciences in Paris, money and space were lacking at the Sorbonne to furnish him with an adequate laboratory. The Pasteur Institute has come to the rescue with the required space and apparatus.

Japan's American Surgeon.—It is stated that Dr. Nicholas Senn, of Chicago, Ill., will shortly go to Japan to assume charge of the medical and surgical corps of the Mikado's army during the current war with Russia. Dr. Senn, it is further alleged, gave his promise some years ago to the Japanese president of the local branch of the Red Cross Society to take this responsibility whenever called upon.

New Hospital for Kansas City, Mo.—The joint committee of the council met on January 29th to consider plans for this institution; the council has passed the ordinance locating the hospital on the site given by Mr. Thomas H. Swope.

Government Position for a Colored Physician.—Dr. Simeon L. Carson, a graduate of Ann Arbor University, has received the appointment of physician to the Indian reservation at Lower Brule, S. D., having been the successful candidate at the recent competitive examination. The position commands a salary of $1,000 per annum.

Christ Hospital, Findlay, O.—The handsome residence of Mr. and Mrs. Lewis Dukes on West Sandusky Street, valued at $10,000, has been given to the Elizabeth Gamble Deaconness Association to hold in trust as a children's ward for Christ Hospital. The deed becomes effective on the day the survivor of the aged couple is buried.

The Lowell (Mass.) General Hospital.—At a special meeting of the trustees of the Lowell General Hospital, January 29th, a check for $50,000 was received from Frederick F. Ayer, of New York, to be used for the construction of an additional building, which will provide about thirty more beds, a maternity department, and an operating room.

The Tenth Quadrennial Congress of the Polish Physicians and Scientists will be held this year in Lemberg, Austria, July 20th to 24th. Professor E. Machek is the chairman of the committee of arrangements, and Professor W. Sieradzki, secretary. Dr. Francis E. Fronczak, of Buffalo, N. Y., is the representative of the committee for the United States of America.

San Francisco, Cal., Maternity Dispensary.—This institution is now open at 1217 Harrison Street and is fully equipped for day and night service, including an outdoor department by means of which poor women will be attended in their homes. A nursery guild has been established, composed of young women who will make the small but necessary garments required for the real fruit of the charity.

Harvard Medical School and Brigham Hospital Allied.—A working agreement is being arranged between the Harvard Medical School and the proposed new Brigham Hospital, which will bring the two institutions into close association when the Brigham Hospital is completed and opened. The Medical School will be benefited materially by the $4,000,000 bequest left by the late P. B. Brigham.

Doctors in the United States.—A writer in a popular weekly states that there are 200,000 physicians in this country, or one to every 350 inhabitants, the average income of each practitioner being about $750.00 per annum. This makes a total of $150,000,000 spent for medical attendance by the American public. We need hardly say that this sum does not include the expenditure on patent medicines, which must mount up well toward the billion mark.

Tabernacle Infirmary, of Atlanta, Ga.—The capacity of this institution is to be enlarged by taking in an adjoining two story building, which has been known as the Wayside Home for Helpless Women. This home will be reopened in another part of the city, while the old building will be remodeled for use by the infirmary, which has also renovated the operating room, purchasing four hundred dollars' worth of new instruments, etc. The number of nurses will also be increased.

The Journal of the Kansas Medical Society, with offices at Lawrence, has incorporated the *Wichita Medical Journal* and the *Western Medical Journal,* of Fort Scott, and is now the only medical journal in Kansas. It is conducting a campaign of organization for the State Medical Society. Dr. G. H. Hoxie, Professor of Anatomy in the University of Kansas, is the editor. The council of the Kansas Medical Society has decided to recommend to the State society the adoption of the uniform constitution proposed by the committee of the A. M. A.

To Experiment with Smallpox Germs.—The Harvard Medical School has recently sent out on a unique expedition W. R. Brinckerhoff and E. E. Tyzzer, who go from the school to Manila. A fund of money has been raised by private subscription for their studies. About $6,000 will be spent by them in the coming year. This money was given in recognition of Dr. Councilman's recent discovery. Monkeys are plentiful and cheap in the Philippines, and the United States authorities there are not antivivisectionists. The government has guaranteed that the two doctors shall have every possible facility for their work.

Physicians Licensed at the January (1904) Examination to Practice in Minnesota:

E. W. Fahey, of Rochester, N. Y.; E. W. Gag, of New Ulm, Minn.; H. O. Hagen, of New Richmond, Minn.; L. L. Henninger, of Blue Earth, Minn.; J. M. Hilger, of Mazeppa, Minn.; R. W. Huffman, of Felton, Minn.; Orlando Ilstrup, of Cokato, Minn.; P. E. Kierland, of Rushford, Minn.; F. L. Kling, of St. Paul, Minn.; W. A. McIntosh, of Deer Creek, Minn.; George McCullogh, of St. Paul, Minn.; William S. Mortensen, of Freewater, Oregon; L. A. Moore, of Ely, Minn.; Derk Mulder, of Edgerton, Minn.; Jennie G. Purmort, of Fergus Falls, Minn.; F. D. Rogers, of St. Paul, Minn.; C. L. Sherman, of Sioux Falls, Ia.; N. M. Smith, of Minneapolis, Minn.; J. W. Sonck, of Hibbing, Minn.; C. S. Shultz, of Lake Park, Ia.; E. F. Swarthout, of Goodhue, Minn.; Matilda M. Thomas, of Chokio, Minn.; J. B. Tower, of Hibbing, Minn.; C. B. Wright, of Minneapolis, Minn.

New York State Hospital for the Care of Crippled and Deformed Children.—The third annual report of this institution for the year ending September 30, 1903, has just been issued. With accommodations for only 25 patients, 52 have been cared for during the past 34 months, of which 51.92 per cent. have been discharged, most of them cured. During the year, out of 350 applicants for admission, only 12 could be received. A school and kindergarten are maintained in connection with the hospital. The board of managers will be glad to have the names and addresses of poor children who are crippled or deformed; such information should be sent to the surgeon in chief, New York State Hospital for the Care of Crippled and Deformed Children, Tarrytown, N. Y.

German Hospital, of Kansas City, Mo.—The annual meeting of the association was held on February 10th. The house committee reported that 863 patients were treated during the past year; 793 were discharged, 40 died, and 30 are still under treatment. Of the patients, 479 were men and 384 women. Nationalities, United States, 706; Germany, 58; Ireland, 19; Italy, 19; Russia, 15; England, 11; Sweden, 9; Austria, 2; Belgium, 1; Canada, 5; France, 2; Greece, 2; Hungary, 1; Norway, 2; Poland, 3; Scotland, 4; Switzerland, 2; Roumania, 2. Pay patients numbered 779; charity patients, 84. Pay patients received 12,181 days' treatment; charity patients, 2,553 days; $3,653 was expended for charity patients. The medical staff consists of Dr. B. L. Sulzbacher, Dr. B. F. Clyde, Dr. F. B. Fryer, Dr. J. W. Perkins, Dr. Claude C. Anderson, and Dr. Edward Schaefer.

Examinations for Army Medical Service.—The examination of applicants for appointment as assistant surgeon in the United States army will be resumed in Washington immediately after the close of the present session of the Army Medical School; it will embrace the full examination (as heretofore), at the conclusion of which those found qualified will be commissioned. Full information as to the requisite qualifications for appearance for examination, method of application, nature and scope of examination, etc., may be obtained upon application to the surgeon general, United States army, Washington, D. C. The examining board will probably reassemble about the middle of April next, and those desiring to present themselves before the board should make application at once. Applicants are restricted in age to thirty years, and one year's hospital experience or its equivalent in private practice is required.

Willard Hospital Corporation.—The Reverend Edward Everett Hale, D. D., was again elected president of the Willard Hospital Corporation, Boston, Mass., at the annual meeting in the Unitarian building, 25 Beacon Street. Other officers elected were: Vice-presidents, Myron T. Pritchard and Edward Cummings; treasurer, William E. Lloyd; secretary, Sydney B. Elliot; auditor, Franklin A. Webster; trustees, John Koren, W. J. Mandell, Franklin A. Webster; directors, Miss Amelia H. Ames, Mrs. Ella A. Gleason, John Koren, W. J. Mandell, Edward May, Franklin A. Webster, Miss Hannah M. Weld, and Miss Helen M. Winslow. During the last year the hospital has treated 53 patients. During the year a donation of $10,000 had been received from the trustees of the estate of Robert C. Billings, and donations of $5,000 each from the late Mrs. Lucy Reed and Mrs. Charles A. Thatcher.

Hudson River State Hospital, of Poughkeepsie, N. Y.—It is stated that important building operations are to be inaugurated at this institution. The most important will be the erection of a new home for the members of the medical staff and their families who now reside in the administration building. The change will be made for the purpose of making more room for the patients, the institution, like all other insane hospitals in the State, being crowded beyond capacity. The Ziegler property, adjoining the hospital grounds, has been purchased by the State and the Ziegler mansion will be vacated by the family. The property consists of sixty-five acres and it is the intention of the authorities to build an addition on the Ziegler house. This will be used by the subordinate members of the medical staff and their families, and a new residence will be erected for Superintendent Pilgrim back of the Carpenter house, which now stands near the entrance.

St. Joseph's Hospital, Denver, Col.—The medical and surgical staff of St. Joseph's Hospital has elected the following officers for the year: Dr. A. R. Seebass, president; Dr. F. E. Waxham, vice-president; Dr. Edward Delehanty, secretary. Executive committee, Leonard Freeman, T. J. Carlin, and William B. Craig. Training school committee, Dr. P. V. Carlin, Dr. C. B. Lyman, and Dr. J. B. Devlin. Following are the members of the staff: Medicine—H. H. Martin, M. D.; L. T. Durbin, M. D.; J. B. Devlin, M. D., and A. R. Seebass, M. D. Surgery—C. B. Lyman, M. D.; Leonard Freeman, M. D.; William B. Craig, M. D., and I. B. Perkins, M. D. Obstetrics—T. J. Carlin, M. D., and Edward Dean, M. D. Gynæcology—William S. Bagot, M. D. Neurology—Edward Delehanty, M. D. Ophthalmology—Charles Walker, M. D. Otology—William C. Bane, M. D. Diseases of Children—P. V. Carlin, M. D. Diseases of Nose and Throat—F. E. Waxham, M. D. Diseases of the Chest—A. M. Stohner, M. D. Pathologist—J. A. Wilder, M. D.

Work of Lakeside Hospital in 1903.—At the annual meeting of the Lakeside Hospital Association, of Cleveland, O., W. S. Tyler, L. A. Severance, and Ralph W. Hickox, the trustees whose terms of five years expired, were again chosen to the board and Mr. Horace Andrews was reelected to fill the unexpired term of the late Judge Samuel E. Williamson. Reports of the various officers were read, including reports from the president of the board, the treasurer, the secretary of the board of lady managers, the superintendent of the hospital and the superintendent of the training school for nurses.

During the past year an average of 187½ patients were treated daily in comparison with 166 for the previous year. The admissions to the hospital numbered 3,075, being an increase of about 400 over the year before. The number of days' treatment given the patients was 68,437, or about 8,000 increase. In the free dispensary department 27,479 people were given free treatment and 13,022 prescriptions were written out.

The hospital received during the year through Messrs. L. H. and M. H. Severance $10,000 from the estate of their mother, Mrs. Sarah H. Severance, without conditions, to go to the general endowment fund of the institution. Mrs. E. C. Reed and Mrs. Cornelia Ford, collectively, gave the sum of $5,000 for the purpose of endowing a bed in the children's ward to be called the Addie Ford bed.

The year at the hospital was a successful and highly satisfactory one in every respect and the work of the hospital staff met with the approval of the board of trustees to such a degree that the entire staff was selected for the ensuing year.

Pith of Current Literature.

VIRCHOW'S ARCHIV.

Volume 174, III.

1. Anatomical Studies on the Human Parathyreoid Gland, By H. PETERSEN.
2. A Hydrodynamic Problem and Its Relation to the Circulation, Especially in the Brain, By R. GEIGEL.
3. Experimental Studies on Air Embolism, By L. P. WOLF.
4. Pigment Formation and Organization in Extradural Hæmatomata, By R. MILNER.
5. Ætiology and Pathogenesis of Blackwater Fever, By A. PLEHN.
6. Pathological Anatomy of Pertussis and the Occurrence of Pertussis Bacilli in the Organs, By G. ARNHEIM.
7. Cancer of the Biliary Passages, By B. FISCHER.
8. Cylindrocellular Gelatinous Carcinoma of the Œsophagus, By FRANKE.
9. Two Cases of Maldevelopment of the Liver, By H. KANTOR.

1. **Human Parathyreoid Gland.**—Petersen endorses the findings of other writers as to the form, position and size of the human parathyreoid gland, after examining one hundred cases. Usually, a small gland is found on either side of the lateral lobe of the thyreoid gland proper, although occasionally two glands may appear on one side, or the parathyreoid is found in the middle of the thyreoid. The author found colloid material in the parathyreoid and sometimes follicles were seen. Occasionally, a cyst formation was noted.

3. **Air Embolism.**—Wolf disagrees with the generally accepted view of cardiac death from air embolism. He believes death to be due to a cessation of circulation brought about by extensive embolization of the pulmonary capillaries. The author does not believe in an insufficiency of the aorta brought about by an entrance of air into the veins, and this can happen only in the event of a great quantity of air entering the heart. In his experiments, the author never found air in any considerable quantity in the left cavities of the heart.

6. **Pathalogy of Pertussis.**—Arnheim refers to the bacilli of whooping cough demonstrated first by him in 1900. They are to be differentiated from influenza bacilli only by their deeper polar staining. The author has examined eight cases and reports that in the secretions of the air passages and in their mucous membranes, the bacilli are found in great quantities. If the lungs are affected, the bacilli are found in somewhat smaller number in bronchopneumonic foci. Arnheim thinks that the explosions of coughing in pertussis are due to bacterial colonies at the site of places in which a cough is usually evoked.

7. **Cancer of the Biliary Passages.**—Fischer seeks to establish from three of his own cases and those of cancer in the liver recorded in literature, that the greater number of cases reported as primary cancer of the liver, in reality, have their origin in the biliary passages. He regards as evidence in his favor the fact that eighty-five per cent. of cases of adenoma of the liver are combined with hepatic cirrhosis.

PRESSE MEDICALE.

December 30, 1903.

1. Diagnosis of Simple and Tuberculous Pyelitis and Pyelonephritis, By F. BAZY.
2. Energy of Growth, By F. TRÉMOLIÈRES.

1. **Pyelitis and Pyelonephritis.**—Bazy says pain and slight hæmaturia may occur at the end of micturition in these conditions, but are not pathognomonic; pollakiuria, nocturnal as well as diurnal, is so, however. Pus is found in the urine in larger amounts than in cystitis. Fever and other systemic signs of infection are present. Pain, and hypermegaly disclosed by bimanual palpation, show which kidney is affected. Inflammation of the ureter may be demonstrated by pressure, paraumbilical, subcostal, or lumbar, when in the upper part; when the lower end is inflamed, vaginal or rectal examination will elicit pain.

2. **Energy of Growth.**—Trémolières attributes the phrase to Springer, the definition being the sum of the forces determining the physiological work that causes the development of living organisms. Potential energy exists as a heritance in the ovum; after fecundation, this energy becomes actual. After birth, energy from without is required. Lecithin is necessary as long as growth continues. It exists in yolk of egg and cereals. Potassium is an active stimulant to growth; water and all the oxidants are others. The process of growth is principally an osmosis, the intensity of which depends on another stimulating agency, electricity. Further study of these factors may enable us to direct growth as we may desire.

January 2, 1904.

Necropsy of Cæcum, By MAURICE LETULLE.

Necropsy of Cæcum.—Letulle advises haste in beginning examination, owing to rapidity of intestinal decomposition. Situation, mobility, color, form, volume should be examined before removal. The entire large intestine should be taken out with it. The appendix may be missing; many deformities may be noted, caused originally by inflammation. A tuberculous cæcum will usually be found accompanied by tuberculosis in all the adjacent organs. The formidable ravages of actinomycosis are easily recognized. Letulle gives directions for opening the organ. Within, small tumors and ulcers may escape notice. If the appendix of a woman is found diseased, the right ovary should be carefully examined. Microscopic sections should be made perpendicularly to the wall of the appendix and to its long axis.

January 6, 1904.

1. General Considerations on Hæmatology, By FERNAND BEZANCON, and MARCEL LABBÉ.
2. Chats on Electricity, By M. LERMOYEZ.

1. **Hæmatology.**—Bezançon and Labbé's article forms the introduction to a treatise on the subject which they are preparing. They point out first that the blood differs from all other tissues in having neither embryonic nor immature

cells; it has only mature and overripe cells. These are formed outside of the blood. In health the blood elements preserve their normal proportions in a remarkable manner, and this equilibrium can be only temporarily disturbed even by bleeding. Poisons and microbes leave the blood quickly for the kidneys or lungs. The authors sketch rapidly the development of cytology and the remarkable results derived from study of blood serum.

LYON MEDICAL.

December 27, 1903.

1. Hitherto Undiscovered Symptom of Œsophagotracheal Fistula, By Adenot and Cadet.
2. Hemiplegia Immediately Following Ligature of the Carotids, By Maurice Beutter.

1. **Œsophagotracheal Fistula.**—Adenot and Cadet's new symptom was ths presence of an immense volume of air in the stomach of a patient whose fistula was caused by cancer. The air entered the œsophagus during inspiration and was then driven into the stomach on expiration, a cancerous nodule acting as a valve to prevent its return to the air passages.

2. **Hemiplegia After Ligature of Common Carotid.**—Beutter details a case in which paralysis of the arm lasted over two months, while that of the leg persisted only a few days. The phenomenon has been variously explained as due to congestion of that half of the brain on the same side as the ligature; to cerebral anæmia, caused by some anomaly in the circle of Willis; to rupture of the vasomotor nerves of the ligatured carotid; to thrombosis; but Beutter thinks that the higher the function of nerve cells, the more fragile they are, and that the more highly differentiated motor cells governing the arm take longer to repair than those of the leg.

SEMAINE MEDICALE.

December 16, 1903.

Use and Limits of Surgical Measures in Cancer, By F. Lejars.

Surgery in Cancer.—Lejars gives copious statistics regarding operation, recovery, and relapse in cancer of various organs. Relapses are known to occur after five years of apparent cure. An operation should be microscopically complete and not undertaken unless this is certain of accomplishment. Encapsulated, non-adherent growths give the best results, as often noted in the kidney. We must operate earlier and still more thoroughly. Much healthy tissue must be removed. Doubtless reinoculation takes place during operation from the operator's fingers or from the sutures. When the thread has passed, new foci of infection will be found to develop. Ganglia should be removed *en bloc*, and never cut into if possible to avoid it. In certain "inoperable" cases, however, life may be prolonged by judicious surgery, and it is not always wise to hand over a patient either to morphine or death.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

December 20, 1903.

1. Two Cases of Hemineurasthenia, By Thomaso Prodi.
2. Clinical Contribution to the Study of Secondary Dementia, By Luigi Conti.
3. Contribution to the Methods of Toxicological Research of Strychnine in Putrefied Blood, By Giuseppe Astolfon.

1. **Hemineurasthenia.**—Prodi describes two cases in which the symptoms of neurasthenia existed on one side of the body only. In view of this fact he applies the term "hemineurasthenia" to these cases, the name having been introduced by Beard, the originator of the term neurasthenia. In both cases the vague symptoms, pains, paræsthesiæ, etc., were felt on one side of the body, and it appears as though in these patients the affected side of the nervous system was more vulnerable than the opposite side, and less resistant against the influences which cause nervous exhaustion.

RIFORMA MEDICA.

January 6, 1904.

1. Cataphoresis as a Method of Local Treatment in Diseases of the Stomach, By Luigi Ferrannini.
2. An Epidemic of Colon Bacillus Infection, By Alessanro Martinelli.
3. The Bactericidal Action of the Blood in its Natural State, of the Blood Deprived of Plasma, of the Plasma, and of the Serum of Normal Pigeons and of the Same Birds Immunized against the Anthrax Bacillus, By Saverio Spangaro.

1. **Cataphoresis in Stomach Diseases.**—Ferrannini suggests the employment of cataphoresis for the purpose of applying remedies directly to the stomach without allowing them to become dispersed throughout the system and so greatly diluted. He employed for the purpose an ordinary electric sound, consisting of an œsophageal bougie provided at its gastric end with a metallic button, and connected by means of a wire passing through the sound with the positive pole of a galvanic battery. The negative, connected with a large electrode, is applied to the epigastrium. The current strength should be about five milliampères, to avoid injuring the mucosa of the stomach. The duration should be from five to ten minutes. Ferrannini conducted an interesting series of experiments in order to determine the efficiency of this method. For this purpose he introduced in a number of patients a certain dose of potassium iodide through a stomach-tube, in order to avoid absorption through the mouth, and after a time examined the saliva for a reaction to starch, showing the presence of iodine. In this manner he found the time which the stomach took to absorb the medicine. In the same patients and under exactly similar conditions he applied potassium iodide by cataphoresis through the electric stomach sound. He found that the iodide was not only more rapidly absorbed, but gave a much more marked reaction when it had been administered by cataphoresis. The author then applied this idea to clinical work. He found that this method gave excellent results when drugs were thus administered, dissolved in half a litre of water. In a case of anachlorhydria of years' duration with constant vomiting after meals, the administration of strychnine by cataphoresis completely stopped the vomiting in a few days. Similar results were obtained with the administration of atropine in hypersecretion and hyperchlorhydria.

2. **Epidemic of Colon Infection.**—Martinelli describes an epidemic of colon bacillus infection in a small town of the province of Mantua, in Italy, where the hygienic conditions were very bad and the drinking water undoubtedly was contaminated by excreta. A series of cases were observed in this village, occurring in rapid succession, in which the clinical features were as follows: Mild prodromic symptoms; slight fever, some diarrhœal movements, at times constipation; an enlarged spleen, and all these accompanied by severe prostration. These symptoms were very similar to those described by recent authors as "paratyphoid," a disease intermediate between typhoid fever and colon infection, due to a modification of the typhoid bacillus or to a separate species intermediate between Eberth's germ and the *Bacillus coli.* The author insists, however, that in his epidemic the majority of the cases were caused by the colon bacillus. Martinelli thinks that these epidemics show the essential unity of these various classes of germs, as modifications of one species.

ROUSSKY VRATCH.

November 22, 1903.

1. The Question as to the Reduplication of the Apex Beat of the Heart, By O. F. Helsingius.
2. Clinical Materials for the Study of the Operation of Suture of the Omentum to the Anterior Abdominal Wall (*To be concluded*), By I. I. Kozloffsky.
3. The Action of Electricity Upon Microorganisms (*To be concluded*), By S. M. Bourakoff.
4. The Connection Between Physical and Mental Development, By P. D. Enjko.

1. **Reduplication of the Apex Beat.**—Helsingius says that the majority of authors agree with Riegel, who regards this phenomenon as due to the occurrence of two systoles in rapid succession, separated from two other systoles by a more or less prolonged pause. Leyden, supported by a minority, declares the reduplication to be due to the fact that the chambers of the heart do not contract simultaneously, and that there is a hemisystole of the heart followed by another hemisystole in quick succession. Helsingius, however, relates the history of an interesting case of endocarditis with insufficiency of the mitral valve and aortic valves, in which there was a marked dilatation of the right ventricle, with thinning of the walls and fatty degeneration of the heart muscle. On autopsy it was found that the apex consisted of both ventricles, the right having been dilated into a thin pouch situated close to the normal apex. It was the contraction of this pouch of the right apex which gave rise to the reduplication of the apex beat. There is only one other case recorded in literature.

4. **Influence of Physical Development on the Mind.**—Enjko found that the early appearance of the sexual function (menstruation) is in the average schoolgirl accompanied by improved mental and physical development. This is important, because it has been frequently asserted that the school has a tendency to depress the mental and physical condition of children. Enjko shows that on the average those girls who had passed through school more rapidly than the rest of the pupils were both mentally and physically precocious.

November 29, 1903.

1. On Hedonal-Chloroform Anæsthesia, By N. P. Kravkoff.
2. On Primary Carcinoma of the Vagina in Connection with the Theory of the Infectiousness of Cancer, By V. V. Diakonoff.
3. A Few Words as Regards the Capacity of the Hypodermic Syringes in the Market, By I. V. Sokhansky.
4. Clinical Materials for the Operation of Suturing the Omentum to the Anterior Abdominal Wall (*Concluded*), By I. I. Kozlovsky.
5. On Hæmorrhages in the Retina in Progressive Pernicious Anæmia Due to the Ankylostoma Duodenale, By A. S. Tchemolossoff.
6. Experiments on the Action of Electricity on Microbes (*Concluded*), By S. M. Bourack.

2. **Cancer of the Vagina and the Theory of Infectiousness.**—Diakonoff reports a very interesting case of cancer of the vagina, which affected the posterior wall of that canal, near the cervix. After the operation a metastasis of the process was found on the anterior lip of the cervix, and the author thinks that in this case the cancer spread by contact of the anterior lip of the cervix with the posterior vaginal wall, where the original cancerous growth had been, the uterus having been in extreme anteversion. If the secondary deposit of cancer had developed as the result of the spread of the disease through the lymphatics, the posterior lip of the cervix would have been first affected, under the conditions in this case, as it was in more direct communication with the site of the growth.

3. **Accuracy of Hypodermic Syringes.**—Sokhansky says that the less expensive grades of hypodermic syringes are not accurately graduated, and that the best way to be sure of having an accurate capacity indicated on a syringe is to test it properly as soon as purchased. It would be desirable to have syringes sold, like thermometers, with a guarantee that they have a certain definite capacity.

4. **Talma's Operation.**—Kozlovsky reports six cases in which he performed Talma's operation of suturing the omentum to the anterior abdominal wall for ascites due to cirrhosis of the liver. The omentum in each case was sutured to the abdominal wall in such a manner that a part of it lay between the skin and the parietal peritonæum. The skin over this was sutured without leaving any space for drainage. One patient lived five months after the operation, and had to be tapped again on account of the reaccumulation of fluid. Another patient lived only two weeks after the operation; a third lived eleven months after the operation. A fourth patient improved considerably and was discharged from the hospital apparently cured, but was not followed afterwards. The other two patients survived the operation, but left the hospital too early to form any conclusion as to the permanent effects of the procedure upon their ascites.

5. **On Hæmorrhage in the Retina in Pernicious Anæmias.**—Tchemolossoff studied a case of ankylostomiasis, with its accompanying pernicious anæmia, in which there were hæmorrhages into the retina. Such hæmorrhages have been described as occurring in the essential form of progressive pernicious anæmia, but cases of ankylostomiasis with such hæmorrhages are very rare. The patients did not complain of their eyes and yet hæmorrhages were found in the retina. The author thinks that they constitute a constant symptom in severe forms of anæmia due to ankylostoma. These hæmorrhages appear in the form of round spots, bands and semilunar marks (preretinal hæmorrhages) and are chiefly found in the neighborhood of the posterior pole of the eye. Their presence has an unquestionable influence on the prognosis. They take place by diapedesis, are absorbed without leaving any traces, and do not give rise to any inflammatory symptoms. They occur chiefly in the layer of nerve fibres, but may penetrate to the outer layers of the retina, even to the external limiting membrane. The changes in the smaller vessels of the retina in these cases consist in swelling of the nuclei of the endothelial cells. These hæmorrhages resemble in every particular those met with in the essential pernicious anæmias. The diagnosis is made chiefly from the appearance of the patient, the presence of ankylostoma in the fæces, and the absence of any disease, such as purpura hæmorrhagica.

6. **Action of Electricity on Bacteria.**—Bourack calls attention to the fact that the influence of electricity on bacteria is among the least developed subjects in bacteriology. Electricity is an active antagonist of bacterial life, quite aside from the heat it develops and the chemical by products it generates. The constant current is capable of effecting a complete change in the biology of certain types of bacteria. The faradaic current acts more energetically, but does not produce such permanent results as the constant. The most marked effects can be obtained with currents of high frequency and high pressure. The static and electromagnetic poles show the least energetic effects. By successive action upon several generations of germs one can change the ordinary type of the functional existence of a germ (possibly of all germs), and microbes which have been reared under the influence of a current produce descendants which are still more susceptible to the action of the current. The action of electricity on bacteria is the more marked the smaller the amount of nutrient medium, the fewer the germs, the older the culture and the stronger and more prolonged the current. The morphological characters of a germ are not modified by the electric current—only the biological peculiarities are changed. Motility is peculiarly susceptible to change. Capacity for growth and reproduction suffers the least. Electricity, however, during the time it is applied, impedes the development of germs. Their life is shortened, even with weak and inconstant currents. Currents of high frequency and high pressure may be used in rendering microbes harmless within the body of an animal.

MEDICAL NEWS.

February 6, 1904.

1. Some of the Physical Properties and Medical Uses of Radium Salts; With Report of Forty-two Cases Treated by Pure Radium Bromide, By Francis H. Williams.
2. Late Results of X Ray Treatment of Sarcoma, By William B. Coley.
3. Abdominal Versus Vaginal Hysterectomy, By John B. Deaver.
4. The Occurrence of *Tænia Nana* in Texas (the First, or, at Least, the Second, Reported Case in North America), By John T. Moore.
5. Two Advantageous Procedures in Anæsthesia Work: Report of Cases, By Victor C. Pedersen.
6. Laboratory Aids to Diagnosis for the General Practitioner, By Victor A. Robertson.

1. **Radium.**—Williams's experience with radium bromide leads him to formulate the following conclusions with regard to its therapeutic effects: (1) Certain diseases promise to yield more readily to treatment by radium and others to the x rays. (2) A disease that has attacked different parts of the body of a given patient may be better treated in certain regions by radium and in others by the x rays. (3) It is quite possible that in some cases the two remedies used together on the same area and at the same sitting may accomplish better results than either alone.

2. **Results of X Ray Treatment.**—Coley considers the late results of the x ray treatment of both sarcoma and carcinoma. His results, as a whole, have been disappointing. He concludes: (1) The use of x ray in cancer should be limited to recurrent and inoperable cases, with the sole exception of small superficial epitheliomata of the face. Even here, I believe, the results of excision will prove to be better and more lasting, save in the proximity of the eyelids and nostrils. (2) It is most misleading to report as cures, cases in which malignant tumors have merely disappeared under the influence of the x ray, since speedy return is the rule rather than the exception. (3) At the present moment there is no evidence to prove that any permanent cures have been obtained, save possibly in the case of rodent ulcer.

3. **Hysterectomy.**—Deaver favors abdominal hysterectomy in cases of cancer of the cervix or of the body of the uterus. He reviews the advantages and disadvantages of both methods. The vaginal route he employs only in cases in which the method is imperatively called for. For instance, if the abdomen is very fat, if there is nephritis, or if the patient is very old. It is permissible, in the author's opinion, to use the vaginal route in the early stages of cancer of the body of the uterus.

4. **Tænia Nana.**—Moore had Stiles, of Washington, and Smith, of Galveston, confirm the diagnosis of the case he reports. The patient was an Irishman who had been in the United States for the past thirteen years. The case report is followed by an essay on *Tænia nana*.

MEDICAL RECORD.

February 6, 1904.

1. Some Groups of Kidney Disease, By FRANCIS DELAFIELD.
2. Some Modern Views of Gastrointestinal Troubles and Their Treatment by Massage, By GUSTAF NORSTRÖM.
3. Practical Points on Hernia, By F. D. GRAY.
4. Orbital Cellulitis; Empyema of the Ethmoid Cells and the Frontal Sinus; Abscess of the Frontal Lobe; Pneumococcæmia; Death, By E. GRUENING.
5. Unusual Sequela of a Submammary Hypodermoclysis, By O. PAUL HUMPSTONE.

1. **Kidney Disease.**—Delafield discusses four chief groups of kidney disease. Each of these groups are subdivided into a number of subgroups. The paper concerns itself chiefly with symptomatology and prognosis. Group 1.—Nephritis occurring in the course of certain infectious diseases, such as typhoid, pneumonia, scarlet fever, and diphtheria. Group 2.—Nephritis either caused or associated with chronic endocarditis. Group 3.—Nephritis of pregnancy. Group 4.—Kidney disturbances in young persons, in which the only symptoms are the presence of albumin and casts in the urine and a slight anæmia. Group 5.—Primary nephritides, most common in young subjects, which run a variable course and, sooner or later, are apt to prove fatal.

2. **Abdominal Massage.**—Norström is an enthusiastic advocate of massage for the treatment of a number of gastrointestinal conditions. The stomach can be readily influenced by this method of treatment. Massage will increase gastric secretion, it will reestablish the equilibrium in the composition of the gastric juices, it will increase the motive power. In stomach cases the method is contraindicated in ulcer and carcinoma. It is of no benefit in gastroptosis. Massage of the colon is capable of curing both chronic constipation and diarrhœa. The author describes his method of performing massage, and reports a number of cases which illustrate the very brilliant results he claims for the method.

3. **Hernia.**—Gray emphasizes the following points: Never forget the possibility of an unsuspected incipient or small hernia, as a possible cause of obscure abdominal symptoms or of obstruction. Always remember the unusual as well as the ordinary locations of hernia. Never practice taxis or delay operation in strangulated cases, or neglect to open the sac and carefully inspect the contents. The radical operation is one of the safest and most certain in surgery, and on that account may properly be advised as a routine measure. On the other hand, it should be remembered that in childhood all forms of hernia are usually curable by persistence in the use of a suitable truss, while after the age of fifty-five the mortality rate increases, and as activity usually then decreases, a truss answers very well.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

February 6, 1904.

1. General Practice a Continuous Postgraduate Clinic, By EDWIN WALKER.
2. The Influence of the Resection of the Cervical Sympathetic Glanglia in Glaucoma (*To be continued*), By WILLIAM H. WILDER.
3. Some Histologic Facts that Contradict the Generally Accepted Odontoblast Theory, By MICHAEL MORGENSTERN.
4. Diabetes and Obscure Physiology, By CARL RAMUS.
5. Radium and Radial Energy, By JOHN INGLIS.
6. The Conflicting Claims of General Education and Professional Education, By ARTHUR TWING HADLEY.

3. **Odontoblast Theory.**—Morgenstern reports a series of histological studies which have led him to form conclusions considerably at variance with those of other observers that have pursued similar studies. Illustrations from over twenty microphotographs accompany the paper, and without the aid of these illustrations the author's argument cannot be followed. The author does not attempt to substitute a new and complete theory for the old one, but claims only to have established a few facts upon which a true theory may in time be founded. He asserts that his studies have demonstrated that the generally accepted odontoblast theory, the theory of dentine formation and of the sensibility of the dentine are untenable.

4. **Diabetes.**—Ramus asserts his belief that diabetes may be due to various causes. True diabetes mellitus is probably always due to pancreatic disease. The theory which the author seeks to bring prominently forward is the following: Physiological chemistry has hitherto been unable to follow the transformation of carbohydrates beyond the dextrose stage. It has been assumed that the tissues absorb dextrose as dextrose. The author believes, however, that dextrose is decomposed before absorption into alcohol and possibly carbon dioxide. This decomposition occurs in the system as a whole and is brought about through the agency of an enzyme produced by the pancreas. When this pancreatic enzyme is lacking, the body tissues starve, since the dextrose remains in the blood unconverted. The liver, in answer to the call of the starving tissues for food, blindly gives up its glycogen in the form of dextrose, and so adds to the trouble. Eventually sugar appears in the urine and the kidneys undergo a secondary degeneration. The author reviews the various theories of diabetes, reports a number of experimental investigations conducted by himself, and concludes his paper with a number of therapeutic suggestions for the treatment of the disease based on the theory he advances.

6. **General and Professional Education.**—An abstract of this address was given in the report of the meeting of the Medical Society of the State of New York, in our issue for January 30th, p. 213.

BOSTON MEDICAL AND SURGICAL JOURNAL.

January 28, 1904.

1. Experiments with the McGraw Elastic Ligature, By F. T. MURPHY.
2. Differential Diagnosis of Rheumatism and the Arthritides, By THOMAS J. HARRINGTON.

1. **McGraw Elastic Ligature.**—Murphy reports a series of twenty operations upon animals in which the elastic ligature was used. The literature of this method of operation is reviewed. Ten illustrations, all very good, accompany the report. The author's conclusions, abbeviated, follow: "These

experiments show that a successful anastomosis between the stomach and intestines, or two loops of intestine, is possible by means of the elastic ligature. The method is not applicable when an immediate opening is required. The time of the cut-out varies, depending upon the character of the ligature, the method of application, and the resistance of the tissues in any cause, but the ligature will ultimately cut out. A knot at either end of the elastic loop increases the rapidity of the cut-out. The procedure causes a minimum operative risk, both as regards shock and infection. Adhesions across the opening are a possible, but not a probable, complication. In cases in which an immediate opening of the bowel is not imperative, and in which the avoidance of operative shock is an important factor, the elastic ligature may prove to be the operation of choice in gastroenterostomy and lateral anastomosis."

2. **Rheumatism.** — Harrington asserts that the term rheumatism is responsible for much ignorance and neglect in medical practice. He calls attention to the fact that rheumatism and arthritis are not synonymous terms. His paper is a classification of the different forms of arthritis, with a brief discussion of their ætiology, symptomatology, and diagnosis.

AMERICAN MEDICINE.

February 6, 1904.

1. Purinæmia: A Clinical Study, By Reynold Webb Wilcox.
2. The Life-Study of Patients, or the Biographic and Multiple Biographic Method of Discovering Medical Truth, By George M. Gould.
3. Morton's Painful Disease of the Toes, By Walter G. Stern.
4. Abscess of the Liver, Caused by Distomum Sinense of the Intrahepatic Bile Ducts, By Thomas L. Rhoads.
5. Some Observations on the Occurrence of Nephritis in Infancy, By Charles C. Biedert.
6. Myxœdema Complicated with Diabetes Mellitus Occurring in Two Children. Effect of Thyreoid Extract Upon Both Diseases. Remarks on the Pathogenesis of Diabetes, By Alfred Gordon.
7. Medicus et Medica, By Helen MacMurchy.

1. **Purinæmia.**—Wilcox devotes his paper to a discussion of the physiology of gout and purinæmia. In both, the process of perverted metabolism is essentially the same. Uric acid and the xanthin bases are mostly derived from the breaking down of cell nuclei; of cells, that is, that constitute the body. The uric acid so derived is called endogenous uric acid, in contradistinction to that derived from the ingested food, the exogenous uric acid. The production of endogenous uric acid is due mostly to autointoxication and it is this uric acid which produces diseased conditions. The author elaborates this view at some length and then reports fifteen cases to show the results obtained by a line of treatment based on this theory. The paper ends with the following summary: (1) The endogenous uric acid is the one chiefly concerned in gout and purinæmia. (2) The uric, as well as phosphoric acid excretion, is merely an index of the amount of retrograde metamorphosis of the body nucleins. (3) Since the endogenous uric acid is independent of the presence of animal food in the diet, the patients should be limited only in quantity in order to reduce the intake to the needs of the organism. (4) The rôle of the liver in gout is purely a negative one, *i. e.*, its inability to act as a poison filter. (5) The keynote to the treatment lies in *(a)* limiting all toxic influences and formation of toxines, particularly in the alimentary canal, in order to minimize the retrograde metamorphosis of the body nucleins; *(b)* preventing the absorption of all toxic material; or *(c)* promoting the elimination of the products of toxic agents.

3. **Morton's Toe.**—Stern believes that there is a pathological entity that, for lack of a better name, may be called Morton's toe. The French have denied the existence of such a disease. Stern's belief is that while the affection exists, the symptoms are not produced, as Morton affirmed, by pressure upon some branch of the external plantar nerve, but by the giving way of the transverse arch of the foot located at the distal ends of the metatarsal bones. The condition is therefore closely allied to flat foot. The author proposes that the condition be treated by means of a properly made steel support having a rubber pad on its upper surface. He reports eleven personal cases.

5. **Nephritis in Infancy.**—Biedert reports four cases of nephritis occurring in infancy. The oldest patient was seven months old. All four patients died. The literature of the subject is reviewed and the following conclusions are presented: (1) The importance of examining the urine in all acute disease of infancy, and especially in the bronchopneumonias. (2) The importance of marked anæmia as the most pronounced symptom of kidney involvement. (3) Œdema may or may not be present, but when it is present it constitutes a valuable sign, but there may be grave kidney involvement without œdema. (4) There is almost always a diminished secretion of urine, the mother almost always noting that the baby wets fewer napkins. (5) There are almost always grave nervous phenomena and convulsions, which in some cases are probably uræmic.

6. **Myxœdema Complicated with Diabetes.** —Gordon's two cases are reported in some detail. The cases present several unusual features: (1) The coincidence of myxœdema and a genuine diabetes mellitus (not a simple glycosuria); (2) the occurrence of diabetes in early childhood; (3) the occurrence of both diseases in two brothers, showing a degenerative hereditary tendency; the latter is corroborated by the interesting family history; (4) the remarkable effect of the thyreoid extract upon the diabetes, explaining with a great degree of certainty the rôle of the thyreoid gland in the as yet unknown pathologic metabolism, which is manifested in a group of symptoms called diabetes mellitus.

LANCET.

January 23, 1904.

1. Old Unreduced Dislocations of the Shoulderjoint, including Five Hitherto Unpublished Cases of Operative Treatment in one of which Gold Plate was Buried for Forty Days, By C. R. B. Keetley.
2. The Treatment of Diabetes Mellitus, By R. T. Williamson.

3. On Certain New Methods of Blood Examination with Some Indications of Their Clinical Importance, By A. E. WRIGHT.
4. Intraperitoneal Rupture of the Bladder in a Girl Aged Five Years with Separation of the Right Os Pubis at its Epiphyseal Lines; Abdominal Section; Suturing of the Bladder; Recovery, By H. B. ROBINSON.
5. A Case of Acute Sulphonal Poisoning. By A. E. HIND.
6. A Case of Acute Traumatic Cholecystitis, By F. J. SMITH, and C. W. M. MOULLIN.
7. Two Cases of Osteitis Deformans in One Family, By W. J. KILNER.
8. A Case of Total Extirpation of the Prostate, By G. P. NEWBOLT.
9. A Case of Veronal Poisoning, By G. F. M. CLARKE.

1. **Shoulder Dislocations.**—Keetley states that the usually accepted limit for even attempting reduction of dislocated shoulders is three months. The symptoms of an old unreduced dislocation differ in some respects from those of a fresh one. Instead of swelling there is wasting of the deltoid and the absence of the head of the humerus from the glenoid is very obvious. But the projection of the elbow from the side is less, and the range of movement of the joint and of the scapula on the trunk is increased. The x rays are often of assistance. If no complication coexists the prognosis of dislocations two to four weeks old is absolutely favorable, up to the ninth week very good; after nine weeks bad unless a cutting operation be performed. The administration of chloroform in these cases is especially dangerous. Either no or very little anæsthetic should be used, or the patient should be put completely under the anæsthetic before reduction is attempted. Never attempt to push the anæsthetic during the operation. If the breathing stops while strong extension is being made, the surgeon should at once desist. The axillary vessels are often injured, as many of these cases have bad vessels due to advanced age, dissipated habits, etc. Nerve injuries are comparatively rare. The treatment of these old cases lies between making the best of the new abnormal joint by exercise, massage, etc., and attempting to effect reduction by means of (1) manipulation or extension; (2) open incision; and (3) excision. Reduction without cutting may reasonably be tried up to the end of the fourth month, except in old people with atheromatous arteries. If Kocher's method fails extension and circumduction may be tried, by means of Skey's knob, the author's fracture extension machine, etc. The structure especially endangered is the axillary artery. Other methods of extension are continuous elastic extension by means of a rubber air pad in the axilla, and Stimson's couch, which is perforated to allow the arm to pass through, a ten pound weight being attached to the hand. The author claims to have been the first surgeon to reduce dislocation of the shoulder-joint by open operation: this he did in January, 1890. It is difficult to preserve perfect asepsis in these operations for the following reasons: 1. The operations are prolonged. 2. The wound is large and deep. 3. Retraction is rough and prolonged. 4. The displaced head vacates a large space which does not fill up. 5. Drainage is contrary to gravity. 6. Several assistants are required. 7, 8, and 9. There are numerous chances of infection. 10. The patients are usually "bad subjects." When it is found necessary to excise the humeral head the stump should be wrapped in gold leaf to prevent adhesions. After a few weeks the shoulder should be reopened and the gold leaf removed. After the wound has healed passive movements should be begun, but abduction should be avoided for months.

2. **Diabetes Mellitus.**—Williamson states that for therapeutic purposes three forms of diabetes mellitus may be recognized: 1. Mild—when sugar excretion ceases on a rigid diet of nitrogenous and fatty food. 2. Medium severity—when the sugar does not disappear on such a diet, but the urine shows no reaction with iron perchloride. 3. Severe—when the sugar does not disappear and the urine gives a brownish-red reaction with iron perchloride.

Most kinds of nitrogenous animal food and fatty food may be allowed in diabetes. Starch is less injurious than sugar, yet bread is the article of diet which causes the greatest difficulty, as most patients require some form of bread. The author discusses the various bread substitutes and comments on their relative value. All beverages which are free or almost free from carbohydrates can be taken. Ordinary beer is injurious and the amount of spirits taken should be moderate. Many patients suffering from mild diabetes are benefited by a visit to Carlsbad or Neuenahr. As regards drugs, the author holds that sodium salicylate has a definite action in decreasing sugar excretion in certain milder cases of diabetes. It should be given in peppermint water, commencing with ten grains three times a day and increasing up to fifteen grams four or five times a day. But toxic symptoms must be carefully watched for. Opium, morphine, and codeine are sometimes beneficial, but when they are given care must be taken to keep the bowels regular. In the most severe forms of diabetes with iron perchloride reaction in the urine, the alkaline treatment (sodium bicarbonate in large doses) is of some service in postponing the onset of coma. The bicarbonate is best taken in frequent doses in soda water or milk—two, three, or four drachms being taken daily.

3. **Blood Examination.**—Wright describes in detail his method of collecting blood for examination in special calibrated capsules charged with a measure volume of sodium citrate solution. Such capsules may be sealed in the flame and the specimens kept almost indefinitely. The blood then prevented from clotting furnishes all the blood elements. The red corpuscles can be examined histologically or quantitatively: the same is true of the leucocytes and in addition their phagocytic power can be measured. The quantity of blood platelets can be estimated, also the amount of albuminous substance and fibrinogen in the plasma or serum.

5. **Sulphonal Poisoning.**—Hind reports the case of a single woman, twenty-seven years of age, suffering from melancholia, who had taken three hundred and sixty-five grains of sulphonal

at a dose. When seen she was comatose, not cyanotic, temperature 98° F., pulse 80, and respirations 15. The reflexes were absent and pupils sluggish. The stomach was washed out, a rectal injection given, and the urine drawn off by catheter, it being clear and abundant. Coffee, strychnine, and digitalis were given. The patient remained comatose for four days, when her condition began to improve, and in four days more she was well. Examination of the urine showed it to be normal, but for a slight trace of albumin: it had no smoky tint.

9. **Veronal Poisoning.**—Clarke reports a case of poisoning with veronal, occurring in a woman aged nineteen years. The drug had been taken as a hypnotic. The symptoms were those of narcotic poisoning. The following day there appeared an erythematous rash all over the body. After a second attack, the same rash appeared, and in addition the patient had periodical attacks of delirium. A strong purgative was the only remedy used; it proved quickly effective.

BRITISH MEDICAL JOURNAL.

January 23, 1904.

1. On the Ætiology of Carcinoma. Researches on the Morphology of An Organism Associated with Carcinoma Mammæ, and on the Ætiological Significance of this Association. (Report lxxix. Scientific Grants Committee, B. M. A.), By K. W. Moussarrat.
2. Carcinoma of the Colon and Its Treatment by Colectomy. (With Abstracts of Seven Successful Cases), By B. Pollard.
3. Radium Bromide: Notes on Some Cases in Which it Has Been Tried, By J. M. Davidson.
4. A Case of Rodent Ulcer Treated with Radium, By G. Sichel.
5. The Leishman-Donovan Body and Tropical Splenomegaly, By Sir P. Manson, and G. C. Low.
6. Human Trypanosomiases on the Congo, By J. E. Dutton, J. L. Todd, and C. Christy.

1 and 2. **Cancer.**—Mousarrat reports that he has found an organism associated with cancer of the breast, with which he believes it to be ætiologically related. He summarizes his researches as follows: 1. From a considerable proportion (58.3 per cent.) of specimens of carcinoma mammæ an organism presenting characteristic features was isolated. 2. This organism presents a life history in which two cycles were traced—the one a vegetative budding cycle, the other a sporulating cycle. 3. The organism when injected into animals is capable of infecting and inhabiting endothelial and epithelial cells. 4. The organism initiates in endothelium and epithelium a process of proliferation as a result of which masses of new formed tissue are built up which consist of a parenchyma and a stroma, and grow and extend actively from their centres of origin. 5. This new cell mass formation may be associated with growth of a similar character in neighboring glands, and some evidence was also provided that visceral metastasis occurs. 6. Intracellular bodies are demonstrable in carcinomata mammæ which present the same features as the intracellular parasites of the experimentally produced nodules. 7. The evidence derived from these researches points to the conclusion that the organism described is an ætiological factor in the morbid process known as carcinoma mammæ.

Pollard reports seven cases of carcinoma of the colon successfully treated by colectomy. He describes in detail the nature and symptoms of the affection and the various modes of operation for its relief. Of the seven cases, six are alive and well: the seventh died suddenly four years after operation, but there was no evidence of recurrence.

3 and 4. **Radium.**—Davidson reports the results attained in the therapeutic use of radium bromide. He uses sealed tubes containing five milligrammes of the salt. In cases of rodent ulcer, tuberculosis verucosa cutis, rodent cancer, epithelioma, and malignant degeneration of male, the results were most striking and satisfactory. Radium gives off three kinds of rays: 1. Alpha rays: minute material particles propelled at an enormous velocity. 2. Beta rays: similar to the cathodal rays inside a Crookes's tube, but with a higher velocity. 3 Gamma rays, resembling x rays of extraordinarily penetrating power.

Sichel reports a case of rodent ulcer occurring in a man, aged sixty-five years, treated by applications of five mg. of radium bromide. There were forty-two sittings in all, over a period of two and a half months. Eventually only a depressed, slightly reddened, indurated circular scar was left, unaffected by further treatment.

5. **Leishmann's Bodies.**—Manson and Low report a case of tropical splenomegaly occurring in a man, aged thirty-seven years, in which tapping of the spleen showed the presence in great profusion of the bodies recently described by Leishman and Donovan occurring in certain low tropical fevers. The authors' observations disprove Laveran's views that these bodies are parasites of the red corpuscles and a species of peroplasma.

6. **Trypanosomiasis.** — Dutton, Todd, and Christy, from the examination of trypanosomes seen in stained specimens of blood from cases of trypanosomiasis, from cases of sleeping sickness (typical or doubtful), in the specimens of cerebrospinal fluid of the latter cases, and in the blood of experimental animals, infected with either of the three above-mentioned fluids, have been led to the following conclusions: 1. The trypanosomes seen in the blood of man, whether symptoms of sleeping sickness were present or not, have always been the same. The number of cases in which trypanosomes from the spinal fluid have been examined have been too small to admit of a definite description of morphological characteristics. 2. None of the forms seen exhibited any morphologic appearance incompatible with *Trypanosoma gambiense.* 3. The parasites seen in the blood of rats inoculated with the cerebrospinal fluid of cases of sleeping sickness are the same as those seen in rats inoculated with the blood of cases of either sleeping sickness or simple trypanosomiasis. 4. The organisms in the blood of rats inoculated with trypanosomes from any of the three indicated sources differed in no way from those observed in animals infected with *Trypanosoma gambiense.*

Letter to the Editor.

ELECTROCHEMICAL STERILIZATION IN TUBERCULOSIS.

PHILADELPHIA, *February* 8, 1904.

To the Editor,

Sir: The editorial in last Saturday's *Journal,* on Country Hospitals for Tuberculous Children, reminds me of the great numbers of these little unfortunates, for I do not see many such personally, and of the great value of the electrochemical sterilization method in their treatment. I have employed this method in but six cases, but as the patients regained color and strength, even before the diseased focus or sinus was entirely healed, and were quickly cured, I would urge its employment on those surgeons having to deal with large numbers of these cases.

The method is very simple. A needle is cut from thin zinc, to the basal end of which is attached a sufficient length of No. 32 copper wire to act as a conductor of the small current employed. The tip is amalgamated with quicksilver and inserted into the diseased gland or sinus, the shank of the needle being insulated or not, as we wish to enlarge the opening or concentrate the action within. The wire is now attached to the positive pole of the apparatus, and, with a negative pad placed elsewhere on the body surface, a current of from half a milliampère to three milliampères is turned on and allowed to run for not less than fifteen minutes. The procedure is repeated with a new electrode every other day, using cocaine by diffusion if necessary.

Under the action of the current the mercury and zinc are ionized, or dissolved, and the metallic ions are diffused from the electrode, uniting with and devitalizing the chemical constituents of the bacilli, which drain away in an aseptic state. The amount of chemical sterilization with nascent ions thus capable of being produced is entirely governed by the strength of the current and its duration, and as the process absolutely inhibits sepsis at the site of the application and can be localized anywhere beneath the skin surface, it should be a most valuable assistant to the surgeon in the several varieties of surgical tuberculosis. The six cases that have had this method applied in my hands were all instances of tuberculous adenitis of the neck, but I see no reason why it should not be applied succcessfully in other forms of accessible tuberculous deposits. An invariable clinical feature of all of these cases was the appearance of pink cheeks and other evidences of relief from some form of autointoxication as soon as the centres of the principal foci had been sterilized, and this occurred as promptly in the case of the little daughter of one of the cleaners in this office building as in the others, though her home environment was most unfavorable.

I should not neglect to mention that the final result of this treatment, which has required from eleven to thirty odd applications in the different cases, has been, from a cosmetic point of view, that a scar no larger than a pin head is left for each opening made. G. BETTON MASSEY.

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The Altoona Hospital, of Altoona, Pa., has received a bequest of $1,000 through the will of the late Mrs. Annie E. Moore, of that town.

Proceedings of Societies.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Ninety-eighth Annual Meeting, held in Albany, January 26, 27, and 28, 1904.

(Concluded from p. 284.)

Algernon T. Bristow, M. D., of Brooklyn, President.

Wednesday Afternoon, January 27th.

Lesions in the Structures Surrounding the Knee Joint.—Dr. NATHAN JACOBSON, of Syracuse, divided such lesions into (1) those due to direct injury; (2) those indirectly resulting from injury; and (3) those whose cause was unknown. Among more unusual conditions he enumerated rupture of tendon of quadriceps and of ligamentum patellæ; periosteitis of head of tibia; and occasionally tuberculosis of bone, rendered active by a slight injury. He reported cases exemplifying these conditions.

Report of 615 Surgical Cases Attended at the Albany Hospital.—Dr. ALBERT VANDER VEER, of Albany, made this report. Included in the cases were two of uterus bicornis, plates of which were shown. Fractures of the lower jaw he had now finally relegated to treatment by an interdental splint. He found that instilling a few drops of pure carbolic acid into persistent sinuses often caused them to heal.

Gunshot Wound of the Brain.—Dr. JOHN A. WYETH, of New York, reported this case.

Tuberculous Myositis.—Dr. WILLIAM B. BRENZMADE, of Brooklyn, reported a case of this rare condition.

Associated Cases of Staphylococcus Aureus Infection.—Dr. ARTHUR G. ROOT, of Albany, reported a group of cases of this character which had occurred in the State Industrial School at Rochester.

The Non-Operative Treatment of Trachoma.—Dr. FRANK J. PARKER, of New York, said that while he believed in the operative treatment in very well-marked cases of soft follicular trachoma, as the shortest method of treatment, it was not necessary. The non-operative treatment which he recommended consisted in the thorough rubbing into the ocular conjunctiva, three times a week, of a 1 to 500 solution of bichloride of mercury, and the use at home, night and morning, of eye drops composed of a solution of argyrol.

Aphasia and Agraphia.—Dr. EDWARD D. FISHER, of New York, read a paper in which he considered this subject in the light of our present knowledge, and expressed his doubts as to the correctness of the idea that the centre for writing was located in the second frontal convolution, citing cases in support of his views. The analogy with speech, however, led him to the conclusion that such a centre existed somewhere, and since agraphia and aphasia commonly were present together it was probable that their centres were closely associated.

SYMPOSIUM ON ABDOMINAL PAIN.

Abdominal Pain in General.—Dr. JOHN H. MUSSER, of Philadelphia, opened this symposium. Speaking of rigidity of the abdominal muscles, he said that, in obese women with relaxed abdominal walls, and in persons suffering from toxæmia, too much stress must not be laid upon the presence or absence of muscular spasm as an indication of the existence or non-existence of abdominal pain. Conversely, abdominal rigidity might be present in very muscular persons in connection with trifling conditions, such as ordinary colic. Pneumonia, particularly in children, sometimes gave rise to pain which seemed to indicate an abdominal origin, as from appendicitis or peritonitis. In pericarditis and angina pectoris the pain was not infrequently referred to the abdomen. Spasm of the pylorus might very easily be confounded with disease of the gall bladder. It was often exceedingly difficult to distinguish between gastric, hepatic, renal, and pancreatic pain. The significance of the disappearance of abdominal pain should not be lost sight of; it often pointed to the presence of a grave toxæmia. Pain was apt to be absent in cases of obstruction of the bowel when associated with intestinal paresis.

Abdominal Pain Referred to Abdominal Walls.—Dr. Joseph D. Bryant, of New York, stated that the diagnostician could derive some assistance in the interpretation of abdominal pain referred to the abdominal walls by remembering the distribution of the spinal nerves. Sometimes an area of hyperæsthesia on the surface was dependent upon a localized peritonitis beneath. A pathological condition confined to the abdominal walls might be mistaken for intraabdominal disease.

Abdominal Pain of Intestinal Origin.—Dr. Frederick Holme Wiggin, of New York, said that, in a general way, a sharp and persistent abdominal pain pointed to involvement of the peritonæum, whereas a dull, aching pain was more likely to be associated with involvement of the connective tissue. When the cause of the pain was situated in the colon, the pain and tenderness would be limited to the large bowel. Colicky pain in the left iliac fossa associated with bloodstained stools suggested inflammation of the sigmoid and rectum. The diagnosis of appendicitis should never be made until disease in the chest had been excluded by a careful examination. The occurrence of severe pain referred to the umbilicus and accompanied by faintness or collapse should lead to an examination of all of the openings in a search for external hernia. Whenever there was persistent abdominal pain of obscure origin, an exploratory laparotomy was indicated.

Dr. R. F. Weir, of New York, spoke of the fallacies connected with McBurney's point, and the aid rendered the diagnostician from the method of examining the costal arches recently recommended by Dr. Ellsworth Eliot. Less difficulty would be experienced in palpating the appendix if, with the patient in the recumbent posture, he were directed to raise the leg, and so by putting the psoas muscle on the stretch, bring the appendix nearer to the examining finger.

Wednesday Evening.—The dinner was held in the big ball room of the Hotel Ten Eyck, President Bristow in the chair. Three hundred members and guests sat down to dinner. Dr. Herman Bendell, following the crystallized custom of the past ten years, was toastmaster. Dr. Bristow, in speaking to the toast of the Medical Society of the State of New York, remarked that considering this momentous occasion of the reunion of the two State societies, the selection of the wedding march as one of the items on the musical programme was very felicitous. Speeches were also made by the Rev. W. F. Whitaker, of Albany; Assemblyman Charles F. Bostwick, of New York; the Hon. Danforth E. Ainsworth, Dr. Musser, of Philadelphia; Dr. Abraham Jacobi, and Dr. McCormack.

THIRD DAY.—*Thursday, January 28th.*

A Case of Recurring Membranous Stomatitis, Associated with Erythema Exudativum Multiforme (Hebra).—Dr. Louis E. Blair, of Albany, reported this case, in which a membranous affection starting as a simple ulcer of the mouth spread all over the buccal cavity and in a later attack affected all the visible mucous membranes. As this affection receded, erythematous skin lesions set in, becoming vesicular with hæmorrhagic contents resembling variola hæmorrhagica.

The Optometry Bill.—Dr. Lucien Howe, of Buffalo, introduced a resolution calling upon the committee on legislation to oppose the passage of this bill.

The Hospital Car; Its Equipment, Uses, and Importance.—Dr. W. W. Sanford, of New York, urged the necessity of special railroad emergency cars fitted for the treatment of those injured on railroads. An ordinary baggage car could be so fitted up as to provide a very satisfactory hospital car. One railroad had recently ordered special hospital cars, sixty feet long, divided into a twenty-foot operating room and a forty-foot hospital. He described the fittings of the car, and said that every railroad should have one like it.

Dr. Bristow then introduced the new president, Dr. H. D. Wey, of Elmira.

Time of Meeting.—Dr. H. L. Elsner moved a reconsideration of the action of the society in changing the time of meeting from Tuesday afternoon to Thursday evening, instead of, as heretofore, from Tuesday morning to Thursday noon. After a discussion by Dr. F. C. Curtis, Dr. W. G. Macdonald, and Dr. A. Vander Veer, and the admission by the President, Dr. Bristow, that he was now disposed himself to favor the old plan, the society voted to go back to the old régime.

SYMPOSIUM ON NEPHRITIS.

There was an unusually large attendance present, nearly one hundred, to hear the symposium on nephritis. Considerable disappointment was evinced at the news that telegrams had been received from Dr. Delafield and Dr. Edebohls stating that they were unable to be present; and as no copies of their papers had been received, their communications would have to be dispensed with. Later, however, Dr. W. G. Macdonald, of Albany, filled the vacancy thus caused with an admirable extempore address covering the field of renal surgery.

Renal Decapsulation from the Pathologist's Point of View.—Dr. J. M. Van Cott, of Brooklyn, sent a paper on this subject. He said that it seemed to have been lost sight of that when the capsule was stripped off the vessels, which should restore the circulation, were torn away; also that there must inevitably be death of considerable areas of the cortex, because renal epithelia were known to die two hours after being deprived of their blood supply, and it required four days for the renewal of the capillary circulation. In a condition like chronic diffuse nephritis, which was essentially of systemic origin, no amount of restoration of the renal circulation could restore the integrity of the cortex.

Surgical Treatment of Nephritis.—Dr. Willis G. Macdonald, of Albany, discussed this topic. He expressed the opinion that surgery could be of the most service in that class of cases in which the nephritis was dependent upon a bacterial infection. It was a common experience among surgeons that, whereas the clinical symptoms of nephritis were present in cases of movable kidney before operation, they disappeared after the operation. Mr. Reginald Harrison had described a class of cases characterized by great vascular tension and dependent upon an acute inflammatory process, in which relief followed stripping off the capsule of the kidney. Again, in cases of "surgical kidney," so commonly fatal under ordinary medical treatment, it had been demonstrated by many prominent surgeons that incision of the capsule would often be followed by a restoration of the function of the kidney.

General Treatment of Nephritis.—Dr. Beverley Robinson, of New York, said that, in the treatment of acute nephritis, the first thing to do was to secure physiological rest of the diseased organ, through the action of the skin and bowel. The patient should be kept in bed, and fed, at first, on an exclusively milk diet, the bowels evacuated and diaphoresis caused by the hot wet pack. When the urine was scanty and highly albuminous, counterirritation over the kidneys and high rectal irrigations of salt solution were beneficial. Pilocarpine was a dangerous drug, and should be avoided. If an attack of uræmia threatened, nitroglycerin or venesection would be of service. Morphine should be used cautiously, if at all, and only in cases showing a tendency to dilatation of the pupil. During convalescence the profound anæmia should be combated by iron, and great care must be exercised in enlarging the dietary. When the skin became very tense from œdema, it might be necessary to make punctures, or even insert a small capillary tube for drainage. In persons past middle life it was usually necessary to guard digitalis by the addition of nitroglycerin. Care should be used in prescribing the salicylates or remedies of the phenol group, because of their known irritant action on the kidneys. In chronic cases too close confinement must be as carefully guarded against as indulgence in too much exercise.

Dr. De Lancey Rochester, of Buffalo, spoke of the great value of hot air baths, and of cupping over the loins in cases of nephritis, and recommended the use of minute doses of pilocarpine, given hypodermically, always followed immediately by the hot air bath. In some instances he had been able to avert an attack of uræmia by prompt treatment instituted as soon as an excess of indican was discovered in the urine.

Dr. S. B. Ward, of Albany, spoke of the needless cruelty of telling persons they had "Bright's disease" simply because albumin or casts had been found in the urine. He indorsed nearly everything said by Dr. Robinson, and added a word in favor of the use of arsenic in nephritis for its constitutional effect.

THE WESTERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

Thirteenth Annual Meeting, held at Denver, Col., December 28 and 29, 1903.

(*Continued from page 235.*)

Ætiology, Symptomatology, and Diagnosis of Gastric Ulcer.—Dr. Frank C. Davis, of Des Moines, Iowa, said that clinically the simple ulcer was not so frequent as the statistics of post mortem examinations would lead one to expect, being from six per cent., as diagnosticated by Lebert, to .82 per cent., as observed by Fenwick. In the extensive records collected by Welch, ulcer, cicatrized or open, was present in about five per cent. of persons dying from all causes. Fenwick, from the examination of nearly 48,000 post mortem records, found scars or ulcers in 4.2 per cent.; and in 20,000 autopsies of persons dying from various causes, open ulcer in 1.5 per cent. If one took even the lowest percentage as found post mortem, namely, 1.5 per cent., it would be seen that every other case was undiagnosticated in life. Clinically and pathologically the author classified gastric ulcer as acute, acute secondary, and chronic. Each classification was expatiated upon. Hæmatemesis was a sign of such unmistakable value that one only needed to exclude a few other sources for the blood to establish a diagnosis by it alone. The symptoms of acute and chronic ulcer were detailed. A conservative estimate of perforation placed it at about 5 per cent. It occurred most frequently in females, which might be accounted for by the fact that many more women suffered from the acute ulcer, and that the chronic ulcer developing from the acute was more liable to perforation. The accident might occur suddenly or be preceded by an increase of pain and vomiting, or by a vomiting of blood.

Perforating Gastric Ulcer.—Dr. Archibald MacLaren, of St. Paul, Minn., said that perforating gastric ulcer was fully as common as extrauterine gestation, and that when the eyes of physicians were opened to this fact, they would be able to see them, diagnosticate them early, and save many lives that were now lost. In this country he did not believe that the perforation cases reached the hospitals so often as they did abroad. His experience left him to believe that Dr. Richard Harte was correct when he said that rigidity or tension of the abdominal muscles was the keynote to the early recognition of peritoneal perforation from whatever source. The pain might subside, the temperature might not be elevated, but the rigidity continued even up to the end. He believed that many cases could be correctly diagnosticated, as was proved by a few cases which he reported, and by the many cases which were constantly being published in the journals.

He detailed three cases. The first was a perforating latent gastric ulcer on the anterior wall. Operation was done eleven hours after perforation had occurred, with recovery of the patient. The second case was one of probable perforating gastric ulcer, followed by death in twenty-nine hours, either without operation or post mortem. The third was a case of subacute perforating gastric ulcer, which was operated on nine hours after perforation, with recovery.

Dr. Charles W. Oviatt, of Oshkosh, Wis., mentioned the case of a man, sixty-two years of age, a laborer, who had never complained of any symptoms of gastric ulcer. He had eaten a hearty meal, had lain down on the lounge feeling perfectly well shortly after, but within an hour he rolled over on to the floor with agonizing pain. A physician was called, who gave large doses of morphine hypodermically, without any benefit, and the patient died within a few hours. Post mortem examination revealed a perforating ulcer in the posterior wall of the stomach which seemingly had attempted to heal. There was no blood in the stomach; but the abdominal cavity was filled with stomach contents.

Dr. B. B. Davis, of Omaha, Nebraska, referring to the ætiology, said that stagnation accounted practically for a large proportion of cases of gastric ulcer, and without it there was no ulcer. This stagnation might be due to a variety of causes which he pointed out.

Dr. Leonard Freeman, of Denver, Colorado, detailed a case he observed some time ago, in which perforation occurred early in the morning, but rigidity of the muscles of the abdomen did not follow until two o'clock in the afternoon. This led to a non-recognition of the case, and although operation was done, it was too late to do any good.

Dr. H. A. Sifton, of Milwaukee, Wis., mentioned five cases of gastric ulcer, and one of duodenal ulcer. No diagnosis was made in three of them. He had operated on but two cases, the diagnosis in these having been made within twelve hours. One of the patients died, the other recovering.

Dr. Charles H. Mayo, of Rochester, Minn., said that, after examining eleven hundred stomachs by test meals, laboratory testing, and physical examination, anæmia was a very important factor; next, long continued neurasthenic symptoms. He mentioned one authority who, in examining twenty-two hundred cases at autopsy, found that 20 per cent. of women showed signs of ulcer of the stomach, and only one and a half per cent. of men. Welch, in an examination of eight hundred cases of gastric ulcer, found 60 per cent. in women, and 40 per cent. in men. The speaker and his brother had operated on approximately 400 cases, and of 1,500 cases of stomachs examined, they had found that the proportion was about the same as that given by Welch. Welch also found, in an examination of 788 cases of ulcer of the stomach, that only 28 occurred in the greater curvature, so that the greater proportion of them were found in the pyloric end of the stomach. Of cases of cancer of the stomach, Dr. Mayo had elicited a history of chronic ulcer covering a period of from one to fifteen years. His statistics showed 88 per cent. of gastric ulcer, and 12 per cent. of duodenal ulcer. The tendency was more and more to consider the first two inches and a half of the duodenum as a part of the stomach. In 31 cases of acute perforation of the stomach and duodenum, 11 occurred in the duodenum in this first two and a half inches, and he had operated in 26 cases of ulcer of the duodenum.

Dr. M. L. Harris, of Chicago, said that the extensive experimental work of Fütterer showed that it was impossible to produce gastric ulcer in an animal until the hæmoglobin of the blood had been reduced below a certain point; that all lesions of the mucosa produced in healthy animals readily healed. When the hæmoglobin was reduced below a certain point, producing a marked anæmia, then these lesions developed into typical ulcers. These observations showed the importance of an examination of the blood in these cases. Another point was the examination of the fæces for hæmatin crystals, as a means of diagnosis in obscure cases of gastric ulcer.

The Treatment of Hæmatemesis by Gastroenterostomy, with Report of a Case.—In a paper on this subject, the author, Dr. F. Gregory Connell, of Leadville, Col., classified the operative treatment of hæmatemesis as direct and indirect. Under direct he included (1) excision of the ulcer; (2) partial gastrectomy or pyloroplasty; (3) ligation of the principal artery; (4) cauterization or curetting of the ulcer; (5) ligation of the mucous membrane, and (6) ligation of all coats.

Under the indirect he mentioned (1) gastroenterostomy; (2) pyloroplasty, and (3) gastrotomy.

After considering the direct method as a whole, he stated that these were not in common use, because of such objectionable features as the difficulty of locating the ulcer, the fact that the lesion was frequently multiple, the presence of firm and complicating adhesions, and the indistinct limitations of the pathological tissue. The high mortality rate of some and the impracticability and unreliability of others had been the cause of a general turning to the indirect method, as exemplified by gastroenterostomy. The manner in which a gastroenterostomy allowed an ulcer to heal was well understood and practically settled, but as to this same operation acting as a hæmostatic measure, no such substantial reasons as those advanced for the healing could be presented. While rest and drainage undoubtedly favored clotting and the cessation of hæmorrhage from small blood vessels, it was difficult to understand how they could arrest hæmorrhage from a large artery with a lateral opening, as in the case reported. As one was unable to determine with any degree of accuracy the nature or the source of the hæmorrhage, gastroenterostomy was indicated only after a thorough search for the bleeding point. The exact status of gastroenterostomy in hæmatemesis was not well defined, as was shown by numerous quotations. It had been said that a search for the bleeding point was futile, harmful, and unnecessary, and that a gastroenterostomy would, without doubt, prevent recurrence of the hæmorrhage. To show that gastroenterostomy would, without doubt, prevent recurrence of the hæmorrhage, the author reported one case and cited others from the literature.

Gastroenterostomy was indicated in hæmatemesis (1) after a thorough search had failed to reveal the source of the hæmorrhage. (2) Where the source of the bleeding was discovered, but in such condition as to make direct treatment impracticable or impossible.

The conclusion, based upon a sad experience and a review of the literature, was an endeavor on the part of the author to discountenance the idea, which had become quite prevalent, that nothing was to be gained by searching for the bleeding point, as gastroenterostomy was all that would be necessary to prevent recurrence of the hæmorrhage.

(*To be continued.*)

Book Notices.

A Textbook of Surgery. For Students and Practitioners. By George Emerson Brewer, A. M., M. D., Lecturer on Clinical Surgery at the College of Physicians and Surgeons, Columbia University, New York, etc. Illustrated with 280 Engravings in the Text and 7 Plates in Colors and Monochrome. New York and Philadelphia: Lea Brothers & Co., 1903.

In his preface the author says: "The need of a comprehensive yet abridged textbook on surgery . . . has been felt by the author; . . . a number of excellent manuals have appeared from time to time; . . . the best of these have, by their success, passed into new editions, in each of which the tendency to enlarge has not been sufficiently resisted. . . . Following these ideas, the author has endeavored in the present work to give the essential facts in practical surgery as briefly as is compatible with clearness. . . . The same reason has excluded the description of more than one or two methods of treating a given surgical affection. . . ."

On the results of his efforts at condensation, for it is in condensation only that the work has any special feature, the author must expect a verdict. We believe that the most lenient critic will admit that Dr. Brewer has far overshot the mark, and that he has squeezed his work out of all semblance to a textbook in the common acceptation of the word. If we confess that some of the standard textbooks on surgery are too elaborate, surely a work that contains all the desired information and more is for every purpose better than one that contains but very little useful information. Nor is it justice to the medical student who has to master innumerable dry facts of anatomy, materia medica, etc., to lighten his tasks of memory by graduating him without a reasonable familiarity with the standard operations. Is it indeed a textbook of surgery for students and practitioners wherein can be found described, for example, only one of the classical methods of gastrostomy? But even the deliberate omissions are no more a fault than is the meagreness of description. Thus, the technics of intestinal resection is lightly dismissed with eight lines, and the entire subject of intestinal anastomosis is given but little more space. Even so simple an operation as circumcision could not be properly performed upon the scant directions given here. With methods of treatment other than operative, Dr. Brewer has been equally sparing of words. Could either a student or a practitioner have any proper notion of the method of applying Gibney straps for sprains from the following brief and solitary reference to the subject: "When the first bandage is removed, the joint should be strapped with adhesive plaster, as suggested by Gibney and shown in Fig. 170. This prevents swelling and gives sufficient support to the parts to enable the patient to use the limb moderately without discomfort," more especially since the illustration shows the straps all in place and not the manner of applying them?

In short, throughout the work the descriptions of affections and of their treatment are reduced almost "to the lowest terms." Had the book been styled a condensed surgical manual or, following the plan of dictionary publishers, an abridged textbook of surgery (which the preface frankly states it to be), there would be less to condemn and not a little to praise. For, after all, there is in it much said in few words; and for students about to begin a course in surgery it affords an excellent survey of the field. For other readers we believe the book would prove a disappointment.

Die Fermente und ihre Wirkungen. Von Carl Oppenheimer, Dr. Phil. et. Med. Assistent am thierphysiol. Inst. d. Landwirth Hochsch, Berlin, Zweite neubearbeitete Auflage. Leipsic: F. C. W. Vogel. 1903. Pp. 439.

Since the appearance of the first edition of this work, the author has altered his original opinion in regard to the reversibility of the reaction of the ferments, and now sides with Ostwald, that the reaction is merely a catalytic one, the ferment undergoing no change whatever in the reactions into which its enters. Oppenheimer's definition of a ferment may be summed up in the following words: A substance working in a catalytic manner, generated by and more or less closely united to the living cell, its action, however, not being entirely dependent upon the life of the cell itself.

Each ferment reacts in its own peculiar manner, selecting substances of a peculiar structural or stereochemical nature, specially adapted to its own configuration formula. This at once brings us to the simple explanation of Emil Fischer, in which he compares a ferment to a key which only fits a certain lock and by its catalytic properties passing from lock to lock until it has reached all the molecules upon which it reacts. This catalytic reaction, however, has its limits, great dilution and the presence of a large excess of the end product causing a diminution and finally a cessation of the activity of the ferment.

Fischer's simple explanation, above cited, is analogous to Ehrlich's theory as to the combination formed between bacterial toxine and the cell protoplasm, the "haptophore" group of the former uniting with the "haptophore" group of the latter, or "receptor." The author further draws a parallel between the side chain theory of Ehrlich and the action of the simple ferments.

The action of the ferment occurs in two phases; the first consists in the formation of a combination between the ferment and the body upon which it reacts, this combination probably depending upon the stereochemical configuration, the second of which is the decomposition of this combination, the original molecule of the ferment reconstituting another combination, according to the law of catalysis. The author draws the conclusion that, owing to the constant secretion of ferments by various cells of the animal organism, the ferments are themselves ultimately destroyed in subsequent physiological processes.

It would be useless further to sketch the contents of this most valuable work upon a most important and interesting subject. The author, however, treats the special ferments fully, criticising all the work which has been published on this most comprehensive subject, in the same lucid manner in which the general properties of the ferments are briefly stated at the beginning of this review. A well arranged index and a most comprehensive bibliography, comprising almost seventeen hundred titles upon this subject, complete the volume.

Festschrift f. Professor Manz und Professor Sattler. Supplement to the Klinische Monast. für Augenheilk.

The presentation of testimonials of esteem on the occasion of birthdays or other personal anniversaries is a pleasant custom observed in all countries. In Germany, when the recipient is or has been an eminent medical teacher, it is not infrequent for this testimonial to take the form of a collection of papers written for the occasion by a number of his former students and colaborers. Such a collection is known as a Festschrift. The present volume is such a collection of twenty-six papers written in honor of the seventieth birthdays of Professor Manz, of Freiburg, and Professor Sattler, of Leipsic. The subjects treated of are all ophthalmological and include, among others, the occurrence of detachment of the retina and the importance of general vasomotor disturbances in hydrophthalmos, experimental researches regarding endogenous tuberculosis in the eyes of rabbits, metastatic ophthalmia, the histology of trachomatous pannus, malignant tumors of the eye, and pupillary phenomena. Each paper is excellent and worthy of a place in a work published in honor of two such distinguished men.

Functional Diagnosis of Kidney Disease, with Especial Reference to Renal Surgery. Clinical Experimental Investigations. By Dr. LEOPOLD CASPER (Privatdocent an der Universität) and Dr. PAUL FRIEDERICH RICHTER (Assistant der III. med. Klinik in Berlin). Translated by Dr. ROBERT C. BRYAN, Adjunct Professor of Genitourinary Diseases, University Medical College, Richmond, Va., and Dr. HENRY L. SANFORD, Resident, Lakeside Hospital, Cleveland. Philadelphia: P. Blakiston's Son & Co., 1903. Pp. x-233. (Price, $1.50 net).

A very excellent monograph on the diagnosis of insufficiency of the kidneys is this little book of Casper and Richter's. It deals with the problems of diagnosis of kidney derangement and their importance in surgical operative treatment. The methods of determining whether the function of either or both kidneys is sufficient or insufficient are given with a great deal of clearness and emphasis. The clinical experimental results of cystoscopy and cryoscopy are fully covered, and the book terminates with the conclusions derived from the various questions considered.

Whatever Casper writes is worthy of serious consideration and reflection. It is, therefore, a matter of congratulation that his teachings should be made accessible to English speaking surgeons in this translation. The translation is, like most of the kind, done by men unfamiliar with German methods of expression. It has been made too literal to be a specimen of good English; thus, on page 56, the following Germanism may be given as an example of many appearing in the book: "There is also another method by which we can, although not always yet still often, tell, etc." Nevertheless, the book is very readable.

Die Topographie der Niere und ihre Bedeutung für die Nieren-Chirurgie. Von Dr. M. ZONDEK, Berlin. Mit Abbildungen im Text. Berlin: 1903. Verlag von August Hirschwald. Pp. iii-104.

This brochure covers in a most exhaustive manner the subject of the topography of the kidney by which is meant, not merely a projection picture of the kidney as related to the surface of the body, but also its topographical relation to all the viscera and the skeleton.

The shape of the organ comes in for a brief consideration. A very interesting chapter is devoted to the internal topography of the kidney, which embraces the distribution of the blood vessels. From the very painstaking study of the arrangement of the vascular system, instructive and valuable information is given as to the best way of plaining the incision of the kidney in nephrotomy, the causes of infarcts, and the effects of resection of the kidney. Open and subcutaneous injuries of the kidneys, it is pointed out, have, as a consequence, a greater or larger renal defect, depending on whether the wound is in the direction of or at right angles to the distribution of the vessels.

Displacement of the kidney is considered under the headings, Congenital, Heterotopia, and Movable Kidney. The variety of factors responsible for this condition are discussed seriatim and the author comes to the conclusion that no one type of operation can be put down as effective, but that each case must be treated on its own merits.

The Principles and Practice of Hydrotherapy. A Guide to the Application of Water in Disease. For Students and Practitioners of Medicine. By SIMON BARUCH, M. D., Professor of Hydrotherapeutics in the New York Postgraduate Medical School and Hospital, etc. Second Edition, Revised and Enlarged, with Numerous Illustrations. New York: William Wood & Co., 1903. Pp. x-496.

The increased general use of hydrotherapy as a remedial agent has justified a new edition of Dr. Baruch's book. He was among the first in America to insist on the good results of hydrotherapy when judiciously applied. While he may have appeared to many to regard this agent from the standpoint of a therapeutic enthusiast, he certainly has presented his subject in an intelligent and readable manner.

Quiz Compends. No. 1. A Compound of Human Anatomy. By SAMUEL O. L. POTTER, M. A., M. D., M. R. C. P., Lond. Formerly Professor of the Principles and Practice of Medicine in the Cooper Medical College, of San Francisco, etc. Seventh Edition, Revised and Enlarged. With 138 Wood Engravings; also Numerous Tables and 16 Plates of the Arteries and Nerves. Philadelphia: P. Blakiston's Son & Co., 1903. Pp. xii-372. (Price, $0.80 net).

This book has been entirely rewritten, and numerous illustrations have been added, while the same standard of merit shown in previous editions has been maintained. Of necessity, it is very concise, but at all times it is accurate. Both student and practitioner will find it of value.

BOOKS, PAMPHLETS, ETC., RECEIVED.

A Text-Book of Legal Medicine and Toxicology. Edited by FREDERICK PETERSON, M. D., President of the New York State Commission in Lunacy, Clinical Professor of Psychiatry, Columbia University, New York, etc.; and WALTER S. HAINES, M. D., Professor of Chemistry, Pharmacy, and Toxicology in Rush Medical College, Chicago; Professorial Lecturer on Toxicology in the University of Chicago. In Two Volumes, Containing about 1,500 Pages, Fully Illustrated. Volume ii. Philadelphia, New York, and London: W. B. Saunders & Co. 1904. Pp. 750. [Price, Cloth $5.00 net, per Volume].

Nineteenth Report of the State Board of Health, of Wisconsin. September 30, 1902. Madison: Democrat Printing Company, State Printer. 1903. Pp. 304.

The Treatment of Fractures. With Notes Upon a Few Common Dislocations. By CHARLES LOCKE SCUDDER, M. D., Surgeon to the Massachusetts General Hospital. Fourth Edition, Thoroughly Revised. With 688 Illustrations. Philadelphia, New York, and London: W. B. Saunders & Co. 1903. Pp. 534. [Price $5.00 net].

Lessons on Massage. By MARGARET D. PALMER, Masseuse and Manager of the Massage Department of the London Hospital, Instructor of Massage to the Nursing Staff of the London Hospital. Second Edition. New York: William Wood & Co. MDCCCCIV. Pp. xvi-261.

The Management of Lateral Curvature of the Spine, Stooping, and the Development of the Chest in Phthisis. By E. NOBLE SMITH, F. R. C. S., Edin., etc.; Senior Surgeon to the City Orthopædic Hospital, London. London: Smith, Elder & Co., 15 Waterloo Place. 1904. (All rights reserved.) Pp. viii-133.

Prostatic Hypertrophy from Every Surgical Standpoint. By GEORGE M. PHILLIPS, M. D., and Forty Distinguished Authorities. Edited and Compiled by S. C. MARTIN, JR., M. D. Lewis S. Matthews & Co., Medical Books, 2623 Olive Street, St. Louis, Mo. Pp. 167. [Price $1.75].

The Prevention of Consumption. By ALFRED HILLIER, M. D., C. M., B. A., Secretary to the National Association for the Prevention of Consumption (London); Member of the Council of the International Association for the Prevention of Tuberculosis (Berlin), etc. Revised by Professor R. KOCH. With Illustrations. Longmans, Green, & Co., 39 Paternoster Row, London, New York, and Bombay. 1903. (All Rights Reserved). Pp. xiv-226.

The Lymphatics. General Anatomy of the Lymphatics. By G. DELAMERE. Special Study of the Lymphatics in Different Parts of the Body, by P. POIRIER, Professeur d'Anatomie à la Faculté de Médecine à Paris, Chirurgien des Hôpitaux, and B. CUNEO, Professeur agrégé à la Faculté de Médecine de Paris. Authorized English Edition, Translated and Edited by CEÇIL H. LEAF, M. A., M. B. (Cantab.), F. R. C. S. (Eng.), Assistant Surgeon in the Cancer Hospital, etc. With 117 Illustrations and Diagrams. Chicago: W. T. Keener & Co., 90 Wabash Avenue. 1904. Pp. xii-301. [Price $5.00 net].

Miscellany.

One Thousand Cases in Students' Out-Door Obstetric Practice.—Dr. John F. Winn, of Richmond, Va. (*Journal of the American Medical Association*, October 3, 1903), gives a very interesting report of one thousand obstetrical cases under his charge in the obstetrical clinic service of the University College of Medicine. A striking feature of this report is the low mortality rate—5 deaths in the 1,000 cases from all causes, or just one half of one per cent. No death was the result of preventable infection.

This excellent showing is the more unique because the deliveries were conducted in the homes of the poorer classes amid unsanitary surroundings (only seven of the patients receiving hospital treatment). One death resulted from post partum hæmorrhage; one from eclampsia; one from septic peritonitis supervening upon a ruptured gonorrhœal pus tube; one from shock in a late stage of tuberculosis; and the fifth from apoplexy induced by eclampsia.

A comparative mortality rate is presented, which shows that Dr. Winn's clinic at the University College of Medicine is entitled to second place in point of low mortality; the other clinics in contrast being the Frauen Klinik of Berlin; the Obstetrical Clinic of Prague; Baudelocque's Clinic of Paris; and the Society of the Lying-in-Hospital, New York. The latter is the only one which execls Dr. Winn's clinic in point of low mortality.

The results go to show that thorough and continuous disinfection of the hands and of the external genitalia are the chief safeguards against infection. No claim is made for a great exhibit of aseptic paraphernalia. On the other hand, the management of these cases has been on plain and easily followed lines of asepsis and disinfection. Chemical disinfection is believed to have its place, but it does not supplant soap and water scrubbing. Specifically, the rule is persistent scrubbing of the hands and forearms, followed by immersion in bichloride—1 to 1,000—not less than five minutes, and in lysol solution—1 drachm to the pint—*every time* a vaginal examination is made. Vaseline is never allowed as a lubricant. The hand is carried directly from the lysol solution to the vagina. More than ordinary care of the genital tract is observed during the third stage of labor, not only in guarding against the entrance of pathogenic organisms, but especially in observing the time for, and the manner of, delivering the placenta. The author lays stress upon the very important fact that the hasty or precipitate resort to Credé's method is largely responsible for the incomplete delivery of the placenta and membranes, and also for the sepsis which is dependent thereupon. Recognizing this statement to be true, he believes that any method designed to excite uterine contraction before Nature indicates that the placenta is ready to be separated and cast off, must be regarded as being entirely at variance with *Nature's* way of dealing with the afterbirth. The instructions for the conduct of this important stage of delivery are clearly defined. The uniform rule in this clinic is to place one hand over the uterus immediately after the child is born, but to make no friction so long as the uterus remains firm. The rising of the fundus while yet firm is taken to be the signal that the uterus is ready to expel the placenta. The lifting up of the uterus may not occur within the average "twenty minutes," but just as soon as it is observed by what the author terms the "sentinel hand," the uterus is grasped firmly with one or both hands and pressed downward in the axis of the superior strait. It is rarely necessary to wait longer than three-quarters of an hour for this signal for action. This applies especially to full-term deliveries. The membranes are not twisted into a rope, as recommended by many. They are allowed to trail out, which they will do during that normal relaxation that follows uterine contraction. The point is especially emphasized that all attendants act on the principle that every placenta *at full term* has its own time to separate, and that it is in accord with nature to wait until that time arrives before resorting to artificial stimulation of the uterus. By the rigid observance of this rule, no case of adherent placenta has been observed.

The paper closes with the statement that all students are strictly enjoined to avoid unnecessary interference with the genital tract after the child is born, and that, just in proportion as this rule is regarded, will there be fewer deviations from the normal puerperium.

Death Under Ethyl Chloride.—Dr. Francis J. Olcott, Jr., reports in the *American Journal of the Medical Sciences* for December, 1903, a case of death during general anæsthesia with ethyl chloride.

Contribution to the Study of Exclusion of the Intestine.—Vautrin (*Revue de chirurgie*, July 10th) lays down as being the principal indications for this operation tuberculous lesions of the cæcum, stercoral fistulæ, malignant tumors of the cæcum, intestinovaginal fistulæ, neoplasms of different portions of the digestive tube, and ulcerative inflammatory lesions of the intestine. The operation separates and isolates a diseased segment of intestine.

For the malignant diseases it offers only a temporary relief, for fistulæ and inflammatory lesions it may produce a cure. It is a substitute for enterectomy when such an operation is impracticable. It may cause such an improvement in the general condition, and such a modification of the local disease, that a subsequent radical operation will become possible. It is superior to enteroanastomosis, which does not prevent or overcome very serious conditions.

There are two varieties of this operation, unilateral and bilateral exclusion. The former consists in dividing the intestine above the obstruction, fixing to the skin the orifice of the lower end, corresponding to the lesion, and anastomosing the proximal end upon the intestine below the diseased structures. It differs from the usual operation of enteroanastomosis in the fact that the intestine is divided, a fistula created, which carries outward the products of secretion and disintegration which are wont to accumulate on the proximal side of the diseased tissues. The field of this operation is limited and it may be followed by hæmorrhage, ulceration, or other serious conditions.

Bilateral exclusion signifies the separation of the diseased segment, outside the intestinal circuit by means of two incisions above and below, the proximal end being then anastomosed with the distal one. The excluded portion can then have its two ends attached to two openings in the abdominal wall, or one end may be attached to the abdominal opening, the second being closed and dropped into the abdomen, or both ends may be closed and dropped. The last mentioned plan is undesirable and is not recommended, except in rare instances. The second method has a somewhat wider scope, but is not to be performed if it is possible to perform the first method, the two openings of the isolated intestine being secured to the abdominal wall. Many inconveniences accompany even this method, but it relieves the patient from pain, permits a return of the appetite and strength, and is as little objectionable as any method in which the diseased structures are not removed.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending February 5, 1904:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
District Columbia—Washington	Jan. 23-30	1	
Florida—Jacksonville	Jan. 23-30	4	
Indiana—Evansville	Jan. 23-30	2	
Iowa—Des Moines	Dec. 23-29	1	
Louisiana—New Orleans	Jan. 23-30	2	
		1 case imported.	
Maine—Orono	Jan. 22	1	
Michigan—Detroit	Jan. 23-30	1	
Michigan—Flint	Jan. 23-30	1	
Michigan—Grand Rapids	Jan. 23-30	2	
Missouri—St. Louis	Jan. 23-30	13	
New Hampshire—Manchester	Jan. 23-30	2	
New Jersey—Camden	Jan. 23-30	1	1
New York—Buffalo	Jan. 22-29	1	
Ohio—Bucyrus	Jan. 23-30	4	
Ohio—Warren	Jan. 23-30	1	
Pennsylvania—Allentown	Jan. 23-30	1	
Pennsylvania—Erie	Jan. 23-30	1	
Pennsylvania—Johnstown	Jan. 23-30	2	
Pennsylvania—McKeesport	Jan. 23-30	5	
Pennsylvania—Philadelphia	Jan. 23-30	65	17
Pennsylvania—Pittsburgh	Jan. 23-30	15	
		1 case imported.	
Pennsylvania—Reading	Jan. 25-Feb. 1	2	
Pennsylvania—Williamsport	Jan. 24-31	1	
Utah—Salt Lake City	Jan. 23-30	1	
Wisconsin—Milwaukee	Jan. 23-30	3	
Smallpox—Foreign.			
Austria—Prague	Jan. 2-9	5	
Brazil—Rio de Janeiro	Dec. 27-Jan. 3	41	27
China—Shanghai	Dec. 21-29	1	1
France—Paris	Dec. 26-Jan. 16	50	3
Great Britain—Edinburgh	Jan. 8-16	9	
Great Britain—Glasgow	Jan. 15-22	65	4
Great Britain—Leith	Jan. 8-16		1
Great Britain—Liverpool	Jan. 8-16		1
Great Britain—London	Jan. 2-16	10	
Great Britain—Manchester	Jan. 8-16	1	
Gt. Britain—Newcastle-on-Tyne	Jan. 8-16	2	
Great Britain—Sunderland	Jan. 8-16	6	1
India—Bombay	Dec. 29-Jan. 5		3
India—Karachi	Dec. 27-Jan. 3	7	1
Mexico—Tampico	Jan. 10-24	11	
Netherlands—Amsterdam	Jan. 8-16	2	1
Russia—Moscow	Dec. 26-Jan. 2	5	
Russia—Odessa	Dec. 26-Jan. 2	2	
Russia—St. Petersburg	Jan. 2-9	24	1
Spain—Santander	Jan. 10-17	2	

Yellow Fever.

Africa—Grand Bassam	Dec. 12	Present.	
Brazil—Rio de Janeiro	Dec. 28-Jan. 3	2	
Mexico—Vera Cruz	Jan. 16-23	1	
Panama—Panama	Jan. 5-12		3
Venezuela—La Guaira	Jan. 2-9	Present.	

Plague.

British Burmah—Rangoon	Dec. 9		1
China—Hongkong	Dec. 5-12	1	1
India—Bombay	Dec. 29-Jan. 5		125
India—Karachi	Dec. 27-Jan. 3		7
South Africa—Natal (Pietermaritzburg)	Dec. 5	3	2

Cholera.

Straits Settlements—Singapore	Dec. 5-19		3
Turkey in Asia—Diarbekir	Dec. 28-Jan. 4		15
Turkey in Asia—Inebe	Dec. 28-Jan. 4	1	1
Turkey in Asia—Kerbela	Dec. 21-23		15
Turkey in Asia—Latakieh	Dec. 28-Jan. 4	11	7
Turkey in Asia—Mossul	Dec. 28-Jan. 4	1	1
Turkey in Asia—Mussieb	Dec. 28-Jan. 4	18	18

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending February 4, 1904:

Beck, J. E., Pharmacist. Upon being relieved from duty at Mobile, Ala., by Pharmacist E. S. Maguire, to proceed to Fort Stanton, N. M., and report to medical officer in command for duty and assignment to quarters. February 1, 1904.

Foster, S. B., Acting Assistant Surgeon. Department letter granting Acting Assistant Surgeon Foster leave of absence for ten days from January 17, 1904, amended to read ten days from January 21, 1904.

Holt, E. M., Pharmacist. Granted leave of absence for twenty-seven days from January 1, 1904, on account of sickness.

Maguire, E. S., Pharmacist. Relieved from duty at Fort Stanton, N. M., and directed to proceed to Mobile, Ala., and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist J. E. Beck. February 1, 1904.

Warren, B. S., Assistant Surgeon. Granted leave of absence for seven days from February 12th.

Promotion.

Assistant Surgeon D. M. Robinson commissioned as passed assistant surgeon to rank as such from December 28, 1903.

Appointments.

William J. Foster appointed acting assistant surgeon at Lexington, Mich., for examination of keepers and surfmen of the Life Saving Service. January 27, 1904.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending February 6, 1904:

Appel, Aaron H., Major and Surgeon. Extension of sick leave is further extended three months.

Farr, Charles W., First Lieutenant and Assistant Surgeon. In addition to his present duties will make the physical examinations of recruits at the recruiting station, San Francisco, Cal.

Hanner, John W., First Lieutenant and Assistant Surgeon. Relieved from duty as surgeon on transport *Sheridan* on its arrival at Manila, P. I., and ordered to report to the Commanding General, Division of the Philippines, for assignment to duty.

Lando, M. E., First Lieutenant and Assistant Surgeon. Resignation as first lieutenant and assistant surgeon in the United States Army took effect February 1, 1904.

Murray, Alexander, First Lieutenant and Assistant Surgeon. Is assigned to duty as surgeon on the transport *Sheridan* to take effect upon the arrival of the transport at Manila, P. I.

Yost, John D., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Mason, Cal., and also relieved from duty as examiner of recruits, San Francisco, Cal.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 6, 1904:

Grunewell, A. G., Surgeon. Granted sick leave for three months from February 2, 1904.

Heiner, R. G., Assistant Surgeon. Ordered to the Naval Hospital, New York.

Morse, E. T., Pharmacist. Detached from the Naval Laboratory, Brooklyn, N. Y., and ordered to the Naval Station, Cavite, P. I.

Ship, E. M., Surgeon. Commissioned surgeon with rank of lieutenant commander from March 3, 1903.

Spear, R., Surgeon. Commissioned surgeon with rank of lieutenant commander from March 3, 1903.

Stoop, R. E., Assistant Surgeon. Ordered to the Naval Hospital, Norfolk, Va.

Strine, H. F., Assistant Surgeon. Detached from the Naval Station, Isabela, P. I., and ordered to the Navy Yard, Olongapo, P. I.

Births, Marriages, and Deaths.

Born.

May.—In Blenheim, South Carolina, on Monday, January 25th, to Dr. Charles R. May and Mrs. May, a daughter.

Married.

Emmet—Drexel.—In New York, N. Y., on Tuesday, February 9th, Dr. J. Duncan Emmet and Miss Josephine Drexel.

Moore—Howell.—In Washington, D. C., on Wednesday, January 27th, Dr. Frederick Clifton Moore and Miss Sara Margaret Howell.

Died.

Awk.—In New Haven, Connecticut, on Monday, February 1st, Dr. Eugene Awk, in the forty-eighth year of his age.

Barnes.—In Pleasant Plains, N. Y., on Friday, January 22nd, Dr. Edwin Barnes, in the sixtieth year of his age.

Buehler.—In Philadelphia, Pennsylvania, on Monday, February 1st, Dr. Henry B. Buehler.

Gordon.—In Santa Cruz, California, on Sunday, January 24th, Dr. Oscar L. Gordon, in the seventy-sixth year of his age.

Hanahan.—In Elwood, Indiana, on Monday, January 25th, Dr. John Hanahan, in the forty-sixth year of his age.

Hale.—In Catskill, N. Y., on Saturday, January 30th, Dr. George Clinton Hale, in the seventy-second year of his age.

Hinkson.—In Blissville, N. Y., on Saturday, February 6th, Dr. John R. Hinkson, in the forty-ninth year of his age.

Jones.—In Gonzales, Texas, on Monday, January 25th, Dr. John Curtis Jones.

Mayfield.—In Bruceville, Indiana, on Sunday, January 24th, Dr. Joseph J. Mayfield, in the eighty-fourth year of his age.

O'Connor.—In Chicago, Illinois, on Saturday, January 30th, Dr. John D. O'Connor, in the thirty-third year of his age.

Rooney.—In Hoboken, N. J., on Thursday, February 4th, Dr. Joseph G. Rooney.

Sutherland.—In Detroit, Michigan, on Monday, January 25th, Dr. Egbert Sutherland, in the fifty-first year of his age.

Thompson.—In New York, N. Y., on Tuesday, February 2nd, Dr. George Thompson, in the ninetieth year of his age.

Wait.—In New York, N. Y., on Saturday, January 30th, Dr. Phoebe Jane Babcock Wait, in the sixty-sixth year of her age.

White.—In Cleveland, Ohio, on Saturday, January 23rd, Dr. Charles E. White.

New York Medical Journal
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Original Communications.

THE CLINICAL IMPORTANCE OF AEROPHAGIA.

By HEINRICH STERN, M. D., Ph. D.,

PROFESSOR OF INTERNAL MEDICINE, NEW YORK SCHOOL OF CLINICAL MEDICINE; PHYSICIAN TO RED CROSS AND METROPOLITAN HOSPITALS.

Clinical medicine of to-day has bestowed but scanty attention upon the importance of aerophagia. Not only has the swallowing of air not been considered as a factor in the ætiology of gastrointestinal disturbances, but in the few instances in which it has been regarded as a cause of disease, affections of the gastric organ alone have been thought of. Aerophagia, however, is a much more frequent phenomenon than is commonly supposed, and its results are not only not confined to the stomach, but are at times perceptible in parts of or even in the entire intestinal tract.

Deglutition of air no doubt occurs most frequently on a hysterical basis and in neurasthenic subjects, but it need not necessarily arise in subjects of neurotic tendencies; healthy people—and especially such as work in the open air and devote themselves to out of door sports—are not infrequently its unconscious victims.

Deglutition of air is well known to the veterinary surgeon. The "cribbing" of horses, the habit of gnawing the teeth and swallowing air, finds its analogy in certain hysterical women. However, in most cases occurring in human subjects, an obstruction in the upper respiratory passages or an asthmatic constriction of the lung tissues seems to predispose to the contracting of the anomaly.

The symptoms generally manifest themselves soon after eating. The patient notices a sense of weight, followed by uneasiness and tension in the gastric region. The sensation continues, and is described by the patient as if the stomach were full of gas, which he makes an effort to expel by belching. Frequent eructations, occurring ten, twenty, or more times in succession, are the rule. By these voluntary and inodorous eructations from the stomach the aerophagic origin of these gastric disturbances is frequently recognized. In other cases it may be ascertained by the ready escape of gas after exercising slight pressure upon the epigastric region, and especially on the great curvature of the stomach. Often repeated eructations in the presence of an empty stomach or of food which does not ferment or will not readily undergo fermentation at once point to this condition.

The volume of expelled gas is sometimes enormous. Bardel estimates the amount of air eructated by one patient in an afternoon at two hundred litres. Albert Mathieu had a patient who belched from five to six thousand times during twenty-four hours, aand a patient of mine can at will eructate ten or fifteen times in succession. The escape of the gas is usually accompanied by more or less noise. In hysterical subjects the swallowed air does not enter the cardia, but very frequently accumulates in the œsophagus, from which it is audibly expelled after a comparatively short period.

In the confirmed aerophagic, as well as in acute aerophagic distention of the stomach, the gastric symptoms very much resemble those of pneumatosis on the basis of motor insufficiency of the organ. They differ very little from the phenomenon indicative of the excessive formation of gas within the stomach and its retention therein. The gases evolved in the stomach, however, contain, or are composed of, carbon dioxide, nitrogen, hydrogen, and sulphur, but enter—if at all—in insignificant traces only into the composition of the air expelled by the aerophagic. In aerophagia the gas is more or less odorless, even if the air has been in the stomach twenty-four or forty-eight hours. During its presence therein the patient may exhibit pronounced anxiety, shortness of respiration, impending suffocation, cardiac palpitation, cephalalgia and vertigo. Anorexia and vomiting are of frequent occurrence; weakness, emaciation, irritability and nervous phenomena of varying degree are the further natural results. Extensive work in the open atmosphere and overindulgence in outdoor sports, however, are in my opinion more frequently responsible for the production of aerophagia, and especially its distressing after effects, than is a hysteric or neurasthenic predisposition. In non-neurotic individuals the attacks are always acute in character, and are the more distressing to the patient as his gastrointestinal tract is only in the rarest of instances accustomed to the excessive accumulation of gas, and as these organs—contrary to the conditions arising on a neurotic basis—may contain at any one time very large amounts of air which remain therein for days or even weeks. In this connection the additional fact must be considered that the hysterical individual usually sucks in the air slowly, but that the full current of air at once enters the stomach of the individual not neurotically tainted. The suddenly swallowed air, when cold, may still further aggravate the condition of the patient; or if it contains a high percentage of humidity or is impure to a high degree, other phenomena are likely to occur, in addition to those due to the deglutition of the air as such.

The aerophagic condition is, however, not limited to the stomach; the swallowed air may be transmitted to the duodenum and other parts of the intestinal tract. Gastric motility, when the individual is in the erect position, effects aspiration of the air contained in the stomach into the duodenum, especially in instances of gastroptosis and non-patent pylorus. That the air in the stomach may pass into other portions of the alimentary canal may be demonstrated when artificially inflating the stomach for diagnostic purposes; for, in a proportion of cases, the desired end is not accomplished—that is, the stomach cannot be completely inflated, as the air to a greater or less extent passes the pyloric orifice. It is in these cases of pyloric incontinence that aerophagia becomes of the utmost importance. Instances of air in the intestines are, of course, of proportionately rarer occurrence than those in which the air has not entered beyond the œsophagus or stomach; and when they occur in the otherwise robust, the distress and disturbances which follow are invariably looked upon as manifestations of other ætiological factors.

I know of a number of cases suspected for days as being typhoid fever, appendicitis, enterocolitis, etc., in which, after eructation of large amounts of odorless or almost odorless gases, recovery was fully effected within an incredibly short period.

CASE I.—A young man, a baseball player and confirmed mouth breather, training for the game, partook in moderate quantities of such nourishment only as on account of its non-fermenting character has long been recognized by trainers as the most suitable. He was a total abstainer and partook of coffee and tea in moderate quantities only. During the game he always developed pronounced epigastric tympanites, which caused him great distress and for which numerous physicians had assigned manifold causes.

Since, at my advice, his nasal passages have been treated by a rhinologist, and since he has accustomed himself, in a measure at least, to nasal breathing, the pecular sudden flatulency either does not ensue at all, or when it does arise it is not of a degree to cause him much discomfort.

The diagnosis in this case was based upon the mouth breathing, the violent exercise, exclusion of fermentative substances from the gastrointestinal tract, movements of deglutition, and the almost immediate distention of the gastric organ after induced exertion.

CASE II.—A physician, forty-three years old, allowed himself so little time for taking his meals that he swallowed with them great amounts of air. Apart from the gastric disorders which were consequential to the insufficiently masticated food, the stomach and intestines frequently became inflated immediately after or during the repasts to an extent out of proportion to the amount of food ingested, so that their gaseous contents could not have been evolved from the ingested material. The abdomen at such times was considerably distended, the patient experiencing agonizing pains, and the body temperature was somewhat elevated. As the greatest amount of distress invariably occurred in the region of McBurney's point, the affection was considered for years to be one of chronic appendicitis. Introduction of air into the stomach for purposes of inflation and the escape of the same through the relaxed pylorus, its rumbling traversing of the intestinal tract, and the almost immediate pain, of a colicky nature, at the right side of the abdomen, showed at once that the distress was due to the presence of accumulated air in some part of the intestinal tract; and as these distressing symptoms occurred so soon after or during eating, it was concluded that they were, to some degree at least, due to the swallowed air.

The patient's attention was drawn to this aerophagic habit coincident with his meals, and the essentiality of their slow ingestion was pointed out to him. Heeding this advice, he has experienced but one attack of pseudoappendicitis during the past year.

A great number of cases of aerophagia occur in drivers, horseback riders, and the modern automobilists.

The most pronounced case of aerophagia which I have seen thus far came under my observation in September, 1900.

CASE III.—The patient, thirty-five years old, German, of athletic build, a semi-professional bicyclist, had accomplished two "centuries" in forty-eight hours. Although he finished first, he had to suffer badly for his victory. He had to lie in a little country hotel for a number of days before he could be moved, and when he was brought to New York he presented, apart from the injuries incidental to "centuries" and similar humbug, a most remarkable appearance. His entire body seemed to be bloated up. He stated that he had partaken only of some steak, chops, and toast during the forty-eight hours, that he quenched his thirst with moderate amounts of milk and seltzer, that he met with no unusual accident on the road, and that the heavy head winds which he encountered, together with the velocity of motion, compelled him at times to breathe through the mouth and to exert himself to an extraordinary degree.

He was of opinion that the aches and pains extending over his entire abdomen were due to the peculiar posture on the bicycle which he had to adopt on account of the contrary wind. The physician of the little country town where he was laid up had also opined the same and had treated him accordingly. Physical examination revealed pronounced palpitation, shallow respiration, bloated face, somewhat inflated stomach, and an enormously distended abdomen. Abdominal bloatedness was so extensive and uniform that not a single organ could be mapped out. The great tension spread over the entire abdomen and prevented every attempt at indentation. The subjective gastrointestinal symptoms were those of a continued, severe, intestinal flatulency, together with pneumatosis and colicky paroxysms.

The history of the case furnished a clue to its diagnosis. Its subsequent behavior, the passing of very large amounts of odorless, or almost odorless, gas by the rectum, the remarkably small amount of inoffensive fæces excreted during four or five days for which time patient had to stay in bed, the nonappearance of symptoms due to intestinal intoxication, precluded the evolving of gases in the gastrointestinal canal and confirmed the diagnosis of aerophagia.

By far the vast majority of instances of aerophagia with which I have become acquainted had been on *prima facie* evidence interpreted as something else. This shows that the phenomenon of aerophagia is practically unknown to the mass of physicians. Whether the stomach alone is involved, or, in addition to this, the intestinal tract, or the intestinal tract alone, aerophagia should always be kept in mind and taken into due consideration when studying obscure cases of disorders of the alimentary canal.

While hysterical aerophagia is a phenomenon which may be present for long periods during the life of a person, the latter may get accustomed to it to the extent that the greater portion of the swallowed air may be eructated almost immediately, so that the air which may be present in the stomach at any one time will not attain the volume essential for the production of untoward symptoms.

The treatment should be primarily of a prophylactic nature. However, when the sequences of aerophagia have once supervened, palliative measures may have to be instituted. In the hysteric great stress should be laid on the moral treatment. The patient must be made to understand that his distress is due to air swallowed unconsciously. It should be brought to his attention that the amount of nutriment which he ingests, even if it consisted largely of fermentative substances, could not evolve these unusually large quantities of gas, and especially not so shortly after ingestion. His attention must be further drawn to the fact that the belched gas is odorless, or almost so, in every case. In this regard it would be opportune to demonstrate to him by olfaction eructations other than those of swallowed air. The eructations differ so widely that they may be considered truly indicative of their respective substrata: in aerophagia the numberless, successive, and odorless belchings expelling a very large volume of gas; in the gastric affections the limited number of odorous eructations by which but comparatively small amounts of gas are removed from the organism.

When the attack cannot be abated, its manifestations in the hysteric who has become accustomed to the untoward phenomena need not be combated in the majority of instances. If in an irritable condition, the patient may continue to swallow and eruct the air for the whole day. On account of the rapidity with which it is again eliminated shortly after it has entered, it may be concluded that the air in many instances does not pass beyond the lower portion of the œsophagus.

Habitual swallowers of air hardly ever seek the services of a physician—at least not for the apparent gastric difficulty. They submit but reluctantly to lavage or other beneficial procedures. The best treatment in this condition of hysteria is rest and sleep, which latter, if necessary, should be induced artificially. A long continued special regimen, designed to be free from highly fermenting substances, not only is useless in preventing hysterical aerophagia, but, by its rigid pursuit drawing all the time the patient's attention to his affection, even tends to perpetuate or aggravate the habit.

Likewise, medicines which are not intended to overcome acute, severe manifestations of aerophagia, or which are not absolutely necessary on account of accompanying gastric disturbances or to promote indicated rest and sleep, are, to say the least, injurious in the treatment of hysteric aerophagics.

In aerophagia of non-hysteric origin—that is, in those cases in which deglutition of air does not depend upon the mental state and does not occur so frequently—in which, in other words, the aerophagic state is always more or less acute in character—treatment to aid the expulsion of gas may be instituted. Whenever practicable, the stomach tube should be employed to facilitate the exit of the air. This may be followed by irrigation with large quantities (six to eight litres) of water of about 43° C., to which has been added chloroform water (about 10 c.c. per litre). If necessary, a teaspoonful of the following prescription may be given every three hours for the next day or two:

℞ Bismuthi salicylatis	15 grammes (225 grains);
Mentholis	1 gramme (15 grains);
Mucilaginis acaciæ, q. s. ad.	90 grammes (3 ounces).

M.

When the stomach tube is not made use of, chloroform water may be administered in teaspoonful doses to aid the escape of gases. For the same purpose, turpentine, 0.5 c. c. preferably in emulsion, spiritus ammoniæ aromaticus, or spiritus ammoniæ fœtidus, well diluted, every three or four hours, may be administered. Emetics, like lobelia or ipecac, may occasionally be employed to advantage. Hot applications, especially turpentine stupes or sinapisms, afford relief. All treatment should be pursued while the patient is in bed. He should remain in the recumbent position for at least twenty-four or forty-eight hours.

In those instances of aerophagia in which the air has passed through the relaxed pyloric orifice into the duodenum and other parts of the intestinal tract, the air may be retained in some portion of the alimentary apparatus on account of accumulated fæces in the lower bowel. The stomach tube, of course, facilitates the escape of the gas from the stomach only, and an enema, removing only the contents of the large intestine, assists only indirectly the exit of the swallowed air by the rectum. The majority of cases in which the air has passed beyond the stomach, in my experience, are those cases in which it seems to accumulate in the small intestines. The compression of the air into a narrow volume by the peristalsis or other forms of motion of the intestinal tract causes cramps (and probably, also, by the aid of some hardened fæces, which it may have passed and which may serve as a piston) often retards the activity of laxatives and palliatives for a considerable length of time, and causes the accumulation of foodstuffs which have been taken since the beginning of the attack.

For this reason no ingesta, except ice and water, should be permitted until the small intestines have been completely evacuated. The affection, in some respects, is more troublesome than it appears to the casual observer; many cases do not readily yield to the treatment instituted, and the escape of the gas, in a great measure, has to be left to time.

In cases accompanied by severe pain, opium or its preparations have to be resorted to. Suppositories of opium and belladonna serve a good purpose. Castor oil in my hands has proved of decided benefit in ameliorating the pronounced intestinal tympany following aerophagia. For this purpose I generally administer it in this combination:

℞ Olei ricini	15.0 grammes (½ ounce);
Pulv. acaciæ	7.5 grammes (2 drachms);
Spirit. chloroformi	10.0 grammes (2½ drachms);
Heroini	0.15 gramme (2¼ grains);
Tinct. vanillæ	2 grammes (30 minims);
Saccharini	0.5 gramme (¾ grain);
Aquæ q. s. ad	100.0 grammes (3⅓ ounces).

M. Sig. One teaspoonful every hour.

The other gas-evacuating remedies heretofore mentioned may also afford relief in some instances; their activity in the intestines, however, is much slower than in the gastric organ. Rest in bed is imperative in intestinal aeroaccumulations; cold applications may be advantageously employed in instances where no discriminating diagnosis between swallowed air in the intestines and appendicular disease can be established. When there is no doubt as to the aerophagic origin of the condition I always prefer hot fomentations. Massage to the abdominal walls, for the purpose of dispersing the accumulated air, may often prove injurious. The attending physician ought not to be surprised in not finding any marked improvement in cases of air accumulation in the intestines for one or two weeks; in such instances he should limit his attention to the food, which should be of a nonfermenting character and should be partaken of in the smallest possible quantities only, and to the amelioration of the sequelæ which may arise during the presence of air in the intestinal tract.

SOME OF THE MORE UNUSUAL RESULTS OF MOVABLE KIDNEY.*

By CHARLES P. NOBLE, M. D.,
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The usual results of undue movability and displacement of the kidney are various reflex nervous symptoms, such as nervous indigestion, gaseous distention of the intestines, palpitation of the heart, general nervousness, and disturbed sleep. As a consequence these effects of abnormal movability and displacement of the kidney are prominently dwelt upon in most articles devoted to the subject, and the fact is emphasized that local symptoms from movable kidney are comparatively rare. And this is true of the various articles[1] which I have contributed to this subject.

Although local symptoms due to movability of the kidney are not common, and degenerative changes in the kidney as a result of its displacement are rare, yet these conditions do result from undue movability of the kidney, and it is my desire to report a number of cases which are striking illustrations of this fact. The most striking local result of undue movability of the kidney is produced by the torsion of the kidney upon its vessels and upon the ureter, producing either acute congestion of the kidney, or acute hydronephrosis, or both, and accompanied by attacks of severe pain, nausea, and vomiting, which are only relieved by the replacement of the kidney in its proper position. Such an attack is known as Dietl's crisis. Several instances of this condition have come under my notice, three of which are reported herewith, the most typical and striking being that of Miss M. (Case IV).

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* Read before the Pennsylvania State Medical Society, September 24, 1903.

[1] Movable Kidney: *Gaillard's Medical Journal*, 1895, vol. lxi, 59-65. Some Further Observations Concerning Movable Kidney: *Amer. Jour. Obstet.*, vol. xxxv, No. 1, 1897, 63. Nephrorrhaphy; *Jour. Amer. Med. Assoc.*, 1900, vol. xxxv, 1517-1520. The Ultimate Results of Nephrorrhaphy: *Internat. Med. Mag.*, 1902, March.

A less striking result of torsion of the kidney upon its vessels is the production of hæmaturia, which may be transient or more or less permanent, depending upon the degree and persistency of the torsion. A typical example is that of Dr. G. (Case VIII), who had repeated attacks of hæmaturia during a period of eight years, due to torsion of the kidney upon its vessels.

The two local symptoms which are most common, and of which numerous examples have come under my notice, are a sense of dragging in the region of the kidney, due to traction of the kidney upon its vessels or to traction upon adjacent structures, and the presence of a movable tumor appreciable by the patient in the abdominal cavity, usually on the right side.

The remaining local result of movability of the kidney to which I wish to call attention is the presence of albumin and casts (usually hyaline casts) in the urine, the result of congestion of the kidney due to interference with its circulation. My own experience does not enable me to confirm Edebohls's view, that this condition would lead to chronic nephritis, but on *a priori* grounds this result would seem probable.

Case I.—*Movable Right Kidney; Tuberculosis of the Kidney; Nephrectomy; Cure.*

Mrs. L., aged thirty-one years, ii-para., was admitted to the Kensington Hospital for Women November 30, 1898. Her family and previous personal history were practically neagtive. She had been subject for the last two years to irregularly recurrent attacks of sharp pain in the right groin and lumbar region, and in the intervals between attacks she complained of a vague feeling of uneasiness in the region of the right kidney. The attacks of acute pain lasted only a few minutes and had no relation to the act of urination. The pain had been growing progressively worse, and a distinct swelling in the right groin had been noticed by the patient to be increasing in size. Upon palpation the right kidney was found to be displaced downward at least six inches, and was exceedingly tender. When admitted she was anæmic and had lost some weight. At the operation, December 3, 1898, the kidney was found to be enlarged, containing an abscess, apparently tuberculous, and was removed by the lumbar incision. The wound suppurated and healed slowly by granulation, a sinus persisting until August, 1899, since which time the patient has been perfectly well and has gained seventeen pounds in weight.

The interesting question in this case is as to what determined the infection of the kidney, which was apparently the primary seat of the tuberculous infection and the only organ in the body involved. It is a reasonable inference that the lowered vitality of the kidney, due to its malposition, was the determining cause of its infection.

Case II.—*Movable Right Kidney, Resulting in Hydronephrosis and Pyelitis; Nephrorrhaphy; Cure.*

Mrs. McB., a widow, aged forty-seven years, who had no children, but had had three miscarriages, was admitted to the Kensington Hospital for Women on Septemebr 15, 1900, for the removal of a fibroid tumor of the uterus. She complained, however, of a "lump" in the right loin, which she first noticed four years previously, and of constant pain in the same region, which pain was more severe when the tumor was palpated. Upon examination this tumor was found to be the right kidney, enlarged and freely movable, and right nephrorrhaphy was performed September 22nd.

Uranalysis before the operation showed the presence of a moderate amount of blood and pus cells and numerous epithelial cells of all varieties; albumin and sugar, negative. Two days after the operation the urine contained much albumin and many granular tube casts, with some pus, but no blood. The albumin and casts persisted for one month after the nephrorrhaphy, and there was evidently some pyelitis.

On October 25, 1900, a fibromyomatous uterus, weighing 16 ounces, with adherent appendages, was removed by supravaginal hysterectomy. The pus in the urine persisted until the patient's discharge from the hospital, November 11th. The family physician reports that the patient had pyuria for one year after her return home. At the present time the urine is normal and the patient is perfectly well.

The hydronephrosis and pyelitis in this case were undoubtedly due to torsion of the kidney upon the ureter. Although progress to recovery was slow in this case, sufficient time has now elapsed to demonstrate that the hydronephrosis and accompanying pyelitis have been cured by fixation of the kidney.

Case III.—*Movable Right Kidney; Albuminuria and Hyaline Casts; Nephrorrhaphy; Cure.*

Mrs. S., aged forty-one years, married, nullipara, by occupation a stenographer, was admitted to the Kensington Hospital for Women on September 10, 1901. She complained of debility, loss of weight, numerous nervous and reflex symptoms, and of pain in the region of the right kidney and vermiform appendix. On examination the right kidney was found freely movable and the appendix sensitive on pressure. Both nephrorrhaphy and removal of the appendix were advised. Urinary examinations from September 10th to the 26th, inclusive, showed the constant presence of a moderate amount of albumin and of hyaline casts. The urine had a low specific gravity, usually about 1,008. Right nephrorrhaphy was performed in the usual manner on the 26th. On the 28th the specific gravity was 1,030, albumin one sixth in bulk, and blood casts and fine granular casts were present. Numerous casts were present in the urine for four days, after which they as well as the albumin disappeared.

The vermiform appendix was removed October 28th, after which casts were present for one day. Subsequently the urine remained normal so long as the patient was under observation.

This case is reported as a type of the cases in which congestion of the kidney is induced by its displacement and abnormal movability.

CASE IV.—*Movable Left Kidney of Traumatic Origin; Intermittent Attacks of Dietl's Crisis; Nephrorrhaphy; Cure.*

Miss M., a young woman of vigorous physique, active habits, and nervous temperament, aged twenty-seven years, a saleswoman by occupation, was admitted to the Kensington Hospital for Women on January 5, 1902. She complained of left lumbar pain of eleven years' standing, with typical crises accompanied by vomiting, and relieved by assuming the recumbent posture and pushing the kidney back into place. The patient herself attributes the onset of these symptoms to a fall from a fence eleven years before her admission to the hospital. Uranalysis before the operation showed the presence of two or three red blood cells and from three to five leucocytes to the microscopical field, and many epithelial cells of mixed varieties. At the operation, January 8th, a marked left hydronephrosis was found. The patient's temperature ranged between 100° and 102° F. for the two weeks following the operation, and during this time a phlebitis of the left femoral vein and its tributaries caused severe pain and marked swelling in the left thigh and groin. The patient had marked postoperative nephritis, which subsided in a week, but the urine contained varying amounts of pus up to the time she left the hospital, February 28th.

At the present time Miss M. is quite well and has at no time had a recurrence of her old symptoms. Her restoration to health was slow, because of the marked crural phlebitis. This interfered with her locomotion for at least a year.

There is every reason to believe that the displacement and movability of the kidney in this case was due to traumatism, and this is one of the very few cases of traumatic displacement of the kidney which have come under my notice. The points in favor of this diagnosis are that the symptoms appeared immediately after a fall, that there was no loss of weight or absorption of fat, which usually precedes displacement of the kidney, and further more that the kidney involved was the left, the right occupying its normal position. Only two cases of movability of the left kidney, the right retaining its normal position, have come under my notice.

CASE V.—*Movable Right Kidney; Intermittent Hæmaturia; Nephrorrhaphy.*

Miss O., aged twenty-one years, by occupation a school teacher, was admitted to the Kensington Hospital for Women, July 1, 1902. Her illness has extended over the past four years, during which time she has suffered from hysterical aphonia, typhoid fever, appendicitis, various nervous symptoms, including indigestion and bloating, and in addition she has had at intervals hæmaturia and gravel. Upon admission she complained of indefinite nervous symptoms in addition to the indigestion and bloating, and also of marked pain in the region of the kidney and appendix. Physical examination showed that the right kidney was displaced downward some five inches, and that the lower end of the left kidney was palpable. Because of the hæmaturia an x ray examination was made, which was negative. Nephrorrhaphy was advised, and was performed on July 3rd. An attempt was made, by opening the peritonæum from behind, to find the vermiform appendix, but a reasonable exploration having failed to find the appendix, this attempt was abandoned. The kidney was fastened in the usual manner. Miss O. made a good recovery from the operation, and was discharged July 29th.

The subsequent history was curious and interesting, if not gratifying. At various intervals following the operation blood was found in the urine upon microscopical examination. Some months later the lumbar wound broke down, and eventually was open almost to the peritoneal cavity. While under treatment for the closure of the wound she developed acute appendicitis, and was operated on May 5, 1903, from which operation she made a good recovery. The wound has never remained closed, apparently due to the extremely nervous temperament of the patient preventing her from remaining sufficiently quiet to permit of its healing.

CASE VI.—*Movable Right Kidney; Recurrent Attacks of Dietl's Crisis; Intermittent Hydronephrosis; Nephrorrhaphy; Cure.*

Mrs. G., a multipara, aged forty-three years, was admitted to the Kensington Hospital for Women on January 30, 1903. She had complained for two years of attacks of nausea and vomiting, with acute pain in the hepatic region, attributed by her physician to indigestion. A large movable swelling appeared during these attacks, disappearing in the intervals between them. A diagnosis of movable right kidney with hydronephrosis was made, and nephrorrhaphy was performed February 12, 1903. When the kidney was exposed, its pelvis was found to be much dilated, but the ureter appeared to be perfectly normal. Mrs. G. made a perfect recovery, and has had no recurrence of her symptoms since the operation.

CASE VII.—*Movable Right Kidney; Intermittent Attacks of Dietl's Crisis; Hydronephrosis; Nephrectomy; Cure.*

Mrs. S., by occupation a housekeeper, aged fifty years, the mother of four children, was admitted to the Kensington Hospital for Women, February 3, 1903. She was poorly nourished and anæmic, with a tuberculous family history. Her appetite was poor and her bowels constipated. Eighteen months before admission she had an attack of severe right lumbar pain, with nausea and vomiting. At this time she observed a tumor in the right hypochondrium, variable in size, easily movable, and disappearing with the subsidence of pain. These attacks of acute pain, with vomiting and tumor formation, recurred at intervals of about two weeks up to the time of her entrance into the hospital. A clinical diagnosis of constriction of the ureter from torsion due to loose kidney was made, and the patient was operated upon immediately. Upon exposing the kidney the ureter and pelvis of the kidney were found to be greatly distended, and the ureter was atrophied for a distance of about one inch below the pelvis of the kidney to such a degree that it was not believed it would drain the hydronephrosis after fixation of the kidney. An attempt was made to overcome this defect by splitting the ureter longitudinally in its narrowest portion, with the intention of passing sutures parallel to the course of the incision, thus increasing the calibre of the ureter. The tissues of the ureter were so atrophied that the sutures would not hold. It was, therefore, considered best to perform a nephrectomy rather than to implant the ureter into the pelvis of the kidney. The patient made a good recovery from the operation, and has continued well up to the present time.

The urinary analysis before operation showed the presence of blood cells and leucocytes, but no albumin or tube casts. A few coarse granular and hyaline casts were found in the urine after the operation, but disappeared promptly under treatment.

Case VIII.—*Movable Right Kidney; Recurrent Attacks of Hæmaturia due to Torsion of Renal Vessels; Nephrorrhaphy; Cure.*

Dr. G., a physician, forty-one years old, was admitted to the Presbyterian Hospital on April 1, 1903. He was a man of spare frame, rather pale, but had gained fifteen pounds in the last eight years. His family and previous history were negative. In January, 1895, he had an attack of hæmaturia. The blood was apparent to the eye, giving to the urine a claret color, and was noticed in the urine for several days. Since that time he has had attacks of hæmaturia at frequent intervals, with increasing length of duration. These attacks were accompanied by soreness in the region of the right kidney, headaches, and symptoms of indigestion, but never by renal colic. The patient suspected the presence of renal calculus and had six radiographs taken, four of which were negative, and two showed shadows which might be considered as indicating the presence of stone. Uranalysis showed oxalates in great abundance, but no casts, excepting a few blood casts. Upon palpation the right kidney was found to be loose and easily movable, and operation was advised.

Dr. G. had been under the care of numerous physicians, and had been treated by the regulation of his habits, frequent holidays, the drinking of various waters, and the regular employment of a pad and bandage, which were supposed to keep the kidney in position.

April 3, 1903, the right kidney was exposed by the usual lumbar incision. Upon delivery through the lumbar wound it was apparently normal, both to sight and on palpation. In view of the two positive shadows in the x ray negatives it was considered best to split the kidney so as thoroughly to explore its substance, also its pelvis. This was accordingly done, and no stone was found. The incision in the kidney was then closed with mattress sutures to control oozing, and the kidney was fixed to the loin muscle in the usual manner. A good recovery followed, the healing of the wound being slightly delayed by suppuration about the rubber drainage tube, which had been inserted down to the renal substance because of a marked tendency to oozing hæmorrhage from the incised wound of the kidney.

Whereas before the operation the urine contained so many red blood cells as to be discolored, the day following the operation only a few red blood cells were found by microscopical examination, and thereafter the urine remained normal.

The hæmaturia in this case was clearly due to interference with the return circulation through the renal veins by torsion of the kidney upon its axis.

My object in presenting this communication is to emphasize the fact that while the usual symptoms and results of undue movability of the kidney are more or less general in their character and effect on the nervous system, yet there are definite local results which must not be disregarded. Whenever any of the conditions enumerated in this paper are present in a given case of movability and displacement of the kidney, the patient should submit to early operation. In cases in which the reflex symptoms are not such as to require operation, and the patients are accordingly advised to have medical treatment or to have no treatment whatever, the urine should be examined from time to time to determine whether or not the kidney structure is suffering from degenerative changes; and the position of the kidney itself should be ascertained so as to learn whether or not the condition is becoming worse instead of remaining stationary or becoming better. With such intelligent care patients having displaced movable kidneys which do not require fixation can be guarded against the various ill results which have been considered.

The Cincinnati, O., City Council, on February 1st, unanimously voted to issue 50,000 of city hospital deficiency bonds to meet the extra expense growing out of the measles and typhoid fever epidemics.

SEX DIFFERENTIATION AND EDUCATION.

By WILLIAM LEE HOWARD, M. D.,

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The American is a composite character, who seems to have absorbed all the energy in the world, but not all its wisdom. In some respects this energy is a drawback to mental progress; that is, it militates against sound, fundamental, individualistic education. This is demonstrated in the rush for "higher" education in women; in the ambition to go to college and associate with young men; to follow a course of study without any definite goal in view, and with but little idea of the serious purpose of a college education—the laying of a foundation for life's work. Careful thought, less rushing ahead ignorant of facts which cannot be ignored—however some women may strive to ignore them—would have shown that the difference in fundamental sex ideas, feelings, and emotions—in the nervous organization of man and woman—must be recognized and understood before blindly mixing the sexes in one educational and social hopper, with the expectation of getting the best results. We frequently hear the president of some State coeducational institution denying any distinct psychological differentiation in man and woman; while a dean of a large Eastern college for the "higher" education of women has gone so far as to ridicule the rôle of wifehood and motherhood, advising her scholars not to waste their precious mental gifts by taking care of their children, but to turn them over to those lower creatures who are better fitted for such work—nurses and servants. When we meet with these facts we are brought to the conclusion that there is something wrong with the leaders of "higher" education for women.

A biological differentiation in male and female is recognized by scholars of broad experience and world knowledge. The few women of uncertain sexual activity and the pedant of indifferent male attributes, who cannot appreciate the true physiological sexual relations of the adolescence of both sexes, are not the individuals to hearken unto. The segregation of the sexes in colleges is the devised result of laws laid down by nature; and a necessity if the proper social conditions are to prevail. After sufficient trial, after acquiescing to the clamorous demands of a class who can best be described as psychically and sexually incomplete, the mingling of the sexes in colleges is shown to be inexpedient, if not dangerous, to the future welfare of all concerned.

The experiments of coeducation were necessary to bring about the realization of the biological and physiological differentiation of the sexes—a differentiation which is demonstrated in the developing psychic phenomena of man and woman—leading the sexes into different mental and moral paths, each necessary to complete the man or woman.

Every educated and sensible man desires that his mother, wife, or sister should have all the educational advantages possible; that they should be as well informed on general matters as himself, and that brother and sister should be *en rapport* in the *humanities;* but he does not desire that they should become psychically hybrid, or that they should lose one iota of their beautiful womanly attributes. But when we hear ancient and attenuated male individuals state that the constant mingling of the two sexes during the active period of adolescence has absolutely no effect on the emotional element of the girl; that this girl can, and does, do her daily college work every day in the monh without psychic symptoms of sex differentiation demonstrating themselves, we can only feel regret that such individuals are allowed to act as mentors.

It is not for the man who has spent all his life giving didactic lectures to young women to express his opinion upon the value of coeducation. He sees merely the academic side. Neither does the opinion of that antisocial being, the woman of "advanced" ideas and undeveloped sexual life, have any weight with the normal man of experience. The neurologist who has the confidence of his women and girl patients will have the sex differentiation so thoroughly impressed upon his mind that he would never allow a daughter or a sister of his to go to a coeducational institution.

The influence of menstruation *has* effect on the position of women. For the proper understanding of the sex relations of men and women this cannot be ignored. Every neurologist—every physician who has a proper understanding of physiological psychology—recognizes the existence of disturbing, teasing emotions; of conditions of affectability, of a suggestive state, during the menstrual period. However much these may be suppressed, whatever influence the occupied mind may have in controlling these psychic conditions, they nevertheless exist, and continued suppression of these natural emotions will ultimately cause riotous physiological and psychological disturbances.

The question of coeducation has been discussed from all points but one by college presidents, by graduates and teachers both male and female. These discussions have appeared in the lay and semireligious journals. They deal with the social side of the question, the educational viewpoint, and the eternal question of the superiority or inferiority of the brains of the sexes; of the right of the girl to have the same educational advantages as her brother, and her fitness and capacity to be his equal in mental work in all its phases throughout periods of adolescence, womanhood, and second womanhood; periods which a woman cannot avoid and which have their effect upon the mental working capacity of every normal woman. As I have said, the subject of coeducation has been discussed from every point but one—the physiopsychological point. Why it is that teachers eminently fitted to discuss the advantages or disadvantages of coeducation are silent upon the most important point in the whole matter, is puzzling to the physician, unless he realizes that these teachers, both male and female, have been tutored, educated and environed in narrow paths; that they are prone to ignore subjects which have in their social circles been tabooed; an attitude undoubtedly the result of their studies having been in high schools, academies, or colleges where coeducational ideas prevail.

The physiopsychological facts must be recognized when studying the subject of coeducation. By coeducation I mean the continued intercourse in classrooms, buildings, campus, town, and college society of the adolescent of both sexes. My remarks do not refer to the grown or middle aged woman pursuing postgraduate courses—for obvious reasons she is an individual apart from the recently graduated high school miss.

That there is a "greater general variability in the male sex" is the conclusion of Darwin, Hunter, and Burdach; and, only recently, Havelock Ellis, after exhaustive study on the subject, has stated: "This organic variational tendency of men is apparently true of psychic variations also." These facts have great bearing on the matter of coeducation, and they should be understood in all their details when considering the expediency of teaching young men and women in the same classroom.

A certain subject in literature will leave opposite, or at least different, impressions in the minds of the youth and young woman hearing the same lecture; these divergent interpretations being dependent upon the psychic and emotional differentiation existing at the time. A teacher well informed on the psychology of sex, when teaching a class of girls, will state a fact in a different mood and manner, will express it in other colors than he would to a class of young men. When it has to be indifferently stated it ceases to leave a true and individualistic impression. The male's view of life is distinct from that of the normal female. Man makes for proficiency in his investigation, not sterile erudition. The man must go to the *Sturm* and *Drang* of practical life. "In college life," as President Woodrow Wilson says, "we must deal with the spirit of men—releasing the perceptions of the mind for a broad and catholic view of life."

A good example of what I mean occurred the other day at the University in this city. One of England's foremost literary men was giving a course of public lectures on comparative literature in the Elizabethan period. It is safe to say that out of an audience of five hundred, four hundred were women and girls. When the lecturer wished to show the influence of Rabelais and Boccacio upon English writers he stumbled over a few facts, hurried over the authors' names, and ceased quoting parallels. He had been reading from other authors up to this point, but here became embarrassed, and turned over page after page of material which had evidently been written for an entirely different audience—university men. There were a few literary men who attended the first lecture, but not those following, for the presence of high school and college girls effectively put a stop to interesting facts showing where Shakespeare and others received many ideas for their comedies.

It may be said in regard to the foregoing that the male student would be just as well off did he remain in ignorance of the salacious and suggestive literature of the ancients, the rich Oriental tales, or the broad stories of the fifteenth and sixteenth centuries. But is this narrow minded and puritanical idea consistent with our present scientific method of study? One who intends to pursue literature as a profession must study it on scientific lines. Its history, its æsthetic, and its comparative aspects must be learned. To do this the world's past literature must be read and the social conditions which produced it must be understood. To avoid this author because he cannot be read in a class of young men and women, or that author because his salacious wit would produce laughter in a St. Anthony—though both writers were the most eminent of their period—is not the scientific method of teaching; it is giving a mere smattering, a weak veneer of education, and of that we have a surplusage. From this false method of teaching we get a lot of women graduates whose half-baked education is ever a teasing problem to themselves. This compromise in coeducational institutions is an injustice to the man whose foundations for life's work depend upon thoroughness. What would be thought of the medical school that offered lectures in anatomy confined to the bones, and whose instructor in physiology limited himself to teaching the uses of the functions of the stomach and liver; avoiding all reference to the basis of life, sexual instincts, the sexual organs, their functions, and the necessity for such functioning? It seems to me that in the above stated conditions we shall find the cause for the subsidence of coeducation, or as it really is at present, colearning.

Let man pursue his studies in manly craft, woman in womanly craft. As a general statement it is safe to say that the woman of twenty years of age attending coeducational institutions has not learned one womanly craft of specific use to her sex. Many have no knowledge of the hygiene and physiology of their sex. Some have false, and a few, perverted, ideas of their economic and social position.

There are several important facts in the psychology of sex which should be recognized and understood by those who advocate the policy of coeducation. One of these facts is, that "A deep difference in constitution expresses itself in the distinction between male and female, whether these be physical or mental. The differences may be exaggerated or lessened, but to obliterate them it would be necessary to have all the evolution over again on a new basis. What was decided among the prehistoric protozoa cannot be amended by act of congress. The biological differences between the sexes results in psychological and social differentiation." (Geddes and Thompson).

OSTEOMYELITIS.*

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Notwithstanding the fact that the advances in pathology and bacteriology of recent years have so immensely influenced the treatment of acute osteomyelitis that the large majority of surgeons now recognize the importance of early radical interference, this infectious process still remains one of the most serious and destructive diseases of childhood. This is due to the fact that the family physician, he who first sees the case, fails to recognize the early indications of a lesion whose signs and symptoms are characteristic of no other disease in childhood, and are but rarely assumed by the diseases of adult life. For this reason, I trust I shall be pardoned for presenting the records of seventeen cases of this not uncommon germ infection.

Ten of these cases were treated in private practice and seven in the hospital. There were thirteen white patients and four colored patients. Fifteen of the cases were in children under sixteen years of ago, two were in adults over twenty-five years old; the youngest patient was two months old, and the oldest fifty-six years of age. Nine were females and eight were males. The disease was present in the upper extremity in five patients, in the lower limb in eight, and in the lower jaw in four; the humerus, the femur, and the lower jaw were most frequently involved. A history of trauma, varying in intensity, was present in eight of the cases; it followed previously existing disease in three instances; exposure and over fatigue accounted for its presence in three others; and in four cases it was the result of decayed teeth. Eight of the cases were seen early enough to do conservative operations; in the remainder, late operations were necessary. No deaths occurred. The following summary embraces the salient points in each case:

CASE I.—Private practice. S. B., aged eighteen months, white, female; history of an abscess on the back of the neck, lanced November 10, 1897. Ten days later, acute osteomyelitis developed in the upper end of the right humerus, attended by exhaustion, fever, and diarrhœa. November 29th, chloroform anæsthesia. Humerus exposed from the greater tuberosity to the deltoid insertion, bone opened and curetted; drainage and iodoform packing employed. *Staphylococcus pyogenes aureus* in the pus. Recovery complete in four weeks.

CASE II.—Hospital practice. G. G., aged eight years, white, female; history of a fall, bruising the right shoulder; a few days later an exposure to sudden changes in the weather was followed within a week by acute osteomyelitis of the humerus. Treated for rheumatism for three months, during which time sinuses formed. July 24, 1900, ether anæsthesia. The humerus was exposed by an incision extending from the greater tuberosity to the condyles, and a sequestrum consisting of the entire shaft from the upper to the lower epiphyses was removed. The periosteum and skin were united without drainage, the limb was dressed with heavy antiseptic dressings, and placed on a straight splint. Primary union occurred and the shaft of the humerus redeveloped within four months, except about an inch at the middle of the bone. Recovery with a useful arm, using a leather brace to encircle the limb from the axilla to the elbow.

CASE III.—Private practice. L. H., aged fifty-six years, white, female; history of a severe bruise of the right shoulder or arm. Three weeks later a chill, and osteomyelitis developed. Treated for ten days as erysipelas. An abscess under the deltoid muscle was opened; the periosteum was found separated from the humerus and sequestration in progress. The pus contained staphylococci. Later, her physician removed a small sequestrum. Recovery promptly followed.

CASE IV.—Private practice. J. B., aged twelve years, white, dirt eater; had chronic malaria, with enlarged spleen (probably uncinariasis); history of an uncomplicated fracture of the lower end of the left humerus, followed by acute osteomyelitis, with suppurative synovitis of the elbow joint. November 28, 1889, anæsthetic ether. Amputation in the upper third of the humerus. Primary union.

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* Read before the Medical Association of Georgia, Columbus, Ga., April 15, 1903.

Case V.—Private practice. M. M., aged eleven years, white, female; history of simple fracture of the lower third of the left ulna, followed by chill, acute osteomyelitis, and discharging sinuses. July 1, 1898, chloroform anæsthesia. Removal of the entire necrotic shaft of the ulna, preserving the epiphyses, through an incision extending the length of the forearm. Periosteum and skin closed without drainage. Primary union. Evidences of reformation of new bone were present within five weeks. Present condition, five years after operation: ulna of the same size as in the healthy extremity, and perfect functional use of the forearm.

Case VI.—Private practice. W. G., aged twenty-six years, white, female; history of typhoid fever, followed six months later by osteomyelitis of the right femur after fatigue and exposure. June 18, 1891, under ether anæsthesia, a deep incision released a quantity of pus from beneath the femoral muscles; the periosteum was found separated from the bone by pus, which also escaped when the bone was trephined. Three months later complete recovery.

Case VII.—Private practice. R. H., aged two months, white, female, healthy parentage; history of suppurating umbilicus, and an account of a fall from the nurse's lap, arrested by a sudden violent grasping of the right thigh. Within a few days acute osteomyelitis of the femur developed, with diarrhœa and rapid emaciation. An examination of the blood showed a high leucocytosis, eosinophiles being markedly present, with a few myelocytes. December 31, 1898, fifth day of illness, under chloroform narcosis, an incision was made down to the bone at and below the greater trochanter; the soft tissues were found infiltrated, the periosteum thickened, œdematous and injected, hæmorrhagic exudation existed under the periosteum, separating it from the bone, which was highly discolored. Small openings were made into the medulla, and the marrow presented discoloration, but there was no evidence of pus. Three days later, pus containing staphylococci freely discharged into the dressings. Rapid recovery without sequestration. Present condition, five years after operation, right femur shorter than the left, but perfect functions of the hip joint.

Case VIII.—Private practice. O. H., aged sixteen years, white, male; fall from a bicycle on the left hip, tenderness and limp for a few days, then in ten days osteomyelitis developed. June 25, 1901, eighth day of illness, under chloroform, an incision disclosed separation of the thickened periosteum by highly colored pus; the bone was opened and pus found in the cancellous tissue of the great trochanter. Staphylococci were found in the pus. Immediate reduction of temperature and relief of all constitutional symptoms followed the operation. Early closure of the wound and rapid recovery.

Case IX.—Hospital practice. G. J., aged fifteen years, white, male; four months before admission, while playing football, became fatigued and overheated, and lay down on the ground to rest. In the evening he had a hard chill, high fever, delirium, and severe pain in the left hip and right humerus. Acute osteomyelitis of the left hip and right arm rapidly followed. He was treated for rheumatism for four months.

When admitted to the hospital, March 10, 1902, he was extremely emaciated, digestion bad, enlarged spleen, continued fever, and albumin in the urine. The hip was dislocated upwards and backwards, a large discolored fluctuating tumor was present on the upper and outer side of the thigh. There was a broad band of induration around the middle of the right humerus, which was painless and gave him no trouble. March 14th, under chloroform anæsthesia, the fluctuating tumor was opened, and sixteen ounces of thin, oily fluid escaped, followed by a large quantity of soft pultaceous matter. Staphylococci were found in the discharges after the second dressing.

May 2, 1902, six weeks later, under ether anæsthesia, excision of the upper end of the femur was performed. A pathological separation of the head of the femur at the epiphyseal junction was found to be present, the head of the bone being found in the acetabulum in a mass of broken down tissue.

After a tedious convalescence he finally recovered, leaving the hospital June 14, 1902.

Present condition; walks on a high soled shoe, using a cane, having a fairly good artificial hip joint. On the right humerus there has recently developed, without any constitutional symptoms, a sinus leading down to necrosed bone. For this he declines to submit to any immediate interference.

Case X.—Hospital practice. J. P., aged twelve years, white, male; history of empyema of two months' duration, for which, March 24, 1902, simple incision and drainage was employed under local anæsthesia. Streptococci were present in the pus. Two weeks later he had a parotid abscess and a phlebitis of the left femoral vein. Finally osteomyelitis of left hip, left ankle, and occipital bone developed. May 31st, in the Macon Hospital, under ether anæsthesia, the upper end of the femur was exposed, and the head of the femur was found to be separated from the shaft at the epiphyseal junction. Excision was performed just below the greater trochanter, the periosteum and muscular attachments being preserved. The lower end of the left fibula was exposed and five inches of the shaft was found necrotic, the lower epiphysis not being diseased. This diseased bone was excised and the periosteum, covered with heavy granulations, preserved. The diseased occipital protuberance was curetted at the same operation.

After a tedious convalescence he went home July 9th, and began to use crutches. Finally he had a recurrence of the empyema, for which, on October 6th, I resected several of his ribs, under nitrous oxide and ether. Present condition; the lower end of the left fibula is now fully up in size to the sound one, a good artificial hip joint is established.

Case XI.—Hospital practice. E. G., aged nine years, mulatto, female; history of chill and acute osteomyelitis of the upper end of the right tibia, after a prolonged exposure to the sun. Treated at first for rheumatism.

Three weeks after the initial chill, she was brought to the Macon Hospital in an intensely septic condition, with a fluctuating knee joint and a discharging sinus leading to an epiphyseal separation of the head of the tibia. July 23, 1901, ether being employed, amputation in the lower third of the femur was performed. Recovery in ten days.

CASE XII.—Hospital practice. J. W., aged fourteen years, negro, male; history of a severe illness two months preceding admission; treated at first as rheumatism of the right knee joint; finally, sinuses formed on the upper and middle parts of the leg. October 7, 1902, under nitrous oxide and ether anæsthesia, the shaft of the tibia was exposed by an incision nine inches long, and a groove through the involucrum was made with chisel and mallet, exposing a suppurating cavity, containing a sequestrum the length of the skin incision, which was removed; iodoform emulsion poured into the cavity and the periosteum and skin closed, with drainage. After a slow convalescence, the boy is now walking on the leg.

CASE XIII.—Private practice. I. F., aged eight years, white, female; history of a continued fever in the fall of 1884. May, 1885, a needle broke off in the left heel, causing pain and fever. August, 1885, a suppurating sinus, leading down to the os calcis was present; advised that necrosed bone be curetted; declined. November, 1885, osteomyelitis of os calcis and astragalus; excision of these bones advised and declined. February 22, 1886, entire foot and lower ends of tibia and fibula diseased, and general infection present. Condition such that amputation in the middle third of the leg was performed under ether. Primary union and rapid recovery.

CASE XIV.—Private practice. K. B., aged nine years, white, female; history of a decayed tooth in the lower jaw, which the family dentist refused to extract, followed by acute osteomyelitis of the right side of the body of the inferior maxilla. Brought to Macon, February 1, 1886, with severe general infection, high fever, delirium, expression of fright, and sinuses into the buccal cavity and at the angle of the jaw externally. Operation under ether, February 2nd; removal of necrosed body of the right inferior maxilla from the mental process to ramus with all of the right lower teeth. Recovery with permanent facial deformity but a functionally useful jaw.

CASE XV.—Private practice. E. C., aged ten years, white, male; history of swollen lower left jaw and a decayed molar tooth which his dentist refused to extract, followed by osteomyelitis of six months' duration. October 19, 1900, ether anæsthesia, free incision down to the dental foramen, opening up the medullary canal, and removal of a sequestrum, with the decayed root of the offending molar. Primary union.

CASE XVI.—Hospital practice. J. M., aged fourteen years, negro, male; osteomyelitis of the jaw of two weeks' duration, attending the decayed root of a molar. High leucocytosis. April 5, 1901, chloroform anæsthesia, incision over the right inferior dental foramen, periosteum thickened and reddened and a drop of pus exuding from the foramen. Maxilla trephined and a quantity of pus escaped; decayed root of the tooth removed, external wound closed, without drain. Streptococci and staphylococci present in the pus. Primary union.

CASE XVII.—Hospital practice. C. T., aged eight years, negro, male; osteomyelitis of the lower jaw, with a sinus of two months' duration. July 8, 1902, ether employed, incision along the base of the right lower maxilla; dead bone and the root of a decayed molar were removed from a suppurating bone cavity. Primary union.

Acute osteomyelitis is essentially a germ infection, not a specific disease of bone tissue; nor is it dependent upon the presence of a characteristic micrococcus peculiar to the disease, as Becker (1) supposed, but is the result of the migrations of any of the pus producing organisms, staphylococcus, streptococcus, pneumococcus, colon bacillus, *Bacillus typhosus,* or other germs. Lannelongue (2), in thirty-five cases, found staphylococcus twenty-eight times, streptococcus three times, and other germs four times. Of the seventeen cases I report, staphylococci were present in five (Cases I, III, VII, VIII, IX), once streptococci alone (Case X), and once streptococci and staphylococci (Case XVI) existed together in the same infection. The presence of these germs was not accidental or from outside contamination; they were found in the pus discharged after aseptic incisions into the infected deposits in the bones. One case, the pus of which unfortunately was not examined (Case VI), I am sure was dependent upon the *Bacillus typhosus.*

This septic process is almost exclusively a disease of the period of bone development and growth, beginning, with but few exceptions, in the growing tissues in the end of the diaphysis near the epiphyseal cartilage on the side remote from the joint in childhood. Townsend (3) states that of seventy-three cases under his observation, all but four occurred in the first years of life, one half of these during the first months of infancy. Pickering Pick (4) says it is not surprising that any slight cause should drive a physiological activity into a state of morbid excitement at this time of life, owing to the highly vascular conditions existing in the embryonic tissues in process of development in this situation. The rarity of the disease in adult life, Max Jordan (5) explains by the fact that, the special conditions predisposing to disease, during the growth of bone tissue having ceased to exist, some unusual violence or some great depression of the vitality at this age becomes necessary for its development. Fifteen of my cases were in children, and in eleven of them the process was in the diaphysis near the epiphyseal catrilage.

The disease is generally a secondary process in a purely bacterial form of pyæmia, in which trauma usually plays the part of an exciting cause. Edmund Owen (6) says: "There are possibly some streptococci or staphylcoocci constantly lurking in the blood of all children, and also of adults; these only need a certain lowering of the vitality to proliferate in a particular spot, the local condition being brought about by a kick, a blow, a wrench, or an over exertion." This may explain many of those cases in which no primary focus of infection can be found, but which are preceded by fatigue. In one of my patients (Case IX), the disease started after the lad had rested for a time on the ground, overheated and exhausted; in another (Case XI) it followed immediately after a prolonged walk in a July sun. Again, it is asserted by Warren (7), Park (8), and others that the ports of entry for the germs may be the alimentary canal and the respiratory organs, most probably the tonsils or pharynx. In those cases occurring in the winter months or dependent upon sudden changes in the weather, tonsillar infection will explain the conditions. One patient whose case I report (Case II) had the disease develop in the humerus after a severe cold. Slight infections of the skin, abrasions or furuncles may be the points of entry of the germs; Tillmanns (9) states that the skin is the most frequent source of infection. In a child of eighteen months (Case I), it followed an abscess which had been lanced ten days previously. The disease is not uncommon in the new born, the primary focus, both Park (8), and Holt (10) assert, being suppuration of the umbilicus. A babe two months old (Case VII), with a suppuration umbilicus, developed an osteomyelitis of the femur after a slight traumatism. Infection around decayed teeth, Schede (11), and H. R. Wharton (12) both state, is a most frequent source of osteomyelitis in the lower jaw, the former affirming that this is a most dangerous location for the disease, four out of eleven of his cases proving fatal. Four of my cases were in this location. Particular attention should be drawn to this condition, since the modern dentist is very averse to extracting decayed teeth in children. In two of my patients (Cases XIV and XV) a timely extraction, I am confident, would have saved permanent disfigurement. Osteomyelitis is frequently a sequela of the acute infectious fevers, scarlet fever, measles, and typhoid fever. Keen (13) reports one hundred and sixty-six cases following typhoid infection. Paul Klemm (14) asserts that in this complication both the typhoid bacillus and some pyogenic cocci are found in the exudations; this H. C. Parsons (15) doubts to be true in all cases. In two cases (Cases VI and XIII) a history of a preceding attack of continued fever was present; in neither of these, however, was the pus examined microscopically. Empyema is not infrequently followed by bone infection; in a case of multiple infection (Case X), a preceding empyema was the cause of the disease.

That trauma plays an important part as an exciting cause of the infectious process in bone tissues must be largely recognized. Traumatism was present in eight of the thirteen cases I have reported occurring in the long bones; in three of these (Cases VII, X, and XIII) the trauma was combined with a recognized previously existing infectious process as an exciting cause. In the case following empyema (Case X), the trauma seems to have been the result of a persistent decubitus, the patient remaining constantly on his left side, the points of greatest pressure, the lower end of the left fibula, the left hip, and the occipital protuberance being simultaneously affected. The traumatism need not be necessarily of marked presence and in childhood this is particularly true; in adults, however, the traumatic cause is usually severe. In an adult case (Case III) a violent fall on the arm was the exciting cause, sufficiently severe evidently to produce a thrombosis of the vessels in the nutrient canal. In grown people, sufficient injury must occur to start up a reorganization or repair of the bone tissues before the necessary nidus for the proliferation of the germs is provoked. P. Klemm (14) has demonstrated this fact experimentally; injecting pyogenic cocci into the tissues of uninjured adult rabbits, no inflammation of the bone occurred; but upon fracturing the thigh of a full grown rabbit and then injecting the germs, osteomyelitis followed in the broken femur.

Osteomyelitis is most frequently confined to one of the long bones; the short and flat bones also suffer at times. Hahn (16) places the percentage of the short and flat bones involved at 7.7 per cent.; Frohner (17) places it at one flat to fourteen long bones. In four of my cases, the disease existed in the lower jaw; in one (Case X) it was present in the occipital bone. The infection is rarely multiple; Funke (18) states that of six hundred and sixty-four cases, multiple osteomyelitis occurred only thirty-seven times. In two of my cases (Cases IX and X) there were multiple foci of infection. In one of these (Case IX) the disease subsided or remained latent in one bone for several months and then redeveloped. Poucet (19) asserts that it may cease to be active and remain latent at some point for years, citing two cases latent in the humerus after being acutely active in the tibia.

In the discussion of my subject, so far, I have devoted some considerable attention to the questions of location, causation, and other ætiological factors, for they are essentially involved in the consideration of the symptomatology and diagnosis of the condition.

Osteomyelitis being essentially a septic process, the constitutional symptoms will, of course, be identical with those of septic poisoning occurring in any other location; an initial chill usually begins the attack, followed by early high temperature, remaining more or less regular in staphylococcus infection, soon becoming irregular, according to Lannelongue (2), when the streptococcus is the active germ. Delirium is almost a constant symptom in the rapidly developing cases. Warren (7) calls attention to an expression of fear or horror on the countenance in severe cases (Cases X, XIV, XVI); sometimes stupefaction may take its place (Cases VIII, XII). Early and rapid exhaustion, soon assuming a typhoid type is a constant symptom. Diarrhœa is a not uncommon symptom in infants (Cases I, VII). Enlargement of the spleen is present in many cases; Warren (7), and Park (8) insist on the presence of this symptom in all cases (Cases VIII, IX). Pain is an early and constant symptom; vague at first, but quickly becoming agonizing, it is characteristic in its location in or near the extremity of the infected bone, and is always intensified by disturbance or movement of the neighboring joint. Cheyne (20) asserts that if the infection is in the leg, tapping the foot excites severe paroxysms of pain (Case X). Localized tenderness at the seat of the infection is also universally present.

The local signs of the disease are as follows: Muscular spasm or contracture, causing postural signs, appears very early (Cases I, VII, VIII). A redness or rose-colored discoloration of the skin over the infected bone is an early manifestation. This discoloration does not correspond with the deep yellowish-red skin of erysipelas; nor does there exist late in the attack the characteristic network of cutaneous veins, according to Arnaud (21) commonly found in tuberculous involvement of the epiphyses and joints. Œdema or pitting of the deep subcutaneous tissues above or below the seat of the bone infection early in the case, Park (8), Warren (7), and Cheyne (20) say, is pathognomonic of acute osteomyelitis. Kuster (22) mentions another sign which he says is pathognomonic; that is, central swelling or thickening, an œdema of the periosteum felt on deep pressure (Cases I, VII, VIII, XVI). It begins near the epiphyseal junction and spreads downward as the case advances.

Fluctuation, deeply situated, is a rather early sign, generally within the first week, and follows central swelling (Cases IX, X, XI). It is dependent upon the accumulation of pus confined between the periosteum and usually attends, according to Park (8), Tillmanns (9), and Arnaud (21) epiphyseal separation. Lannelongue (2), Tillmanns (9), and Cheyne (20) call attention to the fact that signs of thrombosis and other metastatic affections may exist, and are characteristic of an intense general infection; they are usually found in those cases depending upon a streptococcic infection, or in cases following empyema (Case X). Scarlatinal eruptions, due to the absorption of the ptomaines attending the proliferation of the microorganisms, sometimes appear, and may cause a faulty diagnosis. Albuminuria is another evidence of ptomaine absorption which is rarely absent in osteomyelitis.

The examination of the blood in osteomyelitis is simply of confirmatory value; in the differentiation of the disease it is of comparatively little value, especially in infancy. In infants, marked leucocytosis is often present irrespective of diseased conditions; in children the eosinophiles always run higher than in adults, while according to both Cabot (23), and Ewing (24), in other suppurative processes, skin diseases, and severe articular rheumatism, leucocytosis may be high, multinuclear cells abundant, and eosinophilia variable; the presence of myelocytes of course adds to the suspicion of disease in the medullary canals. Blood examinations were made in several of the cases I report; in two (Cases VI and XVI), however, the sole value of the findings was to confirm the histories of the cases.

The diseases most frequently mistaken for osteomyelitis are deep-seated cellular abscess, erysipelas, typhoid fever, and acute rheumatism. Neither of these diseases ever causes the fearful destruction which this acute bone infection produces, and for this reason it is unfortunate that their symptoms may at times resemble those of the more serious affection.

Deep-seated abscess rarely gives rise to trouble or to violent constitutional symptoms; the location of the abscess can usually be demonstrated as existing in the intermuscular spaces away from the bone; while there may be limitation of motion, the postural signs of osteomyelitis are absent and tapping the foot will not excite pain if the abscess is in the leg.

Close examination for central thickening will exclude erysipelas; in this disease there is no characteristic boring pain felt deeply in the extremity, but the feeling is one of tension and burning in the skin itself; tapping the foot causes no paroxysms; in the area of discoloration, which is usually sharply circumscribed, there may be seen minute or large vesicles; the disease is self limited, and the tendency is to recovery, while osteomyelitis grows progressively worse.

Only when osteomyelitis begins insidiously or typhoid fever is ushered in very acutely, should these two diseases be confounded; lesions of the bones complicating typhoid are usually late sequelæ; while central swelling and deep-seated boring bone pain, aggravated by tapping the foot, are not characteristic of typhoid fever.

Acute articular rheumatism seems to be the disease which gives the greatest confusion. Rheumatism, however, rarely begins so acutely as does osteomyelitis; it is not so painful, the temperature rarely rises so high or so rapidly, nor is it septic in type; neither does a typhoid condition attend the disease early in the case; the swelling is limited to the joint, while in osteomyelitis swelling and pitting are confined to a spot located away from the joint; the pain in rheumatism is not in the shaft of the bone, nor does tapping the foot excite the agony which attends bone infection. Two differential points between these diseases should be carefully remembered. First, rheumatism is usually a multiple involvement, several joints being affected at the same time, while osteomyelitis rarely involves more than one bone. Secondly, osteomyelitis is a disease almost absolutely confined to childhood; acute articular rheumatism is rarely found in children and is almost unknown in infancy. Holt (8) says: "Rheumatism in infancy is so rare that in diagnosis it may be practically ignored;" also, "A typical attack of rheumatism such as is seen in adult life, with sudden onset, high temperature, severe inflammation of several joints, profuse acid perspiration, and occasional delirium is rarely seen in a child eight or ten years old." In an experience of twenty-two years, eighteen of which were spent in an active general practice, I have never seen a case of acute rheumatism in a child, but I have seen the tragedies resulting from confusing osteomyelitis with rheumatism.

In arriving at a diagnosis of osteomyelitis two factors go hand in hand, which should never be lost to sight. First, there is a history of some preceding infection, insignificant or grave in character; secondly, a history of some form of traumatism will be elicited if carefully sought for. In eighty per cent. of the cases, the two conditions will be found to coexist. In the other twenty per cent., one or the other will either be present or has existed.

The prognosis of the disease is pitiable in the extreme; usually it is only the fulminant cases that die, death taking place often within the first forty-eight hours, due to an overwhelming septic infection. The mortality is not so great in the less violent conditions, but if the disease is not recognized or is improperly treated, the usual results are necrosis, ankylosis, contractures, destroyed function, and a lifetime of deformity and mortification.

Osteomyelitis is most distinctly a surgical disease. There is no other preventable disease in which purely internal medication is so utterly unvailing, while almost every case immediately recognized and promptly treated by surgical methods can be saved from disfigurement and permanent disability. Delay means disaster. Kuster (22) in 1881, in the early days of the modern operative treatment of the disease, presented the following very suggestive statistics: Of twenty-four cases operated on, fourteen in the first two weeks, nine healed without fistula, five with fistula and none died; three in the third week, one recovered with fistula and two died; three in the fourth week, one had fistula and none died; four in the fifth to the seventh week, one had fistula, one ankylosis, and two died. Of the cases I have operated on in the first two weeks of the affection (Cases I, III, VI, VII, VIII, and XVI) all recovered without fistula, ankylosis, or loss of function; one, however (Case VII), five years after operation, has some arrest of development or shortening of the femur, a not unusual result of the disease in very young children. Herbert Page (25), T. S. K. Morton (26), Edmund Owen (6), and others, urge that the operator should not wait for the formation of pus, but should open the œdematous thickened periosteum and trephine or chisel the bone immediately; the bloody infiltrates, full of pus cocci, found in the softened injected bone thereby escaping, life will be saved, pain relieved, and early restoration of function result. Karewski (27) reports that in fourteen children in whom he employed this method, the constitutional symptoms immediately subsided, the bone tissues recovered rapidly without sequestration, and there was no loss of function or deformity. In two cases in which I pursued this plan (Cases VII and XVI) similar results followed.

Should the opportunity have passed for doing an abortive or early operation, that is, when the necrosed bone has been loosened from its periosteal sheath and before it has been shut in by a deposit of new bone, then an intermediate operation may be done with fairly good results. This stage is reached about the seventh to the eighth week. Cushing (28) calls this the regenerative stage, and says that the periosteum is then most active; it is covered with granulation tissue full of fibroblasts, osteoblasts, and small trabeculæ, in which lime salts are beginning to be deposited. If at this stage the sequestrum be shelled out aseptically, the periosteal wound being immediately closed, regeneration of the bone will take place from the periosteal sheath supported by an aseptic blood-clot. In three cases (Cases II, V, and X) I employed this method with complete success in two and a partial success in the other.

When this stage of active regeneration has passed and an involucrum has been deposited around the necrosed section of bone, then a sequestrotomy will have to be performed. Schede (11), in Europe, and Gerster (29) in America, have taught us the value of complete aseptic necrotomy and union by organized blood clot, which shortens the period of suffering and diminishes the danger of amyloid degeneration from prolonged suppuration attending the older methods of treatment. This operation I have done four times in the cases reported.

If the disease has advanced to epiphyseal separation and suppurating arthritis complicates the case, then excision of the joint will have to be considered. Swoboda (30) states that these two complications are very frequent and occur very easily in infantile osteomyelitis. Since the progress of the disease is usually very rapid at this age, the question of early resection, before epiphyseal separation and necrosis have taken place, has been discussed. Leguen (31) argues that it should rarely ever be performed, and then only in the most serious cases. Max Jordan (5), and Thelen (32), on the other hand, urge its early employment, the former reporting two cases with useful limbs following operations. It is, however, indicated as a late conservative method. I have had three cases with these complications; in two (Cases IX and X) I performed resection of the hip late in the disease.

The last resort in osteomyelitis is amputation; and, as in all other conditions, it should not be performed if more conservative measures can be employed, and only to save the life of the patient. It should rarely be resorted to in the shoulder or hip joints, since the functional results following resection at these articulations are usually very good. I have amputated once (Case IV) late in the disease involving the bones forming the elbow joints; once (Case XI) in fulminant epiphyseal separation at the knee joint; and once (Case XIII) late in complete destruction of the bones of the foot and leg.

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ARTIFICIAL FLUORESCENCE OF LIVING TISSUE IN RELATION TO DISEASE.

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(*Concluded from page 303.*)

In the first part of my article I considered the subject of artificial fluorescence from a theoretical point of view, and described the methods for its practical application in medicine. It now remains for me to report a few out of many cases in which I have used this method for therapeutic purposes.

CASE I.—*Hodgkin's Disease.*—R. W., man, aged eighteen years. Brought to me in consultation by Dr. Edward B. Finch, who has kindly furnished me with the following data: This case, in conjunction with eight others, has been very carefully studied by Dr. Channing G. Simmons, of the Massachusetts General Hospital. He excluded leucæmia, as the blood examinations were negative as regarded that disease. As regarded tuberculosis, neither histological nor inoculation methods discovered bacilli. Dr. Simmons concluded that the case presented a definite histological picture of Hodgkin's disease. The patient reports that at an early stage he first noticed a swelling over the cartilage of the second rib, gradually increasing in size until it is now two inches in diameter, not tender or painful. Spleen not enlarged.

Blood hæmoglobin		70 per cent.;
Red cells, 4,720,000—white cells, 23,000.		
Polymorphonucleas neutrophiles		84.4 per cent.;
Basophiles	large	5.0 per cent.;
	small	7.0 per cent.;
Oxyphiles		2.0 per cent.;
Mast cells		1.0 per cent.

An incision was made into the tumor over the sternum and its contents curetted out.

Microscopical examination of the specimen showed portions, for the greater part, more or less necrotic, but in the better preserved places the reticulum was increased. The most striking thing was the number of eosinophilic leucocytes present, which, in many fields, constituted about one half the cells; the others were lymphocytes and large cells with irregular nuclei, etc. A guinea pig was inoculated subcutaneously with a bit of the tumor on February 10th, and died of unknown cause on February 26th. An autopsy showed an abscess at the seat of inoculation and hyperplastic glands in both groins. No tubercle bacilli could be demonstrated microscopically.

The operation was performed by Dr. C. L. Scudder, of Boston, who curetted out only a portion of the tumor up to and behind the sternum into the anterior mediastinum.

On July 23, 1903, when seen by Dr. Finch and myself, the patient had every appearance of severe suffering. Dr. Finch reports as follows: "His complexion was sallow, his eyes dull, his shoulders stooping, and he carried his left shoulder and arm in a fixed position, avoiding movement as much as possible. Over the manubrium sterni, and to the left, was a soft protuberance, about three inches at the base, and projecting one half inch—tender, with crescent-shaped, somewhat hypertrophied scar below, about four inches in length—with a small sinus at the right end, the site of former operation. Lymph glands enlarged in neck, axillæ, and groins, from very small to about three eighths inch in diameter. Fluoroscopic examination revealed a presternal tumor and a somewhat enlarged spleen."

At my advice, the patient was put under quinine, æsculin at that time not being procurable, three to five grains daily, and the general administration of the x ray, from head to foot, in order to produce general artificial fluorescence. Dr. Finch, in his report, continues, "the sittings extended from forty to ninety minutes daily, practically constituting a general x ray bath, the face and scalp alone being screened off. At the eighth exposure the glands were markedly smaller, and on the fifteenth exposure, no cervical glands could be felt. The presternal tumor gradually decreased in size, till on the sixteenth exposure it could scarcely be seen, and on the twenty-ninth exposure, August 28th, it was imperceptible. The sinus ceased discharging during the first days of treatment, and at this time was completely healed, and the hypertrophical tissue in the scar had disappeared. On September 18th exposures were stopped, owing to dermatitis, which was not severe, and were not resumed until October 13th; they were then kept up until November 3rd, when the fifty-sixth exposure was made. At this time nothing abnormal could be found about the patient, and he was not seen again until November 30th, when exposures were resumed and kept up daily until December 6th, on which date the sixty-second exposure was made. At this time, the patient seemed to be in perfect health in every way; he looked well and weighed 130 pounds, a gain of fourteen pounds since treatment was begun.

On October 19th, the date of the forty-fourth exposure, Dr. Harlow Brooks made a blood examination, and reported as follows:

"Hæmoglobin	88 per cent.;
Red corpuscles	3,552,000;
Leucocytes	9,200;
Clot formation—slow, but complete;	
Blood plates	Few.

"The red corpuscles show slight variation in size and poikilocytes are infrequent. No cells showing cytoplasmic degeneration are present, and no nucleated red corpuscles have been found. The erythrocytes are notably deeply stained with hæmoglobin, more so than in the ordinary specimen of normal blood. No malarial organisms are present. In short, there is nothing about the blood which would indicate Hodgkin's or lymphatic leucæmia, for the mononuclears are all relatively below the normal."

"During the first two weeks of the x ray treatment, the patient's temperature varied daily from half a degree to one degree, Fahrenheit, but after that, it did not vary from the normal. The patient remains well to present date, and has begun his college course."

I attribute the beneficial effects obtained to artificial fluorescence.

This is only one of seven cases which I have treated in this manner or advised the treatment of by artificial fluorescence, and in five cases recovery has followed. Two cases proceeded to a fatal termination, but, in these artificial fluorescence was never fairly or properly carried out.

There can be no question that the best work of radium and of radium combined with artificial fluorescence can be secured only by the employment of salts of radium of the highest radioactivity obtainable. I now use a radium salt estimated to be of 1,000,000 radioactivity. Furthermore, quinine exhibits a fluorescence relatively mild as regards æsculin. The green fluorescent solutions are of great value. Colors must be chosen according to the case and the effect desired.

Case II.—*Carcinoma of Left Breast.*—D. C. McE., aged fifty-nine years. Came to me on September 28, 1903. She first noticed in June last a tenderness on pressure and swelling of the right nipple, but no pain of any moment. Could feel a small, hard, flat, disk-like tumor with the nipple in its centre. She is subject to eczema. The tumor was flat, with corrugated, hard edges, about one inch and a half across, and movable. The patient refused operation and forbade the excision of a specimen for diagnosis which was based on the clinical history. The disease was undoubtedly the so-called " Paget's disease of the nipple " and underlying territory. This diagnosis was confirmed by Dr. Charles Good. Treatment; ten grains of bisulphate of quinine daily, nineteen treatments by radium, applied over the tumor and upon the skin, extending over a period from October 19th to November 14th. The tumor divided into two portions and disappeared. The patient remains cured to date, January 20th, 1904.

Case III.—*Recurrent Carcinoma of Left Breast After Full Operation and Primary Carcinoma of Right Breast.*—Mrs. A. E. H., aged forty-five years, came to me November 24, 1902. She had had her left breast removed and axilla emptied on March 12, 1900. Microscopical examination established the diagnosis of carcinoma. In November, 1901, a new tumor occurred in the right breast, following the same course as the one which had been removed from the left. The patient was referred to me by Dr. Jacob Fuhs, of Brooklyn, who confirms the following reported cure to date:

Examination.—The left breast presents the usual scar following the Heidenhain operation, and the lower inch of the scar is thickened, elevated, red, beginning to *ulcerate*, and evidently the seat of recurrence. In the left axilla are glands sensitive to the touch and enlarged. As for the right breast, in which the disease had reappeared, the following may be noticed: On the upper portion of the breast is a tumor measuring one inch and three quarters in diameter, hard, corrugated, and adherent to the skin. A second mass about the size and the shape of the little finger exists still more outwardly, running up toward the axilla. and evidently consists of cancerous lymphatic vessels. Still nearer the axilla is a small kernel the size of a pea, and within the axilla is one gland prominently enlarged. Another small nodule exists at the upper margin of the mammary gland and in the skin. Thus, the carcinoma seems to be quite generally spread on the right side, and would be a typical case for immediate operation. Altogether, there are four scirrhous lumps. The patient has lost flesh, is very thin, pale, sallow, and cachectic, and extremely nervous. Treatment; artificial fluorescence of quinine excited by the x ray, using induction coil.

December 23d, patient presents a remarkable improvement in general health. She was quite feeble, but now she feels comparatively strong and well, looks well, and is gaining flesh.

January 5, 1903, recurrence at the end of scar thinner and paler and less sensitive. Tumor in the right breast smaller, the second tumor consisting of enlarged lymphatics is noticeably smaller.

January 15, patient can now walk miles without weariness.

February 28, the ulcer and recurrence in the scar in the left side have entirely disappeared.

June 25, the scar continues free from disease, and on the right side the very considerable tumor and the other nodules and enlargements of the lymphatics, the sensitive gland in the axilla and the hard nodule in the skin, have entirely disappeared.

On August 3rd, the patient returned for examination. Every trace of cancer had entirely disappeared from both sides and no signs whatever of the disease could be found.

January 16, 1904, the patient returned again. Her face was full and plump, and she presented the appearance of perfect health. No signs of the disease could be discovered.

This is evidently one of those fortunate cases which can be said to be completely cured to date. As to treatment, the patient took from five to ten grains of quinine bisulphate daily, and was submitted three times weekly to the x rays produced by an induction coil. This case was treated entirely upon the basis of producing an artificial fluorescence of the quinine solution within the patient's tissues. Both the x ray and radium are indicated in this and similar cases; the x ray for cases in which the disease is generally disseminated, the radium for the more local tumors, unless, for instance, the method by radioactive solutions is employed. At the time I began the treatment of this case radium was not in general use.

Case IV.—*Primary Carcinoma of the Breast.*—Miss L., aged sixty-nine years. Came to me August 8, 1903. One month ago she first noticed a tumor in the outer side of the right breast. Diagnosis confirmed by Dr. Arthur L. Root, of New York, physician to the family. *Examination*, Present condition: In the right breast exists a tumor, distinctly hard, involving the mammary gland, and about the size of a hen's egg, inclusive of the mammary substance with it. It is situated on the outer aspect of the breast and involves the nipple. The outer circumference and base of the nipple have been dragged down, are adherent to the tumor and point toward the axilla. The patient is subject to twinging, drawing pains, just below the axilla. Diagnosis is that of an undoubted primary carcinoma. The patient refused to consider operative procedures and, in view of the strenuous advice of many to operate at once in such a case, I had considerable reluctance to assume the responsibility of delay. However, I felt it to be a duty to submit the patient to artificial fluorescence.

October 14, 1903, the tumor is very greatly decreased in size and the condition looks most favorable for disappearance. She complains of numbness in the right arm.

January 30, 1904, the patient has continued steadily, taking x ray three times a week up to the present date, and also steadily takes five grains of quinine bisulphate daily. She has also taken radioactive water, one teaspoonful. I made a careful examination this morning, and can find absolutely no trace of the tumor. The total result is a complete disappearance of the disease up to the time of present writing.

Within a few days, I referred the patient back to Dr. Root for his opinion, and he kindly writes me as follows: "Miss L. called at my office two days ago and I examined her right breast very carefully, and was unable to find any trace remaining of the tumor. The indurated glands in the axilla have also disappeared."

CASE V.—*Rodent Ulcer of Right Cheek.*—C. B. Y., aged sixty years. January 21, 1904. Disease began five years ago as a dark spot on the cheek. It was treated with lanolin and salicylic acid, which, according to the patient's statement, apparently produced an ulceration. This ulceration has continued to the present date growing larger and larger until it is now the size of a quarter of a dollar. It has a continuous discharge and crusts form and come off again from time to time. The patient was treated with artificial fluorescence by æsculin and with radium, and the ulcer has now completely healed over with a new skin in the space of eighteen days.

CASE VI.—*Extensive Papillomatous Growths in the Abdomen.*—Mrs. G. P., aged twenty-eight years. Case referred to me by Dr. Bache McE. Emmet. March 21, 1903. About two years ago first noticed a sore spot just below the navel. Then abdomen began to enlarge. Consulted Dr. Emmet. Dr. Emmet, in notes kindly furnished to me, writes, "I operated in January, 1903, on account of an ovarian tumor of right side, size of crown of a Derby hat. Upon opening the abdominal cavity, finding masses of papillomatous growths attached to various parts of the abdominal peritonæum, with abundant ascites, I decided not to subject the already much emaciated woman to further shock, believing that my efforts for the total removal of the masses would prove futile, and that the patient was destined to die anyway within a short time, exhausted by the rapid spread of such a growth. She made a speedy recovery from the operation and went on gaining beyond my expectation. Notwithstanding this, I placed her in Dr. Morton's hands, that she might have the benefit of a trial of the x ray treatment."

On coming to me the patient's report is as follows: Suffers acute, excruciating and indescribable pain in the abdomen mostly on the left side. Pain comes on in spells lasting two or three hours and causes intense nausea. Her sleep is lost and she cannot lie on the left side. She urinates with difficulty, and it often requires half an hour to empty the bladder. She suffers intensely from backache, and cannot walk two blocks because of weakness and suffering. She appeared, as above stated by Dr. Emmet, "destined to die anyway within a short time," and this opinion had been already communicated to her and to her relatives.

Examination.—Externally the patient showed the usual scar of a laparotomy and a largely distended abdomen, due to ascites. Her appearance showed great emaciation, an expression of suffering, and in general the cachexia of extreme debility.

Treatment.—The case seemed to me to be one peculiarly adapted for treatment by artificial fluorescence of the abdominal cavity excited by the x ray or otherwise. I accordingly provided that the patient's blood be saturated with a fluorescing substance, choosing, in this instance, quinine bisulphate, and caused her to take from five to ten grains daily, according to her physiological tolerance. The exciting cause of the fluorescence, namely, the x ray, was applied three times weekly for twenty minutes; hard tube.

The almost immediate response of the patient to this treatment was remarkable.

On April 17th, less than a month, I was able to record that she "now has not a pain or an ache," and that she can lie upon her left side at night with perfect comfort, that she is free from all backache, can walk ten or twelve blocks without fatigue and with comfort, and that she has no trouble whatever in micturition. Her face is, of course, no longer drawn with suffering and she has began to regain color.

June 6th. By this time the patient's condition had so greatly improved that it was concluded by Dr. Emmet that he might safely do the operation which he had first attempted, but had refrained from doing. In regard to the operation I quote from Dr. Emmet's notes, kindly furnished me for this report: "During the month of May, as her general health was much improved, I decided to again open the abdomen and remove the ovarian tumor and as much of the scattered papillomatous masses as I could. I then discovered that both ovaries had been the seat of papillomatous growths and that there were more of such cases scattered over the painful peritonæum than I had at first thought. I removed the primary tumors and handfuls of the exuberant mass, along with quarts of bloody ascitic fluid. I then threw in an abundance of 50 per cent. of peroxide hydrogen solution, followed by copious washings of saline solution.

"Again, the patient made a beautiful recovery, leaving the hospital at the end of three weeks. A week later she resumed the x ray treatment and kept it up throughout the summer and autumn.

"There has been no reaccumulation of fluid, and I fail to discover any trace of a new growth. It is now eight months since the last operation. The patient continues to gain in flesh, exceeding now her best weight when in perfect health."

December 12th. Operated upon in June last as above stated. After leaving the hospital artificial fluorescence was continued about twice weekly and the patient to-day appears to be in perfect health. She has gained in weight from 95 to her present weight, 130 pounds; her complexion is rosy and fresh, and she feels strong and well, and is conscious of no abdominal trouble.

As to the result here obtained, we have to take into account, as suggested by Dr. Emmet, the effect of opening up the abdominal cavity to the air at the first operation: At the second operation the same influence as well as the washing out of the abdominal cavity with hydrogen peroxide solution and with salines. It must be recollected that at the second operation many of the papillomatous growths could not be removed by the knife or by the hand, and that, therefore, in this case we have an instance of retrogression and disappearance of the neoplasm itself by gradual absorption and not by manual removal.

Certainly, the second operation could not have been attempted had it not been for the benefits derived from the intervening x ray and fluorescence treatment.

My own personal opinion is that the production of the violet and ultraviolet radiation within the abdominal cavity and within the papillomatous growths themselves, was the controlling factor in determining this patient's recovery.

These cases by no means exhaust the list of those under treatment by artificial fluorescence, but space precludes the possibility of citing more. Sufficient has, however, been said to make out a fair *prima facie* case for the thorough investigation of this method of treatment, and of the accuracy of the principles on which it is based. We have entered, in these last few years, on a field of totally new therapeutics by the utilization of physical forces, and it behooves the medical profession not to hold aloof from a critical examination of them, thus allowing them to fall into the hands of empirics, as it did in the past with massage, suggestion, and electricity. The value of these agents, properly used in the right circumstances, is now universally admitted; but how long has this recognition been delayed by the aloofness of the profession in the early stage of their introduction, handing them over to quacks, until scientific physicians required a great deal of moral courage to take them in hand? Let us, then, avoid repeating the mistaken attitude of the past toward that which is novel and entirely outside the realms of previous experience. Let us investigate; sceptically, if you will, but investigate.

ROENTGEN RAYS IN THE TREATMENT OF PRURITUS ANI.*

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Notwithstanding the valuable contributions and discussions of recent years by eminent clinicians and pathologists on the ætiology, pathology, and treatment of pruritus ani, we do not seem to be very much better prepared to give relief to patients suffering from the incessant pangs and torments of this condition than were our forefathers.

While the sources to which this affliction has been attributed are, seemingly, without number, yet in all the cases that have come under my observation, regardless of what the primary cause may have been, there is more or less infiltration and thickening of the skin surrounding the anus. This is due to the deposit of an inflammatory exudate and tissue of a low degree of vitality, and I believe that this deposit disturbs or aids in the disturbance of the normal sense of contact existing between the peripheral nerve endings and the epidermis, causing an irritation and perversion of function, which give rise to the sensation of itching; furthermore, that permanent relief from the intolerable itching must come through the elimination of this morbid product and the results of cases treated, presently to be reported, seem to justify this belief. Moreover, this practically corroborates the view of E. B. Bronson, of New York, who, in discussing the cause of the sensation of itching in general pruritus, says that the disturbance of the normal sense of contact existing between the simple nerve endings which exist so abundantly in the epidermis, and the epidermis itself, is probably the cause of the sensation of itching; that it is the most superficial nerves of the skin that are involved is evidenced by the fact that it occurs only when the disturbance takes place in the epidermis.

If the foregoing premises are correct, then rational treatment of this condition should consist in the employment of some agent or means by which this morbid product could be removed and the normal condition and relation of the peripheral nerve endings and epidermis be restored.

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* Read at the Fourth Annual Meeting of the American Proctological Society, New Orleans, May 5 and 6, 1903.

Have we any agent embodying such properties? It would seem from the reports of histological studies of rayed tissues which have been made by many observers, that we have in the Röntgen ray an agent embodying some, if not all, these properties.

Among those who have contributed such reports may be mentioned Gilchrist and Kibbe, who have studied the effects of the Röntgen ray in x ray dermatitis; also Oudin, Barthelemy, and Darier, who have observed its effects in alopecia produced by raying guinea pigs, without causing dermatitis. These observers agree, as summarized by Pusey, that the most marked changes are found in the epithelial structures; that the growth of the epidermis is influenced in a most remarkable way. There is great increase in the thickness of all the layers of the epidermis, increase in the amount of keratohyaline and pigment, and evidences of greatly increased karyokinetic activity. Oudin, Barthelemy, and Darier have also found increase in the prickle-cells, rete, and nuclear epithelial. Jutassy, of Buda Pesth, found very similar changes in rayed rabbits. All of these go to show that the x ray stimulates marked activity in the cell. This derangement of the structure of the cell occurs more readily in diseased than in healthy stroma. That diseased structures are more susceptible to the influence of the x ray than healthy structures is abundantly confirmed in the macroscopic changes in tissues subjected for considerable time to the effect of the x rays. Pathologic tissues, therefore, being composed of relatively unstable cells, are relatively easily destroyed and eliminated by any active disturbance of their nutrition. In short, it seems that while the Röntgen ray of a given intensity stimulates the healthy cell and increases its activity, it causes degenerative changes and atrophy of the inflammatory products.

These effects of the Röntgen ray, the destruction and elimination of pathologic tissues, under an influence of the ray not sufficiently intense to destroy the healthy tissue, and yet of sufficient intensity to stimulate and increase the vitality and activity of the healthy cell, furnished the grounds for suggesting the use of this agent in the treatment of pruritus ani. I have used the method in a number of cases and believe the results worth recording.

Case I.—Mr. G. Had had pruritus ani for seven years. It involved the perinæum and scrotum. He had sought in vain for relief. Almost all of the prominent dermatologists in Chicago had treated him, but with no effect. I treated him for two months with lotions, ointments, internal medication and diet, all to no avail. I then prepared to dissect the pruritic area, under local anæsthesia, but found the skin so tough and leathery that I could not introduce the hypodermic needle. After all these failures, I put the patient, in October last, under x ray exposures. After the third treatment he began to notice a change for the better. The exposures were continued and the tough leathery condition soon began to disappear. As it disappeared, the itching subsided. There has been no itching for the last four months and the skin to the touch is normal. No other treatment was used after beginning treatment with the Röntgen ray.

Case IV.—Mr. J., city salesman. He consulted me two years ago for pruritus ani and internal hæmorrhoids. I removed the hæmorrhoids, but the itching continued. I continued to treat him for the pruritus for some time. He was relieved, but not cured. In November last, I put him under x ray exposures. Within four weeks the itching had entirely disappeared.

Case VI.—Mr. J. S., German, aged forty-four years. Corpulent. Bowels regular and no other anal or rectal disease. Itching is worse in wet weather. He was given exposures to the x ray every other day for two weeks. A rest of one week was given, and they were then repeated for one week longer. The itching entirely disappeared.

Case VII.—Miss H., aged thirty-five years, referred to me by Dr. Pynchon. She had been operated on for hæmorrhoids with the clamp and cautery, in August, 1902. As a result there is much scar tissue, and a patulous condition of the anus. There was some pruritus before the operation. Since then it has been greatly aggravated. This case is still under x ray treatment, but the patient is greatly improved.

Case IX.—Mrs. E. H., aged forty-five years. Pruritus ani following an operation for hæmorrhoids six years ago. The appearance around the anus is that usually observed in such cases. Digital examination revealed a few cicatricial bands, probably the result of the operation, which was done by the ordinary ligature method. The usual treatment in such cases gave her relief for a time only, but the trouble would return. Exposure to the rays has given her relief for two months.

Case X.—Mr. H., aged forty-five years, German. He was referred to my service in the Chicago Policlinic. He gave a history of an obstinate pruritus ani of seven years' standing. Inspection revealed a putrid eczematous condition which extended far out on the buttocks and covered the entire perinæum and most of the scrotum. The discharge was profuse, sour, and foul smelling. The field had much the appearance of a piece of raw meat covered with pus. He had received treatment from some very able dermatologists, with temporary relief only. I gave him daily exposures to the x ray for two weeks, then a rest of one week and repeated it every second day for the next two weeks. He has been absolutely well for two months.

Case XI.—This patient, a woman, was operated on three years ago for hæmorrhoids by the ligature method. Pruritus followed the operation and has been very obstinate since. She says there was a discharge for some time after the operation, and thinks it was the exciting cause. A few exposures to the x ray eliminated the trouble.

Cases II, III, V, VIII, XII, and XIII, were ordinary cases of pruritus ani, having no special feature connected with them. Each, however, yielded to x ray exposures.

These patients have had practically no internal or local treatment during exposures to the x ray. These cases are unique in my experience. In no case, thus far, that has been under treatment long enough to expect results, have I failed to note improvement. Of course, this method is not urged to the exclusion of all other aids, nor is there any reason why other procedures should not be employed in conjunction with the x ray. In none of these cases has there been any dermatitis or other ill effect produced. The skin is left smooth, soft, clean, and pliable. In the whole of them the hair has been removed by the x ray. The results have been so similar and constant in all of them that I do not think there is any doubt but that they should be attributed to the Röntgen ray. We must not lose sight of the fact, however, that thirteen cases are not sufficient to prove a remedy, yet there is no doubt of the value of the Röntgen ray in the thirteen just reported.

Lectures and Addresses.

ABSTRACT OF A LECTURE BEFORE THE PHIPPS INSTITUTE ON THE ADMINISTRATIVE CONTROL OF TUBERCULOSIS.*

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When we consider the transcendent importance to the human race of the observations of Koch on the causation of tuberculosis and the completeness of his demonstration of the communicable and preventable character of the disease, it seems difficult to understand the limited extent of the sanitary procedures since adopted for its restriction. The imperative demand for the enforcement of comprehensive measures for the prevention of tuberculosis should have been as evident to sanitarians twenty years ago as it is to-day. No facts have been added to our knowledge within this period which are really essential to the intelligent sanitary surveillance of this disease. Yet only here and there throughout the civilized world have measures looking to the administrative control of tuberculosis been put into effect, notwithstanding the educational movements, the formation of societies, and the foundation of sanitariums and institutions for the study of tuberculosis.

The explanation of this is to be found in the idea, so firmly fixed in the minds of the authorities and of the medical profession, that administrative control applies only to the more readily communicable diseases, like smallpox, scarlet fever, etc., and that the inclusion of tuberculosis with these diseases is impracticable. and the enactment of suitable legislation conferring power on the authorities to deal with this disease *in another way* has been either not considered or regarded as impossible. In the very few instances, as in New York, where effective measures have been adopted, the power has usually been vested in the sanitary authorities to determine what diseases should come under their surveillance and under what conditions.

Notification is a necessary preliminary to any plan of supervision. Yet within recent years this has been reported on unfavorably by the Academy of Medicine of Paris, Sir R. Thorne Thorne, medical officer to the Local Government Board of Great Britain, the Academy of Medicine of New York, and every important medical society in New York. The principal objections were the divulging of the medical secret, and the assertions that the public, regarding tuberculosis not as contagious, but as hereditary, would resist the enforcement of such legal enactment, also that the hardships to the individual would be so great as to render the measure unjustifiable.

In these diverse opinions and actions, precedent has influenced the opponents. It has often been urged that the so called contagious diseases are acute, and the whole history of even the most protracted case is comprised within a period of a few weeks or months; whereas, with tuberculosis, the infectious period usually extends, not simply over months, but more frequently over years. Moreover, the contagious diseases usually entirely incapacitate the individual, during the early period at least, and the dangers of the transmission of the infection are so great and the evidence of this so immediate, that no question can be raised as to the justification for proper isolation and supervision; while all authorities agree that, under proper conditions, the consumptive is not necessarily a source of danger, even to his most intimate associates. He may be able to pursue his usual vocation for years. The danger of the transmission of the disease is much less evident, and the source of infection is much more difficult to trace.

The medical and lay sanitary authorities have failed to understand that, with the new knowledge afforded by Koch and others, an entirely different sanitary problem is presented for their consideration, and for its solution new methods must be adopted. This fact has, however, now gradually forced itself upon them, till it is now generally admitted that some kind of action or supervision is justifiable and necessary, and the only difference of opinion is as to what measures should be adopted and how they should be enforced.

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* Delivered at Philadelphia, on February 15, 1904.

It is my desire to present what it seems to me these procedures should be, and also what, in part, they are now in New York. What measures, then, does the efficient administrative control of tuberculosis require?

1. Compulsory notification and registration of all cases is essential, otherwise the enforcement of any measures for prevention is impossible. Practical experience has shown the objections urged against it to be without force or foundation. In New York, in 1893, partly voluntary and partly compulsory notification was adopted. Public institutions were *required*, private physicians were *requested*, to report cases under their supervision. In 1897, compulsory notification was required in all cases. Though not yet strictly enforced, each year sees more complete compliance with the requirement.

The fact that tuberculosis differs radically from the more readily communicable diseases demands different measures of sanitary supervision. Notification should be regarded as confidential, and action taken only when the conditions require it.

The notification of a case of tuberculosis does not require action by the authorities if it seems reasonable to assume that such action is unnecessary. The very fact of notification by the attending physician has the greatest educational value and justifies the assumption, in those instances in which the case is under the supervision of a private physician, that reasonable and necessary precautions for the protection of others will be taken. If, however, the consumptive has the disease in an infectious stage and is without a home, or is living in a lodging house or in the poorest kind of furnished room, or with a family in a tenement house in a crowded district, or is receiving charitable medical advice through some public institution, then all objection to the interference of the authorities is removed, and in the interests of the public such supervision becomes necessary. Such is the attitude adopted in New York. It is understood that in all instances where the consumptive is under the care of a private physician and the latter undertakes to give necessary instructions to prevent the transmission of the disease, no further cognizance of the case will be taken by the health authorities.

2. To facilitate the early and definite diagnosis of all cases of pulmonary tuberculosis, the sanitary authorities should afford facilities for the free bacteriological examination of the sputum in all early cases of suspected disease. In many early cases, the clinical conditions are not definite enough, in the absence of sputum examination, to admit of a positive diagnosis. Valuable time is thus lost, waiting for unequivocal signs, which means further extension of the disease. The health department of New York provided facilities for such examination so early as 1894, and this procedure has proved of the greatest value to the medical profession, the sick, and the authorities. This plan should be universally followed. It is a curious fact that large numbers of physicians in private practice who are reluctant directly to report cases of tuberculosis, without hesitation send specimens of sputum for examination, and with them all the facts in relation to the patient which are necessary for registration. Only on this condition are examinations made. During 1903, more than 13,000 specimens of sputum were examined in the laboratory of the department of health, almost entirely from physicians in private practice.

3. Sanitary authorities should educate the medical profession and the people on the subject of tuberculosis. Circulars suitable to different classes of the community and covering different phases of the subject should be distributed and published in the press. The formation of lay societies, agitation in the press, lectures, etc., are all valuable measures.

4. Every case reported, not being under the care of a private physician or being in a public institution, should be at once visited by a board physician or trained nurse. Verbal instruction should be given and printed circulars left. Data should be gathered as to the history of the sick person and the family, its social and financial condition, the number of persons in the family and their wages, the number of cases which have occurred, the probable source of infection, the sanitary condition of the premises, the cubic air space per capita, the light and ventilation, the precautions observed, and the need for further intervention. In cases that need it, the patient should be persuaded, and if necessary compelled, to go to some sanitarium outside the city.

5. All rooms, etc., vacated by a consumptive, should be disinfected with formaldehyde, or renovated, where the premises are filthy and unsanitary, by kalsomining, repapering, whitewashing, etc.; textile fabrics should be removed by the authorities and subjected to steam disinfection. Disinfection should be carried out by the health authorities without cost to occupants or owners, but renovation, when ordered, should be at the cost of the owner of the premises. Trained medical inspectors should enforce these measures whenever vacation of premises by death or otherwise becomes known to the authorities. The great difficulty in this measure is the frequent changes, often the result of the financial losses entailed by the disease itself. Requiring the owners to furnish notice of removal might react prejudicially on the poor consumptive by making it more difficult for him to obtain lodgings. Yet, this measure may prove to be the only available method.

6. Repeated visits by trained nurses should be made to tenement houses in cases where removal to an institution does not take place. These visits might aid in the notification of removal, as well as testify to the precautions observed, physical and financial conditions of the patient, etc.

7. Suitable food, especially milk and eggs, should be provided by the authorities, where necessary, if the patient cannot be removed to an institution. [Dr. Biggs discussed various economic problems in connection with this provision.]

8. The sanitary authorities should cause to be provided three classes of institutions: *(a)* Free dispensaries for medical treatment of ambulatory cases, under the constant supervision of district physicians and nurses; food, as well as medicine, being furnished where necessary. Dispensaries should be clearing houses for consumptives, and should continue treatment of cases discharged from institutions.

(b) Hospitals for advanced cases. Not all need be under the direct control of the authorities, though all should be under their supervision. In every large city the authorities should have control of at least one such institution for certain varieties of advanced cases that it may be necessary to remove forcibly to an institution. Such are: first, those discharged from other institutions for infraction of regulations, etc. Such cases from the sanitary standpoint especially demand institutional care, though it is obvious that ordinary institutions could not tolerate them without impairing their own efficiency. Secondly, patients from lodging and boarding houses or inmates of public institutions not having facilities for their care. Thirdly, patients where the home conditions, through poverty, destitution, overcrowding, etc., are very unfavorable. Fourthly, patients that refuse to remain in institutions in which they have been placed.

While these classes of cases are the most difficult of control, the experience of New York proves that little difficulty is experienced if the accommodations, food, and care provided are of a superior character. It will readily be understood that the measures suggested can only be taken where the sanitary authorities have full power and control, and that patients can only be detained forcibly in those institutions over which the authorities have direct authority. So far as the author knows, the forcible removal of tuberculous patients has not been attempted by any sanitary authorities, except those in New York.

(c) Sanitariums should be provided by the sanitary authorities in country districts favorably situated for the care of incipient cases.

9. The sanitary authorities should issue regulations applicable to public institutions as to the care of consumptives. The reception of consumptives in general wards should be prohibited. These regulations should apply to general hospitals, penal institutions, homes, asylums, etc. Suitable regulations should also be made for teachers and scholars, mercantile establishments, etc.

10. Regulations should be strictly enforced regarding spitting in public places.

Many minor measures have been in use in New York, such as a semiannual census of pulmonary tuberculosis cases in public institutions; the supply of sanitary cuspidors in poor districts and to institutions by the nurses; the following up of inquiries to physicians who have reported cases, the reporting by tenement house sanitary inspectors of cases they encounter. An attempt is now being made to have several tenement house districts in which tuberculosis is prevalent condemned. From the beginning of the work sectional maps have been prepared with every house lot in the borough on a sufficiently large scale, so that all cases of tuberculosis coming under observation and all deaths from the disease can be plotted out on them.

[At this point of the lecture, Dr. Biggs showed on the screen several such maps, evidencing the extraordinary prevalence of the disease in certain districts.]

The questions arising in the consideration of such a scheme as is here laid down are:

1. Is it practicable?
2. Are there serious objections to it?
3. What results may reasonably be expected from it?

I must reply to the first question that the practicability has been conclusively demonstrated in the second largest city in the world. In only a few of the less important details is the plan, as now followed in New York, wanting. In 1903 13,000 new cases were reported in New York. Over 100,000 circulars in English, German, Italian, Yiddish, Russian, Slovak, Chinese, Polish, Bohemian, etc., were distributed in the proper quarters. Regular visiting of reported cases not under the direct care of a private practitioner is practised. Apartments vacated by consumptives have been disinfected. A special dispensary is about to be opened, where medicines and necessary food will be furnished free of charge. A series of pavilions have been opened for those whom it is necessary to detain forcibly, and for the destitute. An appeal has been made to the city authorities for funds for a suitable sanitarium outside New York and it is believed that the funds will soon be forthcoming. Regulations have been enacted concerning spitting, and will shortly be rigorously enforced. Therefore, except as regards the furnishing of food to consumptives living at home and the supervision of cases in public institutions, schools, and factories, the scheme as presented is practically now in force in New York; the extent and strictness of the supervision having been increased year by year during the last ten years. What is practicable in New York should be practicable in smaller cities.

There are *no* serious objections. Experience has shown that the fancied obstacles are largely imaginary; in fact, the difficulties in regard to tuberculosis are really less serious than those encountered with the contagious diseases. There has been hearty approval by the majority of the medical profession and acquiescence by the remainder.

The experience of New York affords the answer to the third question, also. Notwithstanding that the conditions in New York are very unfavorable, because of the density of the population and the large foreign-born element, there has been a more rapid fall in the tuberculous death rate in New York than in any other city in the world. During the past ten years there has been a decrease of fifty per cent. in the death rate of children under fifteen, from pulmonary tuberculosis and tuberculous meningitis. It is precisely in this, the youngest element of the population, that one would first look for definite results from the enforcement of measures for the restriction of this disease. There has been also a decrease in the total tuberculous death rate between 1886 and 1902, of forty per cent. Other cities have shown a decrease, though none so great as this. And this is not due to return of tuberculosis cases under other names, for in New York the statistics of other pulmonary diseases have not increased.

[Dr. Biggs concluded by expressing his deep admiration for the great work which the Phipps Institute was doing in Philadelphia, and his belief in the large part it was destined to play in extending the cause throughout the world.]

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NEW YORK, SATURDAY, FEBRUARY 20, 1904.

THE ADMINISTRATIVE CONTROL OF TUBERCULOSIS.

In another column will be found an abstract of the very excellent lecture delivered on February 15th before the Phipps Institute for the Prevention of Tuberculosis, at Philadelphia, by Dr. Hermann M. Biggs, of the New York board of health. Dr. Biggs's lecture was one of unusual interest, inasmuch as it laid down a definite series of proposals for a scheme of administrative control of tuberculosis which, it was contended, would tend to prevent what Dr. Biggs described as "certainly the most preventable" of infectious diseases. The prevention of tuberculosis has for some years past occupied much, but not half enough, of the attention of administrative authorities and the public generally, to say nothing of the medical profession. As Dr. Biggs points out, no preventive measures against any form of disease can be efficient without compulsory notification and registration. What a satisfactory intelligence party is to the power engaged in war, an efficient notification method is to the sanitary authorities in their war against disease. Without it, no effective action is possible.

The principle of notification has been opposed in the past on several grounds, all of more or less force. The interference with professional secrecy; the hardships it would inflict on many individuals, making their already unfortunate lot still more unfortunate; its impracticability; and the essential difference between the ordinary so styled infectious diseases and tuberculosis, in that the former commonly incapacitate the subject from the beginning and last but a short time, and that the infectiousness is more clearly demonstrable, are among those urged most strongly. But to these Dr. Biggs replies that, while the difference between the two classes of infectious disease may demand a difference in the method of application of the primarily essential measures, it cannot justify no measures whatever. For some years past, New York has enjoyed the distinction of being the only city in the world that demands compulsory notification of all cases of tuberculous disease. *Pari passu* with the increasing enforcement of this requirement has been a steady decrease in the death rate from tuberculosis, exceeding that of any other city in the world.

We are naturally very jealous of any avoidable interference with individual rights, but we must admit—we do admit when we sanction the notification of diphtheria, smallpox, etc.,—that under certain circumstances the safety of the community must outweigh the rights of the individual. It must, however, be clearly established that a course which invades those rights is absolutely essential; that no other approximately efficient measure could replace it; that every effort is made to safeguard from injury those individual rights to the utmost extent possible; and, finally, that it is likely to effect the purpose for which it is instituted. The first and second of these conditions Dr. Biggs demonstrates when he makes it clear that without notification no effective measures of any kind looking toward administrative control of tuberculosis can be taken. In the modified measures, now and for some time past in force in New York, whereby action on notification is taken by the health board only under conditions in which no remedy is available without such action, it seems to us that the individual rights are protected to the utmost degree possible; and, moreover, the unobtrusive success of the method without causing friction or any obvious protest of hardship bears out this view. Finally, as to whether such an administrative campaign as that outlined by Dr. Biggs is calculated to effect the purpose aimed at, the experience of the past few years in New York speaks loudly in the affirmative. The moderation and tactful methods of the New York authorities must, however, be followed by any city that would endeavor to prosecute such a campaign; education should always precede restrictive action in matters in which it seems necessary to infringe individual rights for the general good, if only for no other reason than that a law which cannot be enforced is worse than no law at all, and that no law can be efficiently carried out for any length of time which cannot gain the hearty acquiescence of the community. In such an educative campaign, we can only repeat that the Phipps Institute, by inspiring such lectures as Dr. Biggs's and those which have preceded it, is doing no local, no national work even, but one that is as truly cosmopolitan as is the science of medicine itself.

COEDUCATION FROM THE MEDICAL POINT OF VIEW.

Those who would restrict preventive medicine to the prophylaxis of purely physical ills take, it seems to us, a very narrow view of our science. Medicine should take quite as much cognizance of disturbances which, though they act primarily on the physical being yet exert their direct effects on the psychical constitution, as of those that have ordinarily no such ulterior effect; and so it does in the minds of its most distinguished votaries.

Strikingly illustrative of this high function of medicine is an article entitled Sex Differentiation and Education, by Dr. William Lee Howard, of Baltimore, published in this issue of the *Journal*. Every reader who is not hopelessly committed to the fad of coeducation must, we think, admit that Dr. Howard's statements rest on facts and that his deductions are such as cannot be evaded. His main contention is that the artificial leveling of sex distinctions involved in the coeducation scheme must result in the more or less complete blotting out of the maternal and domestic instincts of the young women subjected to it. We do not see how this can be denied. If it is admitted, what result, provided it were produced on a large scale, could be more subversive of physical improvement in the race?

A minor, but none the less important, contention of Dr. Howard's is that embarrassment due to the presence of young women sometimes inevitably entails the omission from lectures and class room teachings of data that would materially heighten the value of the instruction. "A teacher well informed on the psychology of sex, when teaching a class of girls," says Dr. Howard, "will state a fact in a different mode and manner, will express it in other colors than he would to a class of young men." Most assuredly he will if he is a decent person.

Other aspects of the subject, none the less important, are discussed in an admirable book that has lately been issued.[1] The author, Dr. Van de Warker, is one of the best known gynæcologists of the country, and his experience as a school commissioner has enabled him to add to his professional insight into the physiological needs of young girls a close knowledge of the conditions prevalent in coeducational institutions. As we are compelled to view the matter, Dr. Van de Warker, while admitting the feasibility and desirability of educating women to the same degree as men, argues that the two should not be educated in the same way, that is, together. He shows very conclusively, as it seems to us, that to exact the same tasks of women as of men, without regard to their physiological limitations, tends powerfully to invite grave derangements of health. He argues, too—and we fear his argument cannot be gainsaid—that coeducation as at present conducted in many of the colleges of the United States has a tendency to undermine the morality of numbers of young women.

THE BALTIMORE HOLOCAUST.

Both directly and indirectly the disastrous conflagration of Baltimore will be a great blow to the physicians and their interests in that city. To the general practitioner who depends upon that large class—especially large in Baltimore—of small salaried employees, the clerk, factory hands, bookkeepers, etc., and even the small merchant, will come the hardship of having to give his care and time gratuitously. It will be many months, perhaps years, before Baltimore will recover its financial equilibrium, and, as physicians, we can all recognize the struggle ahead for our Baltimore colleagues. But it is in just such emergencies as this that our profession silently works and endures. The Baltimore physicians will not be found wanting, of that we are all certain. With no prospect of pecuniary aid, with no ideas but those made active by a sense of duty, our Baltimore confrères will be found always ready to relieve pain and suffering, ever willing to give freely to their stricken community their medical counsel and very present help in time of trouble.

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[1] *Woman's Unfitness for Higher Coeducation.* By Ely Van de Warker, M. D., Commissioner of Schools, Syracuse, N. Y. New York: The Grafton Press.

Indirectly, also, the Maryland profession will suffer through the loss of any immediate chance of receiving an appropriation from the State legislature for the contemplated Faculty building and library, a much needed equipment for the large and valuable collection of books owned by the State society. We trust, however, that this aid will only be deferred, not altogether lost. The Faculty is too just a source of pride to the State for its needs to be overlooked a moment longer than is absolutely unavoidable.

TO ABOLISH THE OFFICE OF CORONER.

A bill has been recently introduced in the Senate of the State of New York, designed to abolish the office of coroner and substitute for the coroner medical examiners, whose duties shall be along the lines laid down in the Medical Examiners Act in the State of Massachusetts. In the bill before the New York Legislature, however, which was introduced by Senator Elsberg, the medical examiners are appointed by the board of health under civil service rules instead of by the Governor, as is the case in the State of Massachusetts. The board of health being responsible for the official acts of the examiners under the Elsberg bill, the system is entirely removed from the realm of politics and placed on the same plane exactly as any other department of the work of the board of health. There can be little question but that the enactment of this much needed legislation will result in insuring a prompt, accurate, and scientific investigation into the causes of death in cases where these causes are unknown. The bill in question has been approved by both the New York State Medical Association and the Medical Society of the State of New York, and it seems not at all improbable that, with the general indorsement with which the measure has met at the hands of the medical profession, the bill will be enacted this year. Such of our readers as are interested in the matter should write to the chairman of the Senate Committee on Affairs of Cities, Honorable Horace White, and to the chairman of the Assembly Committee on Affairs of Cities, Honorable Jean L. Burnett, Albany, urging the prompt enactment of the measure.

THE PROPOSED TUBERCULOSIS CAMPS.

The State Charities Aid Association, in its report to the State Board of Charities for the year ending November 1, 1903, speaks feelingly of the law enacted against the establishment of sanatoria near cities of 40,000 population or more, without the consent of the citizens thereof. It points out that the property interests of the latter were already sufficiently safeguarded, and that it was for the benefit of the poor that the camps were to be founded. The present condition of virulent phthisiophobia among our people will doubtless take time to combat successfully, although it is evident that an educated graduate of a sanatorium for tuberculosis is infinitely less dangerous to his neighbors than one who conceals his infirmity. The existence of the sanatorium near a large city is not only without danger, but affords a valuable bulwark against the spread of tuberculosis by offering mutual protection to the healthy and the diseased.

PATTI'S LONDON DEBUT.

We notice in the Denver *Times*, for January 23rd, an article by Dr. Allison Drake on Patti's first appearance in the English metropolis. The tremendous sensation the remarkable voice aroused is sympathetically described. The article is illustrated by a reproduction of an old fashioned woodcut in the style of 1861, on May 14th of which year the Diva, then but eighteen years of age, appeared. We learn that the now Baroness Cedarström manifested her delight with Dr. Drake's account by sending him an autograph photograph of herself as she appears at present.

Obituary.

PETER DETTWEILER.*

On January 13, 1904, Privy Counsellor Dr. Peter Dettweiler died in his villa at Cronberg, to which he had retired after a lifelong service in the cause of modern phthisiotherapy. Dettweiler was born at Winterheim in Hesse, August 4, 1837. He studied at Giessen, Würtzburg, and Berlin, and took his medical degree in 1863. During the Franco-German war he served as an army surgeon. In the performance of his duty he contracted tuberculosis, and resigning from the army went as a patient to Brehmer's sanatorium in Goerbersdorf. Regaining his health, he became an enthusiastic assistant to Dr. Brehmer. In

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* Read before the Section on Medicine at the New York Academy of Medicine, February 16th.

1873 Dr. Dettweiler published his first work, *Die rationelle Therapie der Lungenschwindsucht in Goerbersdorf*, which attracted considerable attention. After six years' service at Goerbersdorf Dettweiler became the founder of the celebrated sanatorium at Falkenstein, which, up to this date, has been the Mecca for students of modern phthisiotherapy all over the world. From everywhere where sanatorium treatment has taken a foothold, physicians come to Falkenstein to see the institution and learn its methods, and many of our foremost American specialists in tuberculosis have paid a visit to Falkenstein and its distinguished director.

Among Dr. Dettweiler's greatest achievements must be counted the inauguration of the rest cure on the reclining chair in the open air, and the foundation of the first sanatorium for the consumptive poor, now located at Ruppertshain. Germany is in a large measure indebted to him for its now numerous sanatoria for the people. It was my privilege to serve under Dettweiler as assistant when, still in the prime of life, he was managing director of Falkenstein, and I had frequently occasion to observe his many acts of charity as physician, neighbor, and friend. Dettweiler was a man of unusual cordiality and kindness, yet of a strong personality. He could be stern and severe when occasion demanded. His power over the inmates of the sanatorium was wonderful. He studied the soul life of every patient; he was his friend, confessor, and physician. To his assistants he was an ideal chief, always helpful, kind, and considerate. Visiting physicians and others interested in sanatorium work were sure of a hearty welcome; to Americans he was particularly cordial and he often expressed to me regret for his inability to converse in English.

Dettweiler's book *Die Behandlung der Lungenschwindsucht in geschlossenen Heilanstalten*, which has appeared in three editions, has become classic, and is still the authoritative work in all matters appertaining to the sanatorium treatment of consumptives. I cannot do better, in closing this feeble tribute to a beloved master to whom I owe so much and who has been a guide and inspiration to me ever since I entered upon my work in phthisiotherapy, than quote from the memorable address which he delivered in 1899 at the occasion of the first Congress on Tuberculosis. He pictured to the vast audience which had assembled on that occasion his conception of the true physician of a sanatorium. "The medical director of a sanatorium for consumptives should not take upon himself the responsibility of such a position unless he is fully prepared and honestly feels that he can excel his coworkers in strength, creative power, discretion, faithfulness, and duty. Otherwise, he is no better than a hired employee, too weak for the great and uplifting cause of service to his fellow men, which at the end of this nineteenth century has grown to such great heights, and which promises so much for suffering mankind." The antituberculosis movement throughout the world has lost in Dettweiler a great leader, an ideal sanatorium physician, and a strong champion of the cause of the consumptive poor.

S. A. KNOPF.

News Items.

Society Meetings for the Coming Week:

MONDAY, *February 22nd.*—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, *February 23rd.*—Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynæcology); Richmond, Va., Academy of Medicine and Surgery; New York Medical Union (private); Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, *February 24th.*—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private); Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

THURSDAY, *February 25th.*—New York Academy of Medicine (Section in Obstetrics and Gynæcology); New York Orthopædic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society, of Richmond, Va.; New York Celtic Medical Society.

FRIDAY, *February 26th.*—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, *February 27th.*—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

Change of Address.—Dr. A. M. Fernandez Ybarra, after an absence of five years in Europe and in Cuba, to 127 West Twelfth Street.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending February 13, 1904:

	Week end'g Feb. 13.		Week end'g Feb. 6.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	721	14	852	18
Diphtheria and croup	327	56	475	62
Scarlet fever	346	30	413	24
Smallpox	..	.	5	..
Chickenpox	110	..	108	..
Tuberculosis	264	142	347	175
Typhoid fever	24	4	24	13
Cerebrospinal meningitis	2	..	..	6
Totals	1,794	246	2,224	298

Contagious Diseases Hospital in Westchester.—Residents of Westchester in the borough of the Bronx held an indignation meeting on February 10th to protest against the proposed hospital for contagious diseases, for which the city has purchased a site near the Westchester station of the New Rochelle branch of the New York, New Haven, and Hartford Railroad.

Troubles of the Eye and Ear Infirmary.—It is stated that if this institution is unable to secure donations for a large amount by May 1st it will be obliged to close its doors, as the expenses are outrunning the annual income at present by some $20,000. The infirmary is eighty-four years old, and treats nearly sixty thousand patients annually.

The Associated Alumni of Mount Sinai Hospital held their annual dinner at the Freundschaft Club on February 17th, at which seventy-three members were present. Dr. Luckett read an appreciation of Dr. Edward Fridenburg, who had died since the last dinner, and his memory was drunk to in solemn silence. Regrets at inability to be present were read by the president, Dr. Brodhead, from Dr. Wyeth, Dr. Fluhrer, Dr. Janeway, Dr. D. M. Stimson, Mr. Isaac Wallach, president of the hospital, and others. Speeches were made by Mr. Wile, representing the board of directors, Dr. Abraham Jacobi, Dr. Adolf Meyer, Dr. Sachs, Dr. Millican, Judge Meyer, Dr. Blumenthal, and Dr. Libman. The gathering was considered altogether a very successful one. The new officers are as follows. President Dr. Edwin Sternberger; vice-president, Dr. Charles Goodman; secretary, Dr. Leo B. Meyer; treasurer, Dr. Eugene H. Eising. The splendid new buildings will be open on the afternoons and evenings of March 15th and 16th.

An interesting souvenir was taken away by the diners, in the third issue of the *Medical Gewalt*, edited by Dr. W. M. Brickner, for each annual dinner. Its character may be gleaned from the following version of the menu: "The scientific session will consist of a consideration of the following subjects: *Hydatids*—Grape Fruit, Marasquino (G. Brodhead); *Serous Effusion*—Potage Brumoise (J. Rudisch); *Adjuncts*—Celery, Olives, Salted Almonds (A. A. Berg); *Ichthyol*—Salmon, Sause Hollondaise—Potatoes Percy (Fridenberg); *Muscle Tenderness*—Filet Mignon à la Bordelaise, Petits pois, Française (W. G. Eckstein); *Bougies à Boule*—Asparagus, Sauce Figaro (F. Tilden Brown); *Animal Experiments*—Roast Golden Plover (E. P. Bernstein); *Causes of Typhoid Fever*—Compôt Salad de Saison (A. G. Foord); *Frozen Sections*—Glacés Fantaisies (F. S. Mandlebaum); *Mammary Disorders and Modified Milk*—'Cakes,' Cheese (M. Thorner); *Products of Cell Growth*—Fruits (I. Strauss); *Alkaloidal Stimulation*—Coffee (S. V. Haas). A general participation in the discussions is expected."

A Dinner to Dr. Roosa.—On Tuesday evening, March 1st, a dinner will be given at Delmonico's in honor of Dr. D. B. St. John Roosa and to commemorate the twenty-one years since the inauguration of postgraduate medical instruction in this country, at which Dr. William Osler, of Baltimore, will preside. The following are among the committee whose names appear on the card of invitation: Dr. William T. Bull, Dr. Francis Delafield, Dr. Bache Emmet, Dr. Virgil P. Gibney, Dr. Edward G. Janeway, Dr. William M. Polk, Dr. A. A. Smith, Dr. A. H. Smith, Dr. Robert F. Weir, Dr. Albert Vander Veer, Dr. A. W. Calhoun, Dr. William H. Welch, Dr. William S. Halsted, Dr. Clarence J. Blake, Dr. Maurice H. Richardson, Dr. William W. Keen, Dr. John H. Musser, Dr. J. C. Wilson, Dr. George Ben Johnston, Dr. William J. Mayo, Dr. James W. Alexander, Dr. Edward F. Bartlett, Dr. Cornelius N. Bliss, Dr. William D. Howells, Dr. Morris K. Jesup, Dr. Edward King, Dr. John E. Parsons, Dr. J. Edward Simmons, and Dr. J. H. Van Amringe.

The Medical Society of the Bronx held its twelfth annual banquet at the Hotel Manhattan, February 15th, Dr. Frederic W. Loughran being toastmaster. The president, Dr. Gustave H. E. Starke, sketched the history of the society; that its conception was due to Dr. Frank D. Skeel, inaugurating in 1892 the Doctors' Club, which was later merged into the present incorporated body; that its work had been highly beneficial in many of the lines of such an organization. Commissioner Dr. Thomas Darlington responded eloquently to The Relations of the Profession and the Health Department. Dr. Wendell C. Phillips, president of the Medical Society of the County of New York, gave a stirring and an illuminating address on the work of his society. The Reverend William H. Kephart, pastor of the North New York Congregational Church, spoke on Practice, Plasters, and Pills; with much humor he illustrated this theme, closing with a graceful tribute to the medical profession and an earnest exhortation to the members present to get out of life the very best for themselves, as well as for their patients. Dr. Frederick Holme Wiggin, president of the New York County Medical Association, instructively demonstrated the principles of the work of a county medical organization, such being the basis of the national organization. Honorable William G. Raines closed the speaking with an eloquent address on that ever present, ever enduring topic, Woman. The toastmaster announced the toast, The President of the United States; this was drunk standing. The following guests were also present, all of whom have addressed the society on medical or medico-legal matters: Mr. Dallas Flannagan, Mr. H. E. Chapin, Dr. John F. Erdmann, Dr. William S. Gottheil, and Dr. Benjamin F. Tilton, of New York, and Dr. Clarence E. Skinner, of New Haven. The society has a membership of eighty-six; nearly seventy were in attendance at this dinner, including the guests.

Academy of Medicine, 17 West Forty-third Street.—The section on Laryngology and Rhinology will meet on Wednesday evening, February 24th, at 8.15 o'clock. Order: Presentation of Cases. A Case Illustrating the Effects of Traumatism upon Subcutaneously Injected Paraffin. Specimens and New Instruments. Lantern Slides: Pedunculated Vascular Tumor of the Sæptum Containing Bone; Case of Fibroma of the Tongue; Case of Mixed Tumor of the Nasopharynx; Demonstration of the Ultimate Fate of Paraffin in the Tissues; Actinomycosis of the Tonsil; Autoamputation of the Tonsil, by Dr. Jonathan Wright. Paper: An Easy Method of Entering the Sphenoidal Sinus, by Dr. C. G. Coakley. Paper: Parosmia. with History of a Peculiar Case, by Dr. Carl E. Munger, of Waterbury, Conn. General Discussion: Executive session. Francis J. Quinlan, M. D., chairman, 33 West Thirty-eighth Street; Harmon Smith, M. D., secretary, 44 West Forty-ninth Street.

The section on Obstetrics and Gynæcology will meet on Thursday evening, February 25th, at 8.15 o'clock. Order: Presentation of Patient and Specimens showing Bilateral Papillocarcinomata of the Ovaries with Metastases, by Dr. Charles

H. Peck. Subject for Discussion, Sterility: Sterility Due to the Male, by Dr. E. H. Grandin; Sterility Due to Vaginal Conditions, by Dr. J. N. West; Sterility Due to Uterine Conditions, by Dr. H. N. Vineberg; Sterility Due to Tubal and Ovarian Conditions, by Dr. J. Riddle Goffe. A. Palmer Dudley, M. D., chairman, 678 Madison Avenue; Charles F. Adams, M. D., secretary, 104 West Seventy-third Street.

The Late Dr. Fridenberg and Dr. Ruggles.—At a meeting of the Medical Association of the Greater City of New York, held February 8, 1904, the following reports of committees were received and adopted. P. Brynberg Porter, recording secretary.

I.

Your committee appointed to prepare a minute in regard to the death of Dr. Edward Fridenberg, our late fellow and associate and one of the charter members of this association, respectfully reports as follows:

Dr. Edward Fridenberg, whose death occurred on December 9, 1903, was born on August 16, 1857. He received his primary education in private schools in New York city and abroad. In 1877 he graduated from the College of Physicians and Surgeons, an honor man of the class. After serving as interne in the Mount Sinai Hospital and the Ophthalmic and Aural Institute, he began general practice in New York city. His predilections being for eye and ear work, he went to Europe in 1886 and devoted two years to further special study; after which he established himself as a specialist in these branches.

He was closely identified with the early growth of the Harlem Medical Association, and was twice president of that society. For many years he was ophthalmologist to the German Dispensary, and since 1886 he was attending ophthalmologist and aural surgeon to the German Hospital. He was also consulting surgeon to the Hebrew Orphan Asylum, surgeon to the Harlem Dispensary, and at one time surgeon to the Randall's Island and Harlem hospitals. As an active member of many local and national associations he was widely known.

To those who knew Dr. Fridenberg closely he will always be remembered as a man of eruditon and culture, warmly interested in all socioeconomic questions, and always giving full vent to his sympathy for the oppressed individual, class or nation. He was generous and magnanimous in spirit and action, and many a young colleague will never forget the support and encouragement received at his hands at a time when it was most needed.

(Signed) George W. Jacoby, M. D.,
Samuel M. Brickner, M. D.,
Committee.

II.

The totally unexpected death, on Deecmber 27th last, of our honored and lamented treasurer, Dr. Augustus D. Ruggles, was a great shock to all the fellows of this association.

Dr. Ruggles was a member of a well-known family of repute in the revolutionary annals of the country, and at a later period closely identified with the interests of the city of New York.

He was proud of having been a graduate of the Medical Department of the University of Pennsylvania, the oldest and still one of the foremost of the medical colleges of America, and throughout his career he ever regarded his alma mater with feelings of veneration and loving devotion.

Receiving his degree during the early part of the Civil War, his patriotic ardor prompted him to seek a position in the military service, and in the years that followed he won distinction as a surgeon, more especially in the campaigns of the army of the Potomac, where he nobly sacrificed his health in the performance of duty.

The greater part of his professional life was passed in this city, and for many years he did laborious and conscientious work as a general practitioner.

In the medical history of New York Dr. Ruggles will be best remembered as an earnest worker in professional societies. His faithfulness, his zeal, his energy, and his indefatigable industry in this particular field has rarely been equaled, and never excelled. He was one of the early members of the New York State and county medical associations, in the latter of which he was honored with the vice-presidency, and both these bodies were largely indebted to him for their success. In later years he was one of the organizers and incorporators of the Medical Association of the Greater City of New York, and also its treasurer from the beginning; and there are few of us who do not realize that it was in a very great measure due to his untiring efforts that our society has been placed upon a lasting foundation and has started upon a career which promises a brilliant future.

He had not a few devoted friends, and his genial disposition and pleasing address made him a favorite in a very wide circle. It is probable that no one has yet lived who had a more extensive personal acquaintance than he among the medical profession of New York city and its vicinity.

In taking note of the death of Dr. Ruggles this association desires to record a sense of the profound sorrow occasioned by his irreparable loss, and to give expression to its sincere appreciation of the faithfulness and earnestness of his self-sacrificing labors in its behalf.

(Signed) John H. Hinton, M. D.,
P. Brynberg Porter, M. D.,
Reynold Webb Wilcox, M. D.,
Committee.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g Feb. 6.		Week end'g Feb. 13.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	54	16	58	16
Diphtheria	66	14	58	17
Scarlet fever	92	8	104	11
Typhoid fever	88	13	103	12
Consumption	..	64	..	68
Cerebrospinal fever	..	..	..	..

Medico-Chirurgical Hospital.—This institution has been practically rebuilt since the explosion of a year ago. All of the doors are without panels, entirely smooth and with rounded corners. There are likewise no corner to the rooms, the plaster work being rounded, thus minimizing the surfaces for the deposition of dust. It is a model structure from a hygienic point of view.

Banquet in Honor of Professor Coplin.—Sixty surgeons and physicians, all but three of them members of the William L. Coplin Pathological Society of Jefferson Medical College, attended the sixth annual banquet given in honor of Professor Coplin in the Bingham House last evening. The three guests who were not members of the society were Dr. Thornton and Professor Brubaker, of the Jefferson Hospital, and Dr. Allen A. Smith, of the University of Pennsylvania. Dr. Smith was the chief speaker of the evening, responding to the toast of Pathology.

The Section on Gynæcology of the College of Physicians of Philadelphia held a meeting on the evening of Thursday, February 18, 1904, in the Lower Hall, at 8.30 o'clock, at which the following was the programme: Dr. J. M. Baldy, Appendicitis: Its Relation to Pelvic Inflammation; Dr. B. C. Hirst, Syncytioma Malignum; Dr. Joseph McFarland, by invitation, The Defences of the Body and Syncytial Invasion. The subject of Syncytioma Malignum was discussed by Dr. Shoemaker, Dr. Noble, Dr. Davis, Dr. Wilson, and Dr. W. W. Babcock by invitation. A business meeting and the election of officers followed. Fellows desiring to read papers at future meetings are requested to communicate with the clerk, William R. Nicholson, M. D., 1433 Walnut Street, Philadelphia.

GENERAL

Mortality Report of Chicago for the Week Ending February 13th, compared with the preceding week and with the corresponding week of 1903. Death rates computed on estimated mid-year populations of 1,950,000 for 1904 and of 1,885,000 for 1903:

	Feb. 13, 1904.	Feb. 6, 1904.	Feb. 14, 1903.
Total deaths, all causes	661	596	634
Important causes of deaths—			
Acute intestinal diseases	14	13	20
Apoplexy	14	14	11
Bright's disease	40	48	38
Bronchitis	30	31	30
Consumption	71	54	56
Cancer	25	26	19
Convulsions	20	18	13
Diphtheria	11	12	16
Heart diseases	36	45	51
Influenza	7	12	5
Measles	0	0	2
Nervous diseases	31	25	24
Pneumonia	175	151	147
Scarlet fever	5	6	8
Suicide	6	9	13
Typhoid fever	4	5	10
Violence (other than suicide)	33	25	29
Whooping cough	0	0	14

The Bulletin of the Chicago Health Department says that, although the lesson has been repeatedly urged, it is certain that a majority of the laity still fails to realize the fact that influenza is a highly contagious disorder and one of the most insidious of the acute specific diseases. When cholera breaks out in a community every possible precaution is taken to prevent its spread, but in the case of influenza little or nothing is done, and the patient is often unwilling to sacrifice his business or social engagements. It is the reckless exposure of the infected which makes the disease so difficult to eradicate. Everyone is exposed, more or less, to the danger of being invaded by the bacillus, and it is difficult to devise preventive measures on which reliance can be placed. Much, however, may be done by attention to a few simple rules.

When a person is ill with influenza, it is better not to visit him or, if a visit is imperative, it is advisable to avoid unnecessary personal contact. After the interview the hands should be thoroughly washed in an antiseptic solution and the outer garments should be aired by being exposed to a current of fresh air, or, better still, to the direct rays of the sun. The condition of the general health should be maintained by plenty of outdoor exercise, by good food and the avoidance of indulgence in alcohol. At the onset of the initial symptoms the patient should remain in bed and should at once obtain medical advice. No reliance should be placed on popular remedies, for the complications are so grave that the best possible treatment is required. Don't fool with *la grippe*, but go to bed and send for your doctor.

Decrease in Chicago of Measles, Whooping Cough, Typhoid Fever, and Smallpox.—There are pleasanter themes, however, than pneumonia and influenza to be found in the statement of mortality. Apparently all Chicago children susceptible to measles and whooping cough have had these diseases and are now immune. For the fifth consecutive week there has been no death reported from measles and none from whooping cough in six weeks. There was one death from each disease in January and none thus far this month. During the corresponding period last year there were 32 deaths from measles and 46 from whooping cough.

The decrease in typhoid mortality is no less gratifying. During the 44 days of the year there were 39 deaths from typhoid fever reported; during the corresponding period of 1903 there were 124 such deaths—a decrease of 68.5 per cent. this year. There is also a reduction, though not so remarkable, in the other impure-water or acute intestinal diseases—110 this year, 125 last year.

Smallpox has long ceased to attract attention or to have any terror for the intelligent Chicagoan. No one "catches" smallpox but the nonvaccinated. Three such—children under the school age—were removed to the Isolation Hospital during the week. They in turn contracted the disease from another unvaccinated child.

Once again. No one "catches" smallpox but the unvaccinated. It is an optional disease. No one has to have it.

Smallpox in Rosedale, Ind., has closed all the schools in the vicinity.

Hospital for Albany, Ga.—The movement set on foot some months ago by the physicians of this town for the erection of a hospital will now probably result in fruition, some $4,000 having been already subscribed by the citizens, and another $1,000 only being required.

Two I. O. O. F. Hospitals.—Through the will of Mr. George E. Brettell, of Rochester, N. Y., one hospital, to be conducted by the Independent Order of Odd Fellows, will be constructed in Rochester, and another in Brettell Park, Lawrence county, S. D., under the same auspices.

Epidemic of Typhoid Fever in Watertown, N. Y.—It is said that in this town of some 12,000 inhabitants, there are over 200 cases of typhoid fever, not a single street being exempt from the disease. The source of the epidemic is supposed to be the unfiltered water of the Black River.

Typhoid Fever in Leadville, Col.—Dr. Mitchell, the State bacteriologist, states that he has analyzed all the sources of water supply of the city and found them free from infection; he attributes the epidemic to cesspools within the city limits, seepage from which has found its way into the water mains when the water pressure was low.

Wisconsin State Board of Health; a Correction.—A *lapsus calami* in our issue of February 6th caused us to state that Dr. William F. Whyte had been elected secretary of this body. The physician who succeeded Dr. U. D. B. Wingate, of Milwaukee, in that office was Dr. C. A. Harper, of Madison, whither the offices of the board will be removed on May 1st next. Dr. Whyte, a resident of Watertown, is president of the board.

Johns Hopkins Hospital Losses in the Baltimore Fire.—Johns Hopkins Hospital, it has been learned, is one of the heaviest losers by the fire. The hospital owns real estate in Baltimore, whose value has been placed at not far from $2,000,000. A list of the buildings owned by the hospital and burned was examined to-day and the estimate was made that the hospital's loss will be very close to $1,000,000.

The Cambridge, Mass., Board of Health, on February 10th, reelected Dr. Felix F. McGirr physician at the diphtheria hospital, and Dr. John P. Sennott city physician.

The Lake County, O., Medical Society has been organized through the efforts of Dr. Thomas C. Martin, of Cleveland; Dr. E. B. Root, of Painesville, has been elected president.

The Floyd County, Ky., Medical Society will hold its annual banquet in the rooms of the society at St. Edwards City Hospital on March 3rd. Invitations will be extended to members of the Louisville Medical Society.

The Cleveland, O., Board of Health, at a secret session on February 5th, appointed Dr. L. W. Childs as district physician to succeed Dr. White, who formerly held the position for the fifth district.

The New England Baptist Hospital, of Boston, will build a nurses' home as soon as the frost is out of the ground. Miss Annie M. Peck, the mountain climber, gave a lecture on February 17th, the proceeds of which went to the fund for the building.

The American Laryngological, Rhinological, and Otological Society will hold its tenth annual meeting in Chicago, Ill., May 30, 31, and June 1, 1904, under the presidency of Dr. Norval H. Pierce. Wendell C. Phillips, secretary, 49 West Forty-seventh Street.

Hospital for Washington County, Md.—At a largely attended public meeting in Hagerstown on February 3rd it was decided to build a hospital for the county, to cost $50,000; taxes will be levied to meet this expenditure and that of $10,000 annually for current expenses.

The Massachusetts Association of Boards of Health held its annual meeting in Boston on January 27th. Resolutions were adopted protesting against sections 1 and 2 of the house bill number 174, which imposes certain restrictions upon work in animal experimentation. The following officers were elected: President, Dr. H. P. Wolcott; first vice-president, Dr. Samuel H. Durgin; second vice-president, Dr. Samuel W. Abbott; secretary, Dr. James C. Coffey, Worcester; treasurer, Dr. James P. Field, Lowell. Executive committee for two years, Dr. G. L. Tobey, Clinton; Dr. W. H. Gove, Salem; Dr. C. A. Hicks, Fall River; Dr. G. H. Ellis, Newton; Dr. C. V. Chapin, Providence.

The Second Session of the Navy Medical School opened in Washington, D. C., on February 3rd, under the instruction of Dr. R. A. Marmion, Dr. John W. Ross, and Dr. John C. Boyd, physicians, and Dr. C. F. Stokes and Dr. E. R. Stitt, surgeons. The members of this year's class, who are graduates in medicine and have the present rank of lieutenant, are: J. P. De Bruler, R. E. Riggs, F. W. S. Dean, R. L. Sutton, B. H. Dorsey, C. F. Ely, J. R. Dykes, A. J. Geiger, W. W. Verner, Otto Kohlhase, P. S. Rossiter, W. H. Rennie, W. S. Hoen, W. B. Smith, C. C. Grieve, J. D. Manchester, P. T. Dessez, J. S. Woodward, J. A. Randall, C. E. Ryder, A. D. McLean, Harry L. Brown, H. L. Scott, T. M. Pease, and F. G. Abekin.

Fire in Minneapolis Hospital.—A fire, supposed to have been started by an overheated stove in the pump house, destroyed on February 9th two of the detention hospital buildings in St. Louis Park, Minneapolis, Minn.

Old War Hospital Destroyed by Fire.—A large barn on Mount Eagle farm in Fairfax county near Alexandria, Va., was destroyed by fire on February 6th; during the civil war the barn was used as a hospital by United States troops.

The Hospital of St. Elizabeth, of Hungary, took title on February 15th to a parcel of land on the north side of Fifty-first Street, 200 feet west of Ninth Avenue, from Mary A. O'Neill. The parcel is 55.5 by 100.5 feet. The consideration is said to have been nominal.

The St. Clair County, Mich., Medical Society, at its meeting on February 12th, elected the following officers: President, Dr. W. P. Derk, of Marysville; vice-president, Dr. S. K. Smith, of Port Huron; secretary-treasurer, Dr. A. H. Cote, of Port Huron.

The Boston, Mass., Antitoxine Laboratory, it is estimated, has saved to the general public by its manufacture of the serum, over $405,000 in four years. The statistics have been forwarded by Dr. Samuel Abbott to Chicago, where the intention is to adopt the Massachusetts plan.

The County Detention Hospital at Ann Arbor, Mich., will ere long be ready for the reception of contagious diseases, the county having arranged to raise the $30,000 secessary for the building, and the university having promised to meet the running expenses. The construction will be largely of glass, with the idea, it is said, of allowing students to observe contagious diseases without coming in direct contact with the patients.

Compliment to Dr. Osler.—Graduates of the medical department of McGill University, of Montreal, Canada, where Dr. William Osler graduated and was for some years professor of the Institutes of Medicine, have been invited to contribute to a fund designed to meet the expense of painting two portraits of Dr. Osler, one to be hung in the college library, the other to be presented to Mrs. Osler.

The Union Medical Association of Northwestern Ohio, at its quarterly meeting in Akron on February 9th, elected the following officers: President, Dr. Edward Lauder, of Cleveland; first vice-president, Dr. F. C. Reed, of Akron; second vice-president, Dr. C. A. Hamann, of Cleveland; recording secretary, Dr. J. H. Seiler, of Akron; corresponding secretary, Dr. C. W. Milliken, of Akron; treasurer, Dr. H. H. Jacobs, of Akron.

The Connecticut Health Report for January, 1904, shows 1,294 new cases of measles, 180 of scarlet fever, 138 of diphtheria, 1 of cerebrospinal fever, 65 of whooping cough, 36 of typhoid fever, and 37 of tuberculosis. In 65 towns, it was reported, no cases of infectious disease existed. The vital statistics for 1903 show 21,586 living births, an increase of 370 over 1902; 8,064 marriages, an increase of 404, and 15,436 deaths, an increase of 1,050.

Pith of Current Literature.

BERLINER KLINISCHE WOCHENSCHRIFT.

January 11, 1904.

1. Expulsion of Tube-Shaped Œsophagus Mucosa and Stenotic Hypertrophy of the Pylorus Following Hydrochloric Acid Poisoning, By H. Strauss.
2. Methods of Determining the Cardiac Boundaries, By F. Rosenfeld.
3. Primary Intestinal and Tonsillar Tuberculosis, By S. Ito.
4. Syphilis and Tabes (*Continued*), By W. Erb.
5. Pathology and Treatment of Knee Diseases, By A. Haffa.

1. **Hydrochloric Acid Poisoning.**—Strauss says that but one case analogous to his has been recorded in literature. On the ninth day following the ingestion of a poisonous quantity of hydrochloric acid, the mucous membrane of the œsophagus was expelled in a tubular form. Three months later death followed and an hypertrophy of the pylorus with a consequent stenosis was found. The prognosis is not always bad as several recorded cases show. In this case, in addition to the dense pyloric scar, there was a thickening of the entire musculature of the stomach.

2. **Cardiac Boundaries.**—Rosenfeld discusses the various methods employed to determine the absolute and relative boundaries of the heart. He thinks highly of auscultatory percussion, as it does not affect the patient, it usually gives accurate results, and the influence of other cardiac sounds does not influence the findings. Nevertheless, the cardiac resistance projected upon the anterior thoracic wall is somewhat greater in area than the actual size of the heart. The author thinks that with the use of the phonendoscope the absolute boundaries of the heart can be determined, as he has demonstrated by many experiments on the dead and on the living.

3. **Primary Intestinal and Tonsillar Tuberculosis.**—Ito reports two cases of primary tuberculosis of the intestines in which the throat and pulmonary organs were free of the disease, although the origin of the infection could not be found. He also records two cases of primary tuberculosis of the tonsils, due to the ingestion of tuberculous food. In the latter form of the disease, the diagnosis can only be made microscopically, and is of very rare occurrence, the disease running its course without much disturbance and without the formation of ulcers. Through the tonsils, the cervical glands often become infected without actual disease of the tonsils themselves.

5. **Diseases of the Knee-Joint.**—Haffa describes four forms of disease of the knee-joint hitherto not sharply differentiated: 1. Arthritic muscular atrophy, which, on careful examination, discloses a severe atrophy of the extensor muscles of the thigh. The treatment of this condition consists in massage and gymnastics of the quadriceps muscle. 2. In the so-called *dérangement interne*, the lesions consists in a luxation or tearing away of one or both menisci of the knee-joint. For the diagnosis of this condition, an important element is the isolated sensitiveness in the knee space, and occasionally the dislodged meniscus can be palpated. The treatment is occasionally reposition, but operative measures are more certain, as is shown by the histories given. 3. Pain in the joint due to the development of a form of fatty tumor in the joint. The examination discloses a bulging below and on both sides of the patella. Excision of the tumor is the only treatment. 4. Free joint bodies in the knee, the presence of which can be determined by the Röntgen rays.

ZENTRALBLATT FUER GYNAEKOLOGIE.

January 16, 1904.

1. Six Cases of Pseudohermaphrodotism, By F. von Neugebauer.
2. Vaginal Cæsarian Section (Anterior Vaginal Hysterotomy), By W. Ruehl.

1. **Pseudohermaphrodotism.** — Neugebauer adds six interesting cases to those he has already reported, making altogether 942. In commenting on his cases, he urges greater didactic attention to this form of maldevelopment and asks a place for its consideration in forensic medicine. The latter field is especially to be considered in cases of *erreur de sexe,* in which the person has been living the life of the opposite sex to which he or she belongs.

2. **Anterior Vaginal Hysterotomy.**—Ruehl has performed this operation nineteen times, and gives the detailed technics for its proper performance. At the beginning of the operation, the cervix must be bluntly dilated, using as little force as possible. By this means, the necessary incision into the uterus is kept as small as possible, and secretions and the lochia are not so likely to be retained. Hæmostasis must be practised rigidly during the operation. If the operation is performed because of dystocia due to a previous vaginal fixation, the author advises keeping the incision as closely as possible to the original scar.

PRESSE MEDICALE.

January 9, 1904.

Treatment of Bright's Disease by Edebohls's Operation of Renal Decapsulation, By P. Cavaillon, and P. Trillat.

Edebohls's Operation.—Cavaillon and Trillat detail the 51 cases of Edebohls and others treated in America with a view of combating the skepticism existing among French physicians and surgeons regarding the operation. A complete bibliography terminates the article.

January 13, 1904.

Clinics for Nurselings, By Guérin-Valmale.

Clinics for Nurselings.—Guérin-Valmale attributes the founding of these institutions, of which there are now 25 in Paris, to Professor Budin, who first systematically fought the ignorance and prejudice of mothers regarding the feeding of babies; "sponges for precedent," Ampère called women. These clinics have a waiting room, scales, and apparatus for modifying and sterilizing milk. Emulation is excited among the various mothers (who are also women, says the writer) with the object in view of persuading them to nurse their children from the breast. Nine tenths of women can do this, if willing. Great difficulty is experienced in holding the women when this has been accomplished, and thereby guarding them against other mistakes, such as uncleanliness or premature weaning.

January 16, 1904.

Contribution to the Study of the Diathesis of Autoinfection. The Digestive Origin of Acute Articular Rheumatism, By A. GILBERT, and P. LEREBOULLET.

Digestive Origin of Rheumatism.—Gilbert and Lereboullet admit rheumatic infection through the tonsils, but not that amygdalitis does always precede a rheumatic attack; they have studied cases in families which exhibit biliary phenomena, lithiasis, colic, cholæmia, jaundice, and metaicteric splenomegaly. A pleurisy of the right side often precedes a rheumatic outburst in these subjects. There is a relation between cholæmia and diabetes, and 16 per cent. of diabetics have rheumatism. Hepatitis with icterus and urticaria often follows a rheumatic attack. Freckles and beauty spots are common in rheumatic subjects, and often an anæmia masks their jaundiced color. The writers have often noticed hypertrophy of the liver and spleen without cardiac hypertrophy to justify it; this is against classical opinion. Polymorphous erythema is common and bradycardia, so well known as an associate of cholæmia, has been noted in almost 10 per cent. of cases. Chronic rheumatics have almost invariably biliary troubles late in life. The writers assert that they have seen no rheumatic in whose history they could not detect a family cholæmia; or, to use their language, who did not belong to the diathesis of autoinfection. Examination of rheumatic patients has shown many possible avenues of attack by a rheumatic germ; hypertrophy of liver and spleen, scanty and urobilinic urine, a bilious serum. After sudden death, necropsy has shown mitral and aortic lesions, and rheumatic pleurisy, while the microscope has disclosed angeiocholitis, perilobular sclerosis of the pancreas as well as peri- and intraacinous sclerosis and hypertrophic follicular appendicitis. All these might be foci for the spread of rheumatism. Finally, bacteriology seems to identify the diplostreptococcus found in many cases of rheumatism with the enterococcus of the bile duct. It seems likely that rheumatic infection may proceed from any point in the digestive tract from the tonsils down. Sodium salicylate, which has such an extraordinary influence in rheumatism, has also, it must be remembered, a controlling influence in biliary infection.

SEMAINE MEDICALE.

December 23, 1903.

Sleeping Sickness, By WURTZ.

Sleeping Sickness.—Wurtz, in this lecture at the Institute of Colonial Medicine, drew the attention of his students to three blacks who were suffering from the disease, and who apparently were enjoying a perfectly normal sleep. Two were aroused without much difficulty, and all more easily between seven and nine o'clock a. m., and at meal time. Dreams interrupted the sleep, and war songs were sung, and epileptiform attacks occurred in one case to be followed by more profound coma. One case began with severe headaches, which ceased when sleep came on; reflexes were diminished, but sensitiveness to burns and pricking were normal. The pupils were equal and reacted normally. The glands of the axilla and groin and others were enlarged; heart and lungs were normal, the liver slightly enlarged, the spleen normal, the urethra somewhat inflamed. There was a papular eruption in the folds of skin, aggravated by scratching. Examination of the blood showed eosinophilia, and the presence of *Filaria perstans* (this, however, is common in inhabitants of tropical regions), as well as *Trypanosoma*, which also existed in the cerebrospinal fluid; appetite was good, when patient was aroused at meal times, urine was normal, and weight was not lost. Temperature varied in an extraordinary way and great emotion was manifested over trivialities (unusual with negroes). After dismissing various theories of previous travelers and investigators, Wurtz states that the tzetze fly, as originating the disease, must be exterminated, that healthy individuals must be protected, that the infected must be guarded against healthy flies which might become infected, and that bactericides must be discovered to attack the germ in the blood and cerebrospinal fluid of the infected.

December 30, 1903.

This number, being the last of the year, is given over entirely to the review of medical works.

January 6, 1904.

Surgical Treatment of Intestinal Perforation in Typhoid Fever, By MAURICE CAZIN.

Typhoid Perforation.—Cazin attributes to American surgeons the idea of operating in these cases since 1890, when the operation was discovered. Before this, mortality from perforation was from 90 to 100 per cent. Diagnosis of perforation is difficult, and is made only from pain, hiccough, vomiting, and tympanites, which do not always supervene, and even if they do, may be due solely to constipation. Leucocytosis is sometimes diagnostic, but not always. An exploratory laparotomy, however, is never out of order, and may frequently save a life, and the operation should be done at once to obtain the best results. When alarming symptoms appear, the surgeon should be called at once, but even if he is called late, he should operate. Resection should not be done, but, after thorough exploration, the Lembert suture should be used, followed by thorough irrigation with normal salt solution.

RIFORMA MEDICA.

January 23, 1904.

1. Hæmoantitoxine, By **Figari.**
2. A Case of Ataxiospasmodic Paraplegia, By **Agostino Bruno.**
3. On the Toxic Effect of Some Organic Extracts. Anatomical and Histological Observations (*To be continued*), By **Giovanni Ghedini.**
4. On the Granular Erythrocytes, By **Vittorio Marzocchi.**

1. **Hæmoantitoxine.**—Figari, of Maragliano's clinic, describes the results of a research instituted with hæmoantitoxine a preparation of Maragliano's serum designed for internal administration by mouth. At the twelfth International Congress, Figari showed that the blood of animals could be endowed with high agglutinating, antitoxic, and bactericidal powers against the tubercle bacillus by feeding with Maragliano's antitoxic serum. In order to pursue the same line of work in man, *hæmoantitoxine* was used, as the original serum is not well adapted for internal use by mouth. Hæmoantitoxine consists of a 20 per cent. solution of Maragliano's serum in a vehicle of water, alcohol, and aromatics. It also contains 5 per cent. of hæmoglobin and 10 per cent. of glycerin. The dose of it is a tablespoonful four times daily, and it is not only an antitoxine, but also a tonic in virtue of its hæmoglobin, a stomachic in virtue of its aromatics, and a nutrient in virtue of its glycerin. The preparation was used in eighteen patients in the clinic, whose histories are tabulated in the article. The following conclusions were drawn by the author after a study of these cases: Hæmoantitoxine effects a marked increase in the agglutinating power of the blood serum, and produces antitoxic and antibacillary substances therein. It combats the toxic symptoms, arrests the fever, the night sweats, the anorexia, improves nutrition, and increases the patient's weight. The results obtained with this treatment varied with the form and extent of the lesion, the individual capacity for reacting to the specific substances, and the conditions of life and environment in each case. Of the eighteen patients five may be said to have been clinically cured, i. e., all their symptoms and physical signs disappeared, and they increased considerably in weight. Of the remainder, many had improved considerably, and gave rise to the hope of cure in the near future. All have been benefited to a greater or lesser extent by the treatment.

4. **Granular Red Blood Cells.**—Marzocchi says that the erythrophile and the cyanophile granules of the erythrocytes are identical. Demel, in 1901, stated that these two varieties of granules found in red cells were identical, and Donati, in 1903, confirmed this view, showing that if one variety was not found in a given specimen of blood, the other was also absent. Marzocchi says that the only way to prove the identity of the two kinds of granules is to substitute the blue color for the red, or vice versa, in the same blood cell. This is exactly what he succeeded in doing in his experiments. He stained a drop of blood, diluted with salt solution, by means of methylene blue, and then looked for the blue granules within the red cells which belonged to the "granular class." Then, keeping his eye on the same cell, he added a solution of neutral red in salt solution to the specimen under the cover glass, and almost instantly the granules changed to red. The first colored fluid does not mix with the second, but flows from under the cover glass on the opposite side, so that the red dye is substituted for the blue. The affinity which binds the dye to the granules in the red cells is, therefore, very changeable, and the granules are identical, whether they stain red or blue.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

December 27, 1903.

1. Periodic Ophthalmoplegic Hemicrania, By **Carlo Molon.**
2. Traumatic Lesions of the Cranial Vault, By **Giuseppe Stella.**
3. Exfoliation in Pneumonia, By **Arturo Campani.**
4. The Action of Formalin on the Kidneys, By **Vittorio Putti.**

1. **Ophthalmoplegic Hemicrania.**—Molon describes a case of this rare disease, which was defined by Charcot as a paralysis of one of the oculomotor nerves accompanied by hemicrania which tends to occur in repeated attacks. The origin of this syndrome is not definitely known. Charcot considered it of functional origin, while others have asserted that it is connected with a central lesion in the nucleus of the oculomotor, and still others maintain that it is due to a peripheral change in this nerve. The patient in the present case was a man, aged thirty-seven years, who for six years had been suffering from periodical attacks of hemicrania on the left side recurring irregularly about every two months. At first these attacks were simple migraines, usually associated with dietetic disturbances and preceded by nausea, vomiting, etc. Later, the patient found that the left eyelid could not be lifted during the attacks, and on examination the left pupil was found to be wider than the right, the eye rotated externally, and there was a certain amount of exophthalmos, as well as crossed diplopia. These paralytic symptoms were at first transitory, but in the course of time became permanent. Ophthalmoscopic examination showed, during the attacks, hyperæmia and hæmorrhages in the left retina. The author is inclined to believe that the condition is a purely functional one and due to circulatory disturbances in the oculomotor system.

2. **Injuries to the Cranial Vault.**—Stella concludes, from a study of some cases of injuries to the cranium, that the gravity of such cases should never be judged from the extent of the external injuries. The chief elements in such cases are the concussion and compression of the brain and the presence of intracranial hæmorrhages. In children, as a rule, the injuries to the cranium are less grave in proportion, because in them the metabolism is more active and injuries are more rapidly repaired; and, besides, their sutures are not so firmly united, so that the head has more resiliency.

3. **Exfoliation in Pneumonia.** — Campani speaks, under this heading, of desquamation of the skin in cases of pneumonia and reports five

such instances which occurred under his observation. The cases occurred in soldiers who were in the prime of life. The desquamation occurred in the period of convalescence and appeared always on the face, usually on the nose and cheeks. The author attributes it to trophic disturbances analogous to those occurring after typhoid, as shown in that disease in the desquamation of palms and soles and the falling out of hair.

4. **Action of Formalin on the Kidneys.**—Putti injected solutions of formalin into the parenchyma of the kidneys in rabbits. He found that watery solutions of formalin had a marked necrobiotic effect upon all the elements of the renal parenchyma, and produced grave hæmorrhagic phenomena. Eight days after the destruction of the parenchyma at the site of injection, salts of lime appeared in the renal tissue at that point. This deposit of calcium was found in the cortical portion only; more exactly in the tubules proper, where these salts appeared as part of the changes in the hyaline casts, produced in virtue of the degenerative changes within the epithelial cells of the tubules. The cells less markedly affected by formalin showed fatty degeneration instead of calcification. Only in one instance were calcium salts found deposited in a Malpighian body. The destroyed parenchyma was always replaced by an abundant growth of connective tissue after the formalin injections. A small amount of albumin was noted in the urines of the four animals experimented upon, but in no case did these urines give the reactions for formaldehyde or formic acid.

ROUSSKY VRATCH.

December 23, 1903.

1. The Action of Sublimate Upon the Kidneys, By A. Tartarini-Gallerani.
2. On the Immunizing Antibodies in the Serum of Convalescents from Typhoid Fever and on their Relation to the Agglutinins, By A. Bonome, and E. Ravenna.
3. Lowered Acidity of the Urine and Apparent Phosphaturia, By A. Campani.
4. Neoarthroses with Metallic Supports, By G. Pascale.
5. Sarcoma of the Mediastinum and Acromegaly, By E. De Silvestri.

3. **Lowered Urinary Acidity and Apparent Phosphaturia.**—Campani thinks that so-called phosphaturia or phosphatic diabetes is nothing but an expression of the lowered acidity of the urine. It is better to apply the term hypoacidity to such cases, as this expresses the origin of the phenomenon. The name phosphaturia or phosphatic diabetes should be reserved for those cases in which there is a real increase in the total phosphorus eliminated through the urine. Lowered acidity very often occurs in puberty in the male sex, and is aggravated by sexual excesses. It does not seem to have relation to venereal diseases, but has distinct relation to diet. The effect of disturbances of digestion on the amount of phosphates in the urine did not appear in the cases observed by the author. Mineral acids, above all hydrochloric acid, are excellent therapeutic agents in this condition.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

February 13, 1904.

1. The Influence of Trauma in the Production of Movable Kidney, By M. L. Harris.
2. The Nervous Phenomena Associated with Movable Kidney, By Wharton Sinkler.
3. A Consideration of the Neuroses of Status Lymphaticus, By A. P. Ohlmacher.
4. Methods of Controlling Hæmorrhage of the Oral Cavity, By H. E. Belden.
5. The Influence of Resection of the Cervical Sympathetic Ganglia in Glaucoma, By William H. Wilder.
6. New Aspects of Yellow Fever Ætiology Arising from the Experimental Findings of the Last Three Years, By Carlos J. Finlay.
7. The Present Status of the Uric Acid Question, By Walter Baumgarten.
8. Tuberculous Joints and Their Treatment, By David C. Peyton.
9. Diphtheria of the Nose, By W. Scheppergrell.
10. Acute, Subacute, and Chronic Infectious Osteomyelitis; Its Pathology and Treatment, By Edward H. Nichols.

1. **Movable Kidney.**—Harris gives his reasons for disagreeing with the usually accepted views as to the causation of movable kidney. His own beliefs as to the ætiology of this condition are thus summarized: (1) Movable kidneys occur in women with a particular body form, and practically all women with this body form have movable kidneys of greater or less degree. (2) Movable kidney is not produced immediately, but requires time for its development. (3) While it is possible to injure, crush, or suddenly displace by violence a normally fixed kidney, such displacement is always accompanied by laceration of the perirenal tissues, which is manifested by distinct local and general symptoms. (4) Severe injuries involving the kidney or perirenal tissues are seldom or never followed by movable kidneys. Sterns says he has not been able to find a single case in the literature where such a result occurred. (5) A movable kidney is never the immediate result of a single trauma.

2. **The Status Lymphaticus.**—Ohlmacher enumerates the following clinical manifestations as neuroses of the status lymphaticus: (1) Sudden death. (2) Infantile eclampsia. (3) Spasm of the glottis. (4) Infantile tetany. (5) Idiopathic major epilepsy. This later manifestation of the status lymphaticus, the author believes, is brought about by periodical increases in the intracranial pressure; exactly by what mechanism is at present not established.

5. **Resection of the Cervical Sympathetic in Glaucoma.**—Wilder reports sixty-one additional cases of resection of the superior cervical sympathetic ganglion in glaucoma. These cases are given in detail, are analyzed, and the results obtained are tabulated. The author concludes his paper as follows: " The statistics up to date seem to indicate that the simple chronic form is the one most suited for it, next to the hæmorrhagic form, if that can be determined. As a guide for my own practice, I should feel very much like following Abadie, when he says: ' In acute forms of glau-

coma and in subacute with intermissions, practice first iridectomy, and if it fails, do sympathectomy. In simple glaucoma use meiotics twice a day; if they suffice, continue them. If, in spite of their systematic employment, the vision fails, do sympathectomy.' "

10. **Osteomyelitis.**—Nichols's paper should be read in the original. It is a twenty-three page paper, profusely and beautifully illustrated, and represents original work. The pathology, symptomatology, and treatment are fully discussed, and original views, both as to ætiology and treatment of the affection, are advanced.

MEDICAL RECORD.

February 13, 1904.

1. Some Personal Observations and Experience of the Schott Treatment of Heart Diseases, By WILLIAM W. BALDWIN.
2. Contribution to the Study of *Spondyloze Rhizomélique,* with Report of Three Cases, By ALFRED GORDON.
3. The Antiseptic Treatment of Pneumonia in Infants and Children, By S. HENRY DESSAU.
4. Hernia in Young Children, By W. B. DE GARMO.
5. Radiotherapy, with Report of Cases, By D. C. DENNETT.

1. **The Schott Treatment.**—Baldwin's paper discusses first the Nauheim baths and then the resistance exercises: (1) The indications and contraindications are given for the employment of the baths. The method of giving artificial Nauheim baths is fully described, so that they may be tried by any one who reads the paper. Five varieties may be reproduced in private practice. They are to be used with extreme caution when patients are suffering from serious vascular or kidney lesions in addition to the heart lesion. (2) Resistance movements are very well borne even by very feeble patients. To obtain the best results the movements should be continued for the balance of the patient's life. This is entirely practicable, as the patient soon learns how to conduct the treatment. The author holds that the Schott treatment is indispensable to the successful treatment of heart lesions.

2. **Spondyloze Rhizomélique.**—Gordon reports three cases of this disease, the chief characteristic of which is rigidity of the spine. The disease has been assumed to be of rheumatic origin. The author does not agree with this view. The author concludes that: "(1) While Bechterew's, as well as Strümpell-Marie's, ideas cannot be accepted in the sense of the existence of two sharply defined clinical entities, the other view of considering all cases of spondylosis as an expression of rheumatism for the simple reason that the patient some time during life presented a history of rheumatism cannot be equally accepted. The onset, course, and termination are in some cases not those of rheumatism. (2) A great many cases recorded, if not all, present distinct symptoms of cord involvement showing that the ætiological factor is of a more complicated order than one may suppose. (3) Between the types described by Bechterew, Strümpell, and Marie there are a great many intermediary forms. (4) Spondylosis is only a symptom of a more complicated disease, the ætiological factor of which is not at all elucidated."

3. **Pneumonia in Infants and Children.**—Dessau advocates the use of carbolic acid in the treatment of pneumonia. To a child of three years of age he gives as much as a drachm of a two per cent. solution every two hours. He considers the drug harmless and capable of doing much good. To adults he has given as much as twelve grains of carbolic acid every two hours with gratifying results. In addition to carbolic acid internally, the author is in the habit of using cold wet compresses to the chest and evaporations of eucalyptus and creosote in the sick room.

4. **Hernia.**—De Garmo tabulates as follows the indications for hernia operations in children under fourteen years of age: (1) Strangulated hernia—immediate operation. (2) All cases not controlled by truss. (3) Occasional protrusion with threatened strangulation. (4) When truss-wearing causes pain. (5) On children that cannot be brought regularly for attention. (6) In all cases of femoral hernias. (7) On all children over seven years of age.

AMERICAN MEDICINE.

February 13, 1904.

1. A Case of Gunshot Wound of the Brain, By JOHN A. WYETH.
2. The Prevention, and Treatment of Puerperal Infection, By RICHARD C. NORRIS.
3. Myxoneurosis Intestinalis Membranacea, By C. A. EWALD.
4. Suburethral Abscess, By RICHARD F. WOODS.
5. The Value of Histologic Examination in Carcinoma of the Uterus, By BROOKE M. ANSPACH.
6. Facial Paralysis, By NORTON L. WILSON.
7. Drainage of the Chest in Empyema, By LEON BRINKMAN.
8. Medicus et Medica (*Concluded*), By HELEN MACMURCHY.

1. **Gunshot Wound of the Brain.**—Wyeth reports in full the case of a man who came under his care five months after receiving a gunshot wound of the brain. The bullet was at that time still within the brain and the symptoms called for an operation which resulted successfully. The author concludes his paper with a discussion of gunshot wounds of the brain which are not immediately fatal. Such wounds may be divided, for purposes of treatment, into two classes: (1) Those in which the missile passes entirely through the skull. (2) Those in which it lodges within the cranial cavity. The author's advice, as to treatment, does not differ materially from that usually given.

2. **Puerperal Infection.**—Norris's advice may be summed up as follows: (1) Prevention of infection. Clean the external genitals as well as possible; do not douche; use rubber gloves and make as few examinations as possible; repair at once all injuries to the parturient tract, cervix excepted, unless hæmorrhage demands suture, and either use sterile and antiseptic vulvar pads or none at all. (2) If infection develops, prompt treatment is imperative. The best results, in the

author's estimation, will be obtained by relying on the old and well tried methods. He has not the dread of the curette that is now fashionable, though he states that, rarely, harm may result from its use.

7. **Empyema.**—Brinkman considers that most of the methods that have been suggested for the treatment of empyema in children are unsatisfactory. He recommends the following operation which he has employed 27 times with good results: A sufficient number of ribs are exposed in the axillary line. About two inches of bone are resected from each rib. A small opening is then made in the pleura and the pus is allowed to escape gradually, in order to avoid shock. As soon as all the pus has escaped, the opening in the pleura is enlarged and through it the pleural cavity is explored. Adhesions are broken down, if any exist, and a search is made for concealed pockets of pus. The pleura is now stitched to the skin and a large hole for drainage is thus obtained. This hole will, however, close with time.

BOSTON MEDICAL AND SURGICAL JOURNAL.

February 4, 1904.

1. Report of Cases of Trephining for Epilepsy, By JOHN C. MUNRO.
2. Some Conclusions Based on a Study of One Hundred and Thirty-four Cases of Calculus in the Ureter, with a Report of Three New Cases, By BENJAMIN TENNEY.
3. Decapsulation of the Kidneys, By EDWARD REYNOLDS.

2. **Calculus in the Ureter.**—Tenney concludes: Intermittent pain on one side, with varying amounts of red blood in the urine, are constant symptoms of stone in the ureter. Though the best means of locating stones, the x ray cannot yet give evidence *sufficient in itself* to warrant us in operating or refusing to operate on certain cases. If a calculus starts from kidney to bladder, it is likely to catch within an inch of one of three places, all of which are accessible to the surgeon through extraperitoneal openings. A single calculus is the rule, but the exception occurs, according to these cases, about once in eight times. The opening in the ureter or kidney pelvis for removal of the calculus should be sutured if possible. Both sorts of suture materials have been used with equally good results, and wounds in both locations apparently heal equally well. The recovery is only delayed if sutures are not used. A calculus in the ureter is a menace not only to health, but to life, and its removal is an operation of low mortality, provided it is undertaken before secondary changes appear in the kidneys.

3. **Decapsulation of the Kidneys.**—Reynolds believes that the benefits of decapsulation, if there are such benefits, are due to relief of kidney tension. His own experience is confined to the four cases which he reports. The author, however, did not perform decapsulation, but contented himself with merely slashing the kidney capsules. On such experience as this he anounces the following tentative conclusions: "(1) We must admit that our present knowledge of the pathological physiology of renal disease is still defective, but we are justified in believing that nephritis has, as a rule, an infective origin, and probably that the defective renal drainage, due to swelling of the organ within a rigid capsule, plays a part in maintaining the disease. (2) The cases in which general uræmic symptoms are more prominent than the physical signs obtained on the examination of the urine are unpromising cases for operation. (3) Where the urinary signs and constitutional depression outweigh the distinctly uræmic general symptoms, we may regard the cases as favorable for operation. (4) Where one kidney is mainly or predominatingly affected, a unilateral operation upon that kidney offers an excellent chance of prolonged improvement in health, if not indeed, of ultimate cure. (5) In women, in whom ureteral catheterization involves little trauma and risk, all cases of chronic nephritis should be subjected to ureteral catheterization and the unilateral ones selected for operation."

MEDICAL NEWS.

February 13, 1904.

1. Abdominal Pain of Intestinal Origin, By FREDERICK HOLME WIGGIN.
2. The Dietetic Treatment of Arteriosclerosis, By THOMAS L. COLEY.
3. Enlargement of the Phalanges in Rickets: A Report of Two Cases, By JACOB SOBEL.
4. Treatment of Pneumonia, By DELANCEY ROCHESTER.
5. The Sanitary Aspect of Food Preservatives, By R. G. ECCLES.

1. **Abdominal Pain.**—Wiggin discusses the character of the abdominal pain due to twenty-four abdominal conditions. In only a very few of these conditions are the kind of pain and its location characteristic of the disease. As a rule, cases exhibiting marked pain in the abdomen should be treated expectantly and opiates should be withheld. The surgeon should always be called in early. In obscure and persistent cases exploratory laparotomy should be resorted to.

2. **Arteriosclerosis.**—Coley recommends the following rules for arranging the dietary of patients suffering from arteriosclerosis: (1) The quantity of food should be about two thirds of that suitable to persons in health. (2) Proteid foods should be reduced. Easily digested and well cooked foods are essential. Alcohol, tea, coffee, and tobacco are to be forbidden. Water should be taken in moderation. (3) Meals should be taken at regular hours.

4. **The Treatment of Pneumonia.**—Rochester asserts that his method of treating pneumonia gives better results than those generally obtained in some of our leading hospitals. He reports 200 cases with a mortality of 7 per cent. Excluding cases in which there were complications, in the nature of other diseases or notoriously bad habits on the part of the patients, and all cases in which the patients were over fifty years of age, the mortality rate falls to only 2.5 per cent. The author's general mode of treatment may be summarized as follows: (1) Sustain the metabolic processes of the individual by the administration of easily digested or predigested foods in small quantities at

stated intervals. Administer large amounts of pure water, for eliminative purposes, and oxygen gas by inhalation whenever the absorbing surface of the pulmonary mucosa is involved to such extent as to interfere with proper metabolic oxygenation. (2) Elimination should be favored *(a)* by the liver and bowel through the vigorous use of calomel and salts; *(b)* by the skin through sweats induced by external heat; *(c)* through withdrawal of blood when indicated by right heart distention. (3) Stimulation of heart by strychnine, alcohol, or ammonium carbonate, and in suitable cases the subcutaneous injection of normal salt solution should be resorted to. (4) Local treatment of the lung by leeching, wet cupping, or dry cupping as indicated.

5. **Food Preservation.**—Eccles asserts that the crusade against chemical preservation of food is not exactly rational. That certain chemical substances may be injurious is undoubtedly true. It would be more to the point to establish which are injurious and which are not rather than indiscriminately to inveigh against all food preservatives. As a matter of fact those who object so eloquently to all chemical food preservatives seem to forget that sodium chloride, acetic acid, and ethyl alcohol are chemicals. The article champions the use of salicylic acid and attempts to prove that foods prepared with salicylic acid are not only not injurious, but are really safer than foods not so preserved.

LANCET.

January 30, 1904.

1. Hysterical Skin Symptoms and Eruptions, By T. D. Savill.
2. The Sanatorium Treatment of Pulmonary Tuberculosis, By C. T. Williams.
3. The Relation of the Medical Practitioner to Preventive Measures Against Tuberculosis, By A. Newsholme.
4. Note on the Probable Mode of Infection by the So-called *Filaria Perstans,* and on the Probability that this Organism Really Belongs to the Genus *Tylenchus* (Bastian), By H. C. Bastian.
5. A Contribution to the After-History of Gastric Ulcer, By J. W. Russell.
6. Notes on a Case of Otitic Cerebellar Abscess; Extradural Abscess; Trephining Middle and Posterior Fossæ; Recovery, By P. Jakins.
7. The Efficent Treatment of Cardiac Failure, By A. Morison.

1. **Hysterical Eruptions.**—Savill calls attention to the great importance of the skin symptoms of hysteria. He has met with seven different varieties, as follows: 1. Attacks of generalized pallor of the surface. These generally accompany or alternate with hysterical cerebral attacks, and are parts of " splanchnic storms." 2. Attacks of flushing, morbid blushing, and " flush storms." These are the most important of the stigmata of the hysterical diathesis and are among the evidences of the central and peripheral vasomotor instability which is the essential somatic part of that diathesis. They are met with in all women at the menopause. 3. Fugitive localized patches of congestion suddenly appearing and disappearing: definite and visible evidences of the abnormal reflex excitability of the vasomotor centres. 4. Dermatographia-congestive streaks, appearing after a few seconds in the track of a scratch on the skin. They can be produced in both hysterical and non-hysterical persons, and generally indicate the presence of toxæmia, very often of gastrointestinal origin. 5. Aeroparæsthesia and erythromelalgia. Periodic attacks of sensations of tingling in the extremities and more chronic redness and swelling are most frequently met with in hysterical subjects and in the female sex. The same is true of attacks of white pallor of the fingers. 6. Exudative skin conditions are closely related to hysteria, urticaria, erythema, and localized circumscribed œdema being frequently met with. There are three degrees of dermal exudation:—serous only, as in urticaria; serosanguineous effusion, as in chilblains and erythema nodosum; and purpuric effusion of all the blood elements. These exudations are often due to auto- or heterotoxic alterations in the blood, but they are also frequently dependent on nervous influences, or on a combination of the two factors. Urticaria is the best known type, and is usually traceable to a gastrointestinal autotoxia. Angeioneurotic œdema on the other hand is usually a pure neurosis, the main cause acting through the neurovascular apparatus. Hæmorrhagic effusions are less certainly and less constantly related with hysteria. 7. Localized ischæmic conditions. Constriction of the arterioles of a given area is classed by many as a hysterical manifestation. The symptoms may be very transient, or severe and associated with hysterical cerebral attacks. The parts feel swollen, heavy, and numb, and the skin may be either normal in color or of a waxy whiteness.

2 and 3. **Tuberculosis.**—Williams discusses the modern sanatorium treatment of pulmonary tuberculosis. A modern institution should contain the following: 1. A two story block facing south or southeast, for the patients' bedrooms, day rooms, bathrooms, etc. 2. A block behind the first for dining rooms, kitchens, medical offices, laboratories, and nurses' quarters. 3. An administration block some distance away, containing the heating and lighting plant, laundry, etc. 4. An isolation block. 5. Medical superintendent's house. 6. The liegenhallen, or shelters, which can be connected with the patients' block, but must not be in front of it. Graduated exercise is a most important feature of the sanatorium treatment, and the grounds should contain suitable woods and paths. The pace generally enjoined is about two miles an hour, and such exercise increases muscular strength, and appetite, and promotes digestion, nutrition, and sleep. An abundant dietary, representing all groups of food, is necessary, but too much stress is laid upon mere gain in weight alone. Unless muscular vigor is coincidently improved, gain in weight is not of much advantage. Sputum must be disinfected either by high-pressure steam, or mixed with sawdust and burned in a furnace. Patients' clothes should also be disinfected by steam before being washed. A good hydrotherapeutic department is a necessary part of all well-organized sanatoria.

The sun-bath treatment, which originated in South Austria, is well worth trying. In conclusion, the author discusses the results obtained by sanatorial treatment, giving statistical tables of after-results, etc. In all but advanced cases, great improvement may be expected. Newsholme indicates the ideal position of the medical practitioner in relation to tuberculosis. Everything indicates the necessity of cooperation between medical practitioner and medical officer of health, and the more complete is this cooperation the greater is the benefit to the consumptive patient and to every member of the public. In an appendix he gives an excellent leaflet of Precautions for Consumptive Persons.

4. **Filariasis.**—Bastian, from his observations, concludes that it is highly probable that the embryos found in the blood of human beings, and known as *Filaria perstans,* are really embryos of some species of Tylenchus. Further, as a species of Tylenchus has been found in Queensland infesting the roots of bananas, it seems quite possible that a nematoid belonging to the same genus may infest the roots and perhaps different parts of the bananas in Equatorial Africa. Although he grants the possibility of direct infection through the skin in filariasis, the evidence points strongly to infection through the alimentary canal. A parasitic stage forms no necessary part of the life history of the above-mentioned nematoids.

6. **Gastric Ulcer.**—Russell has investigated the ultimate ending of cases of gastric ulcer treated along medical lines. In 89 cases he succeeded in tracing the after-history in 47. His conclusions may be summed up as follows: 1. Gastric ulcer is not a frequent cause of death, and apart from first attacks, its mortality is but a small one. 2. A large proportion of the cases (40 per cent.) recover entirely. 3. About the same proportion continue to suffer from gastric symptoms. Here surgical intervention would seem to be indicated. 4. While a second hæmorrhage by no means precludes recovery it is a serious factor in prognosis, pointing at least to a considerable prolongation of the period of active symptoms.

BRITISH MEDICAL JOURNAL.

January 30, 1904.

1. Observations on Suprapubic Prostatectomy, By Sir T. Stoker.
2. Prostatic Enlargement and its Treatment by Freyer's Method, By G. Barling.
3. An Anatomical Criticism of the Procedure known as Total Prostatectomy, By C. S. Wallace.
4. Notes on Myiasis, By P. S. Lelean.

1, 2, and 3. **Prostatectomy.**—Stoker states that there seem to be three conditions of senile enlargement of the prostate. 1. A true hypertrophy of the gland without any interstitial growths. 2. The existence upon and within the substance of the prostate of one or more encapsulated tumors, distinct from the substance of the gland proper, and either myomatous or adenomatous in structure. Both forms of neoplasm or one only of them may be present. 3. A mixed condition of true hypertrophy and interstitial growths of the second class. This is the most common condition. The tumors may reduce the prostate to such a state of pressure atrophy that it is merely a shell or capsule for adventitious growths. He reports three cases of enlarged prostate in which suprapubic prostatectomy was performed after the method practised by Sir W. Thomson, the gland being enucleated by the finger. The question of attempting to conserve the prostatic urethra usually settles itself—cases in which it has been removed seem to do about as well as those in which it has been preserved.

Barling reports ten cases of enlargement of the prostate treated by suprapubic incision and enucleation according to Freyer. His conclusions are: 1. It is possible to enucleate the prostate. 2. The prostatic urethra is then almost invariably, if not always, removed with the organ. 3. If the prostatic urethra were left it would necrose from want of blood supply. 4. Stricture does not follow the damage to the urethra. 5. The operation gives excellent results, often restoring the functions of the bladder to an absolutely normal condition.

Wallace criticises the operation of "total prostatectomy" so-called, from an anatomical viewpoint, and concludes as follows: 1. That the usual form of prostatic enlargement is an adenomatous one. 2. That the adenomatous tissue may surround the urethra or form masses in the lateral parts of the organ, behind the urethra, or in all three parts. 3. That the parts removed may consist of adenomatous masses from the lateral parts, or of an adenomatous formation completely surrounding the urethra. 4. That there is always left behind a definite laminated envelope containing glandular tissue, derived from the expanded outer portion of the organ. 5. That the amount of envelope left on the surface of the tumor after removal depends upon the depth at which the enucleating finger cleaves the envelope. 6. That the rectovesicular fascia is not opened nor the prostatic plexus of veins injured. 7. That though it is possible to remove a small adenoma from the centre of the lateral part of the prostate without extensively injuring the urethra, yet this canal is removed *in toto* when the adenomatous growths are extirpated in their envelope, and the lateral walls come away adhering to the adenomata when these are of any considerable size. He suggests that the term "surgical capsule" be applied to the envelope formed from the prostate by the expansion of the adenomata. It is a pathological formation, and represents more than the outer non-glandular portion of the prostate. To its presence is due the small amount of bleeding and the absence of urinary extravasation. In so-called "total prostatectomy" the enucleating finger never passes outside the limits of the prostate and therefore cannot enter the rectovesical fascia or tear the prostatic plexus of veins.

4. **Myiasis.**—Lelean reviews the subject of myiasis from the most ancient times. Paré reported a case of maggots passed per urethram in 1582. He reports the results of his observations of ectoparasitic larvæ found on natives of Northern Nigeria. On hatching out these larvæ, the resultant fly was of the family Muscidæ: *Anchmeromyia luteola,* Fahr.

Letters to the Editor.

PSYCHIC HEALING AND CHRISTIAN SCIENCE.

1133 Broadway, New York,
February 5, 1904.

To the Editor,

Sir: We have just read with interest the lecture by Dr. Edward Wallace Lee on Pyschic Healing, in your issue of January 16th, and trust that you will do us the courtesy of a brief hearing in reply.

On page 101, in the middle of the first column, we read: "Perhaps the most prevalent psychic cure scheme which confronts us to-day is that known as Christian Science."

The word psychic does not at all apply to Christian science healing, as will readily be seen by referring to Webster's definition: "The word (psychic) describes the human soul in its relation to sense, appetite, and the outer visible world, as distinguished from spiritual or rational faculties, which have to do with the supersensible world." This definition might have been written expressly to meet the arguments which follow in the learned doctor's lecture, for all of them are based on the assumption that the evidence of physical sense is rational, and that of the spiritual irrational.

The doctor will be spared much anxiety for the welfare of the human race when we inform him that we know of a Christian science church on the same avenue on which he lives that has a membership of over thirteen hundred, among whom the mortality for 1903 was a quarter of one per cent.

Christian scientists entertain great respect for the better class of medical practitioners, believing them to be honestly pursuing a system that meets the needs of those not yet prepared for Christian science. The writer recalls his own beloved and respected family physician, a man of unquestioned integrity in his community. He failed, however, to give relief to chronic complaints of life long standing, which were removed in three weeks by Christian science.

Dr. Lee objects to a literal interpretation of the Great Physician's injunction, "Go heal the sick." He does not say, however, upon what ground. We recall that the Greek language was probably the most perfect of expression that the world has ever had, and if Jesus had intended another meaning, he would have selected an appropriate word.

When the doctor states that the healing power of Christ ended with the crucifixion, he forgets that we are informed by no less an authority than the historian Josephus that Christian healing was successfully practised for nearly three centuries after that time, and was only extinguished by the brutal persecution inflicted upon the early Christians.

Mrs. Eddy, in her discovery of Christian science, only claims to have again revived this spiritual healing, which had so long been dormant, through man's ignorance of God.

Dr. Lee says further, "We have nothing in the Bible to make us believe that Christ ever intended that a system of healing would grow out of those words." We believe, however, that abundant proof can be furnished that he foretold just such a system. We quote as follows: Mark xvi, 17, 18: "These signs shall follow them that believe; they shall lay hands on the sick and they shall recover," and "The works that I do shall he do also, and greater works shall he do, because I go unto my Father" (John xiv, 12).

Christian scientists decidedly approve of sunlight, pure water and air, believing that "cleanliness is next to Godliness." But they also believe that of the two Godliness is more essential, the other following as a consequence.

In refutation of the argument that "Christian scientists will not give their aid or influence unless they have the monopoly of the case," which seems to him "most un-Christian procedure," allow us to remind the doctor that he himself would not treat a case where another physician of another school was administering drugs calculated to neutralize his own, and possibly produce complications which might result fatally for the patient. The Christian scientist knows that divine metaphysics and materia medica will not blend, and an attempt to combine matter with mind would be disastrous to the patient. This is not "hide bound dogmatic bigotry," as the doctor calls it, but a known fact which all Christian scientists recognize.

In closing, Dr. Lee says: "All common sense people have recognized the necessity of living proper lives; yet if a system goes on and is allowed to flourish that teaches there is no such thing as disease, you can imagine the disastrous results."

We would advise the doctor not to imagine disastrous results, but just remember the ancient utterance, "If this work be of man it will come to naught; but if it be of God ye cannot overthrow it, lest haply ye be found even to fight against God." (Acts v, 38, 39.)

Richard P. Verrall,
Christian Science Publication Committee.

*** We have, in fairness, published this letter because it contains a temperate defense, by the parties implicated, against charges to which expression has been given in these columns. With the right of reply this correspondence must end. We cannot throw our columns open to a discussion on Christian science.

THE TENURE OF APPOINTMENTS UNDER THE NEW YORK HEALTH DEPARTMENT.

New York, *February 7*, 1904.

To the Editor,

Sir: Your editorial in the issue of January 23rd on the status of The Medical School Inspectors of the New York Health Department sums up well its unsatisfactoriness. It applies equally to all the inspectors. I was myself a medical sanitary inspector in the department for seven years. I had a taste for the work and hoped in time to do some really good work. I was dropped once for "insufficiency of funds," but succeeded in getting reinstated. For five years of my time I had, in addition to regular duty, to give antitoxine and do intubations in a very large district. I never received promotion or increase of salary. I finally resigned, after an attempt to visit daily four widely-separated schools, in addition to doing regular district inspection work. As you clearly show, an inspector must cling most tenaciously to his practice, where he has chance for advancement, at the expense of a precarious tenure of office.

The inspection work of the department will not be what it can be until there is security in office, and promotion and salary increase for merit and length of service. EX-INSPECTOR.

THE PREVENTION OF APPENDICITIS.

NEW YORK, *February* 10, 1904.

To the Editor,

Sir: The opprobrium of medicine is a dose; the opprobrium of surgery is an operation.

Of course, if required, I would have the patient take the dose, or submit to the operation. On the other hand, prevention of disease—of what makes the dose and the operation necessary—is what we all most desire, not the neutralization of disease, as far as may be, when it exists. In my judgment, "good men and true" should preach constantly, those lines of conduct which will largely prevent primary or recurrent attacks of appendicitis, and not continually insist upon the best time for operation during an acute attack, or in the interval, or indeed, take time by the forelock (God save the mark!) and perform the operation of removal before any attack at all. "O tempora! O mores!" Let men, women, and children live wiser, saner lives; eat less, drink less of many things; avoid senseless and undue fatigue; watch their evacuations closely and intelligently, and I am decidedly of the opinion, now, as for many years, we shall hear less of operations for appendicitis and the unruly abdominal organ will soon become silent and docile.

"Verbum sat sapienti."

BEVERLEY ROBINSON.

THE EXCLUSION OF NON-MEMBERS FROM THE LIBRARY OF THE ACADEMY OF MEDICINE.

NEW YORK, *February* 10, 1904.

To the Editor,

Sir: Upon going to the Academy of Medicine yesterday I was confronted with a sign which stated that the library was closed to non-members after one o'clock. As the place opens at ten in the morning, there are but three inconvenient hours in which the ordinary physician can enjoy its privileges. Inasmuch as this is the only medical library in New York, and many of the volumes upon its shelves were donated with the understanding that they were to be used by the profession at large, and not alone by the comparative few who are willing to pay the annual dues of twenty dollars, and as the academy, I believe, is a chartered institution, paying no taxes, there seems to be something very petty about this new regulation. If the rule is to stand, it is to be hoped that the New York Public Library will establish a medical reference department for the large number of studious doctors of medicine of moderate means, and that prospective donors will keep their books for such a time.

A NON-ACADEMICIAN.

Proceedings of Societies.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

TWENTY-NINTH ANNUAL MEETING, HELD IN MEMPHIS, TENN., ON OCTOBER 7, 8, AND 9, 1903.

(*Continued from page 1016.*)

Syphilitic Manifestations in the Nose and Pharynx.—Dr. PAUL TURNER VAUGHAN, of Hot Springs, Ark., said that in looking over the clinical histories of five hundred cases of nose and throat syphilis he had not found a single instance in which the primary sore had been situated in either of these localities. Erythema, mucous patches, ulcerations, and gummata might at various times be found in the nose of the syphilitic patient. Primary sores of the pharynx were not met with in Hot Springs so often as one would suppose, for among his cases of nose and throat syphilis he had found only four in which the sore was situated in the pharynx. As to the treatment of these conditions, attention should be paid to both the local manifestations and the constitutional cause. The primary sore should be cleansed with some antiseptic wash and dusted with some mild powder. Calomel was about the best he had found. Caustics locally applied in this stage did harm.

Cyclical Albuminuria.—Dr. ARTHUR R. ELLIOTT, of Chicago, gave the clinical histories of two cases of cyclical albuminuria which possessed features of unusual interest. The most interesting feature of the two cases was the direct connection between the cyclical albuminuria and preceding acute infectious nephritis. There existed some doubt as to the exact nature of the original infection in Case I, but whether it was influenza or atypical scarlatina mattered little, so far as the renal end product was concerned. In Case II the direct connection with scarlatina was clearly established. In both cases the nephritis was a mixed process attended by little systemic disturbance, slight renal desquamation, and moderate albuminuria. In both instances he thought the lesion was glomerular, a mild cortical involvement. An element of importance from a prognostic standpoint was the existence of chronic nephritis in the immediate ancestry of both patients.

Chronic Interstitial Nephritis.—Dr. R. ALEXANDER BATE, of Louisville, referred to the anatomical changes occurring in the different forms of nephritis. The indications for surgical treatment appeared to him to be limited to cases complicated by a malposition of the kidney and to those cases in which medicinal measures had failed to arrest the destruction of the epithelium of the tubules.

The Use and Abuse of Fresh Air and Overfeeding in Tuberculosis.—Dr. W. H. PRIOLEAU, of Asheville, N. C., pointed out the importance of supplying fresh air and nutritious food to each patient, according to the comfort of his body and the power of his digestion, remembering always that the personal equation entered into each case that was under the care of the practitioner.

The Treatment of Chronic Otitis Media Purulenta.—Dr. John F. Barnhill, of Indianapolis, stated that the principles upon which successful treatment of this disease must be based were both surgical and medical, and did not differ materially in their application from the use of these methods for similar conditions in other parts of the body. All aural discharges were curable by these methods, except those due to tubercle or cancer, and such cure would be simple and easy were it not for the fact of the concealed and inaccessible situation of the disease. A positive diagnosis of the conditions present was of the first importance. Drug application or surgical interference was likely to be very unwisely directed until first the cause of the discharge had been discovered. Only those most highly skilled in aural diagnosis could hope to treat successfully many cases of chronic otorrhœa. If, after all parts had been thoroughly treated that were accessible to surgical and medical measures through the route of the external meatus, the disease continued, sound surgical principle dictated that the disease should be followed to its origin and thoroughly eradicated. This necessitated in most instances the radical mastoid operation. Wilde's incision or gimlet trephining of the mastoid was not based upon sound surgical principles, and should be entirely abandoned. Only that thoroughness of modern surgery in general should have any place in a consideration of the principles of otological surgery.

Nasopharyngeal Adenoids.—Dr. J. A. Stucky, of Lexington, Ky., after discussing this subject at considerable length, presented the following deductions: The obstructive and non-obstructive adenoid tissue, when diseased, was a menace to health, hearing, and mental and physical development, and should be radically dealt with. It was far more serious in its effects than disease and enlargement of the faucial tonsils. Frequently when the pharyngeal tonsil was thoroughly removed, the enlarged faucial tonsils rapidly assumed normal size and function. While this was not the rule, he had seen it occur so frequently that it was safe to say it was far more than the exception to the rule. The technics of adenectomy was simple as compared with many other surgical operations, but should be just as conscientiously carried out. When carefully and thoroughly done, the results obtained were only equalled by those of some of the so called major operations performed by the general surgeon.

Dysmenorrhœa.—Dr. Emil Ries, of Chicago, after discussing the unsatisfactory condition of the present therapeutics of dysmenorrhœa, described the Fliess treatment of the so called nasal dysmenorrhœa. The importance of suggestion and the toxic effects of cocaine were reviewed in their possible bearing on the treatment.

Penetrating and Perforating Gunshot and Stab Wounds of the Abdomen.—Dr. John Young Brown, of St. Louis, discussed the preparation of the patient, the search for visceral injuries, the control of hæmorrhage, irrigation and drainage, and closure of the incision, and then reported nine cases of perforating wounds of the intestines, with six recoveries and three deaths. One death was due to shock. In this case the injury was so extensive that the patient never reacted. The second patient entered the hospital with general peritonitis, and while a perforation was overlooked, it was probable that the result would have been the same if the injury had been repaired. He thought the third patient should have been saved. Of patients with wounds of the liver, five in all, four recovered and one died. This one died three hours after an operation, from shock, which was the result of hæmorrhage. The patient with wound of the pancreas recovered. To these cases he added eight where laparotomy was performed, and no injury to the viscera found. This made a total of twenty-three cases, with nineteen recoveries and four deaths.

The Surgery of the Thyreoid.—Dr. B. Merrill Ricketts, of Cincinnati, read an exhaustive paper on this subject. He drew the following conclusions: 1. The thyreoid is oftener abnormal than normal in size, shape, and number of lobes and accessory lobes, which are more frequent on the left side. 2. The physiological function of the thyreoid and its secretions and relation to other glands are not understood. 3. There may be but one lobe, which may be situated anywhere in the anterior, lateral, or posterior portion of the neck, or it may be intrathoracic, subclavicular, or postscapular. 4. It is the most constant of all the glands in animal life, and all vertebrates are subject to the same laws concerning it. 5. Absence of the thyreoid at birth results in cretinism, and its destruction by disease or otherwise in advanced life induces myxœdema. 6. The cause of parenchymatous goitre is unknown. 7. It may develop in fœtal, infant, child, or adult life. 8. All animal life is subject to it. The cause of exophthalmic goitre is unknown. 9. The patient may or may not have protrusion of the eyeballs. 10. Lesions of the restiform body in rabbits and dogs, and probably all other animals, will induce exophthalmia and tachycardia, also tremor, polyuria, glycosuria, and salivation. 11. Medicaments are of no avail except to palliate. None cures. Animal extracts are most satisfactory for palliation. Surgery offers the only means of cure. 12. Thyreoidectomy is the operation of choice, and is done more quickly, with less mortality, and with better results. 13. Concretions may be osseous or calcareous. 14. Cysts should be removed by thyreoidectomy, whether they contain blood, serum, or pus of parasitic, benign, or malignant origin. 15. Gangrenous and tuberculous thyreoid tissue should be freely excised. 16. Syphilitic gummata may be congenital or acquired, and should be subjected to syphilitic remedies, to which they will yield. 17. Transplanted segments of thyreoid tissue will, more or less, maintain life. 18. Electricity in any shape is not only useless, but very detrimental, in that it causes the formation of adhesions, which greatly interfere with subsequent surgical operations. 19. The use of the seton and incision into the thyreoid are seldom indicated, except for the removal of concretions or foreign bodies. 20. Injections of crystals, solutions, or caustics of any character into the thyreoid for any purpose should not be tolerated. Like local applications of any character, they should be condemned and abandoned. 21. Division or resection of the thyreoid isthmus does not cure. It has no place in thyreoid surgery, and should become obsolete. 22. Partial thyreoidectomy is the proper term, as the entire gland is seldom removed. 23. The use of cocaine for local anæsthesia is the most desirable. 24. The mortality is less than one per cent. in the general application of thyreoidectomy. It is the operation of choice. 25. All thyreoid tissue should not be removed unless malignant. 26. Regeneration of thyreoid tissue, which will secrete thyreoidin, is just as impossible as the regeneration of a finger. 27. Death from hæmorrhage in thyreoidectomy need not occur, as blood vessels of any size or in any location may be closed by ligature or forceps. 28. Ligation of the thyreoid arteries is ineffectual and should be abandoned. 29. Compression of goitre sufficient to be beneficial will occlude the trachea and larger blood vessels of the neck. 30. Tracheotomy is indicated when the goître presses upon the trachea or blood vessels, producing alarming effects, and then it should be done only to palliate until thyreoidectomy can be performed.

(To be concluded.)

Book Notices.

Die Theorie des Augenspiegels und die Photographie des Augenhintergrundes. Von Dr. Walter Thorner, Assistent der Universitäts-Augenklinik der Königl. Charite zu Berlin. Mit 64 Figuren im Text und 3 Tafeln. Berlin. 1903. Verlag von August Hirschwald, N. W. Unter den Linden 68. Pp. iv-134.

One of the greatest of the difficulties to be overcome in attempts to photograph the fundus of a living being is to dispose of the reflexes from the surfaces of the interposed lens and of the cornea so that they shall not interfere with the picture. In Chapter II, Thorner describes the manner in which he asserts he has disposed of this difficulty, by means of a diaphragm which permits the passage of the rays that go to form the picture, and excludes those from which the harmful reflexes are drawn. He has constructed a reflexless, stereoscopic ophthalmoscope, with a contrivance added with which to measure the refraction; and in Chapter VI he describes how the fundus can be photographed quickly and accurately with its help. The work is highly technical and copiously illustrated with diagrams. It is worthy of careful study by every one interested in the photography of the fundus.

Le Traitement de la constipation. Par le Dr Froussard, Ancien Interne des hôpitaux de Paris; Médecin consultant à Plombières. Préface par le Dr Maurice Soupault, Médecin des hôpitaux de Paris. Paris: J. B. Baillière et Fils, 1903. Pp. v-95. (Price, 1 fr. 50.)

The author has given us a thoroughly modern work on the subject of constipation, including some preliminary remarks upon the ætiology, symptoms, etc. The cases are divided into broad groups, based upon the presence of spasms or atony, and the treatment varies according to the pathological condition found. Directions as to diet and mechanical forms of treatment, such as by electricity, massage, etc., are given at length. Massage is denoted as the all-important form of treatment. Great stress is laid upon the necessity of making the proper diagnosis, and numerous valuable diagnostic hints are given. Laxatives are advised in exceptional cases only. The book is concise, very readable, and most excellent throughout.

Lessons on the Eye for the Use of Undergraduate Students. By Frank L. Henderson, M. D., Ophthalmic Surgeon to St. Mary's Infirmary, and the Christian Orphans' Home; Consulting Oculist to the St. Louis City Hospital, etc. Third Edition. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1903. Pp. viii-204.

"The only claim to originality made for this work lies in its omissions. Minute anatomy, the fitting of glasses, skiascopy, ophthalmoscopy, and kindred subjects have been left out intentionally." This statement of the author defines the purpose of the book, to be a manual for students of medicine who do not intend to treat disease of the eye after they graduate. Instead of furnishing the student with an exhaustive treatise, or a brief condensation of the whole subject he would prefer to give a book for study, containing only a certain amount of information, as much as he thinks the undergraduate can be reasonably expected to learn in the limited time allotted to the study of the eye in our medical schools. It is certainly debatable whether this is a wise plan or not, but if its wisdom is granted, it would seem as if it should be carried out more thoroughly. The author says, "I have also slighted those diseases which have to be diagnosed with the ophthalmoscope, as I doubt the diagnostic value of an ophthalmoscope in the hands of the average practitioner." Then why devote three out of the twenty-eight lessons to diseases of the chorioid, retina, and optic nerve, which can be recognized in no way without the opthalmoscope, and publish illustrations descriptive of the pictures to be seen in those diseases with that instrument? It seems to the reviewer that this book probably exactly fills the place for which it was really intended, and forms the nucleus about which the author groups his teachings to his students. Whether it would prove an equally good nucleus for the use of any other teacher is uncertain.

Ethyl Chloride in Surgical and Dental Practice, with an Account of a Simple Device for Use with Ordinary Gas and Ether Apparatus. By A. de Prenderville, M. R. C. S., Anæsthetist to the London Hospital, etc. London: Henry J. Glaisher, 1903.

The author considers that ethyl chloride can be advantageously substituted for gas and ether or chloroform for short operations, lasting between one minute and a half and three minutes. It may be followed immediately by ether or used in combination with chloroform from a Junker inhaler through a bent metal tube held in the corner of the mouth, when more prolonged anæsthesia is desirable. The chief point in this brochure, however, consists in the description of an ingenious spring collar, of the author's invention, for use with gas and ether apparatus in ethyl chloride narcosis. The collar is used as follows: "First, fit Hewitt's stopcock, with bag attached, to the selected face piece . . . then take a circular piece of lint with diameter (roughly) of seven inches, place the collar, apex downward, in the centre, gather up the edges of lint over the superior border, and hold tightly in right hand; then force the lint-covered cone into the metal ring of the face piece, or, to be more exact, into the ring of the bag already fitted to the face piece. Next spread out the lint smoothly against the walls of the work, cutting off any portion that may overlap the rubber and pad. The apparatus is now ready for use." The advantages alleged are smallness of cost, ready adaptability to the apparatus in ordinary use, simplicity of introduction and withdrawal, and complete fixation of the lint lining, rendering its displacement during deep inspiration impossible.

Manual of Medicine. By THOMAS KIRKPATRICK MONRO, M. A., M. D., Fellow of, and Examiner to, the Faculty of Physicians and Surgeons, Glasgow, etc. Philadelphia and New York: W. B. Saunders & Company. London: Baillière, Tindall, and Cox. Pp. xvii-901.

So many manuals of medicine appear that it would seem as if the supply were much greater than the demand. While knowledge may be gained from all of them, it is given to very few to impart it in such a way as to render its acquisition easy. On this account manuals differ materially in value. It is not always the college professor who is the best teacher or the writer of the most instructive textbook. He may be encyclopædic in knowledge, but be unable to impart it in such a way as to impress it on others.

Of the numerous manuals that have been published within the past year in English, this of Monro's deserves special praise for its lucidity, conciseness, and force of statement. The book says what should be said, avoids verbose statements, emphasizes the essential facts of internal medicine in an impressive manner, and omits nothing of value in doing so. It presents a vast amount of information in an admirable style. In fact, it possesses all the good qualities which a book intended for teaching should have.

Scheme for the Differential Testing of Nerves and Muscles for Use in Diagnosis. By J. MONTGOMERY MOSHER, A. M., M. D., Clinical Professor of Insanity, Neurology, and Electrotherapeutics, Albany Medical College, etc. Illustrated. Albany, N. Y.: Brandow Printing Company, Fort Orange Press, 1903. Pp. 55.

This is a very excellent book in which just enough is said and said correctly. There is first a description of technics; then a section devoted to variations in electric excitability, which includes the reaction of degeneration, its character and occurrence; the myotonic, the myasthenic, and other reactions. The remainder of the treatise is devoted to very admirable plates showing the motor points, and each plate is accompanied by a description on the opposite page of the action of the respective nerves and muscles whose points of stimulation are pointed out.

The Medical Epitome Series. Physics and Inorganic Chemistry. A Manual for Students and Practitioners, by ALEXIUS MCGLANNAN, M. D., Associate Professor of Physiological Chemistry, etc., College of Physicians and Surgeons, Baltimore. Series Edited by V. C. PEDERSEN, A. M., M. D., Instructor in Surgery and Anæsthetist and Instructor in Anæsthesia at the New York Polyclinic Medical School and Hospital, etc. Illustrated with Twenty Engravings. Philadelphia and New York: Lea Brothers & Co., 1903. Pp. 216.

This little volume presents in a brief and lucid manner sufficient matter upon the subjects treated to be of value to the student or practitioner in his efforts to prepare for an impending examination, and may be classed under that large group of "quiz compends" which are most welcome to those in search of a handy method of readily acquiring the facts contained in works on these subjects. The regular form has, however, been altered in this book, inasmuch as all the questions are placed at the end of each chapter, thereby giving a certain continuity to the text itself. The volume presents a good appearance.

A Manual of Electrostatic Modes of Application, Therapeutics, Radiography, and Radiotherapy. Second edition. By WILLIAM BENHAM SNOW, M. D., Professor of Electrotherapeutics and Radiotherapy in the New York School of Physical Therapeutics, etc. New York: A. L. Chatterton & Co. Pp. xix-302.

In this edition sections have been added on radiography, and radiotherapy, and the section on electrostatic modes of application and therapeutics has been submitted to some changes and additions. X ray work and the employment of high frequency discharges have greatly increased the interest in static machines and in the study of their possibilities, and the book is therefore timely and interesting. As the large experience of the author would lead one to expect, it is very practical and thorough, albeit concise.

Directions for the choice of a static machine, its care and management, are laid down in detail. The convective discharges (including high frequency modalities and the employment of Geissler tubes for their production), disruptive discharges, and conductive discharges (Morton's "static induced" and "wave" currents) are dealt with at length, from both the technical and physiological standpoints. The choice of static modality in various affections and the therapeutic effect and manner of application are next considered.

The sections on skiagraphy and radiotherapy concern the use of the coil as well as the static apparatus. They are sufficiently ample for the beginner. Recent appliances and various experiments now being made seem to indicate that x ray coils may soon replace influence machines for the production of the various forms of static discharges. Meanwhile the static apparatus has a field of its own. To those operating or intending to purchase an influence machine Dr. Snow's work may be earnestly recommended as a valuable guide.

Transactions of the Twenty-fifth Annual Meeting of the American Laryngological Association, held at Washington, D. C., May 12, 13, and 14, 1903. New York: Published by the Association. 1903. Pp. vi-292.

The *Transactions* this year contain the usual goodly number of papers, of which the following may be deemed worthy of special mention without incurring the charge of favoritism: Congenital Laryngeal Stridor, by James E. Newcomb, M. D.; Cicatricial Deformities in the Respiratory Tract Due to Causes Other than Syphilis, by G. Hudson-Makuen, M. D.; The Arch of the Palate, by Henry L. Swain, M. D., and The Removal of Obstructions and Cicatricial Contractions of the Nose by the Plastic Method, by John O. Roe, M. D. Most of the other papers are clinical and of a generally good average value.

BOOKS, PAMPHLETS, ETC., RECEIVED.

A Chart of Static Modalities. By F. HOWARD HUMPHRIS, M. D. (Brux.), F. R. C. P. (Edin.), M. R. C. S. (England), L. R. C. P. (Lond.), Honorary Consulting Physician Queen's Hospital, Honolulu, T. H., U. S. A. Issued by the Hospital Supply Company, New York, U. S. A.

Organic and Physiologic Chemistry. A Manual for Students and Practitioners. By ALEXIUS MCGLANNAN, M. D., Associate Professor of Physiologic Chemistry, Instructor in Clinical Laboratory, College of Physicians and Surgeons, Baltimore, Md. Series Edited by V. C. PEDERSEN, A. M., M. D., Instructor in Surgery, and Anæsthetist and Instructor in Anæsthesia at the New York Polyclinic Medical School and Hospital, etc. Illustrated with 9 Engravings. Lea Brothers & Co., Philadelphia and New York. Pp. 246.

Transactions of the National Association of United States Pension Examining Surgeons. Second Annual Meeting, Washington, D. C., May 13 and 14, 1903. Including an Account of First Meeting, at Saratoga Springs, June 9, 1902. Vol. i. Published by the Association, Rochester, N. Y. 1903. Pp. 212.

The Pathogenic Microbes. By M. LE DR. P. JOUSSET, Physician to the Hospital Saint-Jacques; Former Interne Lauréat (Gold Medal) of the Hospitals of Paris, etc. Authorized Translation of HORACE P. HOLMES, M. D. Philadelphia: Boericke & Tafel. 1903. Pp. 192. [Price, Cloth, $1.00].

The Self-Cure of Consumption. With a Chapter on the Prevention of Consumption and Other Diseases. By CHARLES H. STANLEY DAVIS, M. D., PH. D., Member of the Connecticut State Medical Society, Physician to the Curtis Home for Old Ladies and Children, etc. New York: E. B. Treat & Co., 241-243 West Twenty-third Street. 1904. Pp. 172. [Price $0.75].

The Treatment of Neurasthenia. By A. PROUST, Professeur à Faculté de Médecine de Paris, Inspecteur général des services sanitaires, etc. Translated by PETER CAMPBELL SMITH, L. R. C. P., L. R. C. S., Edin.; L. F. P. S., Glasg. New York: Edward R. Pelton, 19 East Sixteenth Street. 1903. Pp. xiv-213.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, etc., by Leading Members of the Medical Profession throughout the World. Edited by A. O. KELLY, A. M., M. D., Philadelphia, U. S. A. Vol. iv. Thirteenth Series, 1904. Philadelphia: J. B. Lippincott Company. 1904. Illustrated. Pp. viii-321. [Price, cloth, $2.00 net].

Bacteriology of Milk. By HAROLD SWITHINBANK, of the Bacteriological Research Laboratory, Denham, and GEORGE NEWMAN, M. D., F. R. S. E., D. P. H., Medical Officer of Health of the Metropolitan Borough of Finsbury, and Formerly Demonstrator of Bacteriology in King's College, London. With Special Chapters also by Dr. NEWMAN, on the *Spread of Disease by Milk and the Control of the Milk Supply.* With 72 Illustrations, Maps, Charts, etc. New York: E. P. Dutton & Co. 1903. Pp. xx-605. [Price $8.00 net].

Social Diseases and Marriage. Social Prophylaxis. By PRINCE A. MORROW, A. M., M. D., Emeritus Professor of Genitourinary Diseases in the University and Bellevue Hospital Medical College, New York; Surgeon to the City Hospital, etc. New York and Philadelphia: Lea Brothers & Co. 1904. Pp. xxi-390.

Manual of Cooperative Surgery. By H. J. WARING, M. S., M. B., B. Sc. (Lond.), F. R. C. S., Demonstrator of Operative Surgery and Surgical Registrar, Late Senior Demonstrator of Anatomy, etc. With 420 Illustrations. London: Young J. Pentland. New York: The Macmillan Company. 1898. Pp. xxvi-661.

Oppenheim's Diseases of the Nervous System. By H. OPPENHEIM, M. D., Professor at the University of Berlin. Translated and Edited by EDWARD E. MAYER, A. M., M. D., Pittsburgh, Pa. Second American Edition, Revised and Enlarged. With 343 Illustrations. Philadelphia and London: J. B. Lippincott Company. 1904. Pp. 953. [Price, $5.00 net, cloth].

Diseases of the Eye. By L. WEBSTER FOX, A. M., M. D., Professor of Ophthalmology in the Medico-Chirurgical College of Philadelphia, Pa.; Ophthalmic Surgeon in the Medico-Chirurgical Hospital. With Five Colored Plates and 296 Illustrations. New York and London: D. Appleton & Co. 1904. Pp. xix-584.

Monthly Bulletin of the International Bureau of the American Republics. International Union of American Republics. Vol. xvi, No. 1. January, 1904. Washington, D. C.: Government Printing Office. Pp. xxii-250-xxxi.

The Complete Medical Pocket Formulary and Physician's Vade-Mecum. Containing Upward of 2,500 Prescriptions. Collated for the Use of Practitioners by J. C. WILSON, A. M., M. D., Physician to the German Hospital, Philadelphia, etc., etc. Third Revised Edition. Philadelphia, Pa.: J. B. Lippincott Company. Pp. 267. [Price, $1.75; Thumb Indexed, $2.00].

Bulletin of the Ayer Clinical Laboratory of the Pennsylvania Hospital. No. 1, issued October, 1903. Philadelphia, Pa. Pp. 88.

Vorlesungen Ueber Die Pathologie und Therapie der Gonorrhœ des Mannes. VON DR. W. SCHOLTS, Privatdozent an der Universität Konisberg, i. Pr. Mit einer Tafel. Verlag Von Gustav Fischer in Jena. 1904.

Miscellany.

The Cause of Appendicular Inflammation.—We are indebted to Dr. Beverley Robinson, whose letter appears elsewhere in this issue, for calling attention to an interesting article reproduced in the *Evening Sun* for February 10th from the Paris *Matin.* The article deals with data communicated to the Paris Academy of Medicine by Dr. Chauvel, medical inspector in the French army. During the year 1902, out of 668 appendicitis cases in the French military hospitals, 188 were operated on, and 480 received purely medical treatment, the surgical cases showing 23 deaths, and the medical cases 5 deaths—12.23 per cent. and 1.04 per cent., respectively. In 1901, "the nineteenth corps of the army of France had 460 cases of appendicitis, very nearly one to every thousand of the effective—to be precise, 0.95; while the nineteenth corps in Algeria and Tunis had but 32 cases, or 0.44 per thousand, twice less. In 1902, these figures were larger; 619 cases in France, or 1.27 per thousand, and 49 in Algeria, or 0.63. The population is smaller in Algeria than in France, and the difference, which is from simple to double, remains exactly the same in 1902 as in 1901. . . . Our army in Africa includes Europeans and natives. Legionaries, soldiers of the line, and Turcos, are they equals before appendicitis? . . . In five years, from 1898 to 1902, out of an effective of 14,000 men, we have among the French and Europeans 137 cases of appendicitis, or 0.64 per 1,000, while in the same space of time out of an effective of 17,000 natives, we find but 13 cases, that is, 0.14 per 1,000. By this it appears that appendicitis is two times less frequent among the French soldiers in Algeria than among the French of France, and it is ten times more rare among the native Algerians. . . ."

M. Chauvel's investigations lead him to the conclusion that the cause of this difference is to be found in the question of alimentation. "The Arabs are very sober; they eat little, and are above all vegetarians; when they do eat meat they eat it very much cooked. Accordingly, among the native tribes living their ordinary life appendicitis is almost unknown." Attention is also called to the fact that Dr. Snyder, for ten years past physician to the Shah of Persia, has had to treat but five cases of this disease in Teheran, three in Europeans and two in natives. Dr. Snyder arrives at similar conclusions to those of M. Chauvel. "At Teheran abstinence from pork is obligatory, and the meat of cattle is almost unknown. They hardly eat any meats but mutton and chicken, and those always very much cooked. One of the two Persians attacked by appendicitis was a student recently returned from Paris, and he had continued to feed himself in the European style." A similar result was found by Dr. Matignon, for five years physician at the French embassy at Peking. He had not met with a single case of appendicitis. The Chinese eat but very little meat. The European alone eats beef there. Again, "Dr. Championnière knew a physician practising in Brittany, where little meat is consumed, who for a number of years had seen but three cases of appendicitis. In the religious communities, where the use of meat is forbidden, appendicitis is unknown." The article concludes with a comparison with the conditions existent in Great Britain and America, where the consumption of meat foods reaches its maximum, and where appendicitis is more prevalent than anywhere else in the world. The conclusion drawn in the article is: "The carnal régime, then, the abuse of meat, appears to be the true cause of this evil. No meat, no appendicitis."

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Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending February 12, 1904:

Place.	Date.	Cases.	Deaths.
Smallpox—United States.			
California—San Francisco	Jan. 24-31	3	
Illinois—Danville	Jan. 30-Feb. 6	1	
Louisiana—New Orleans	Jan. 30-Feb. 6	5	
Maine—Calais	Feb. 7	5	
Maine—Madison	Jan. 28	1	
Maryland—Baltimore	Jan. 30-Feb. 6	1	
Michigan	Jan. 23-30	88 places.	
Michigan—Detroit	Jan. 30-Feb. 6	3 cases.	
Michigan—Flint	Jan. 30-Feb. 6	1	
New Hampshire—Manchester	Jan. 30-Feb. 6	9	
New Jersey—Newark	Jan. 30-Feb. 6	1	
New Jersey—Trenton	Jan. 30-Feb. 6	3	1
New York—Niagara Falls	Jan. 30-Feb. 6	1	
New York—New York	Jan. 30-Feb. 6	5	
Ohio—Bucyrus	Jan. 30-Feb. 6	9	
Ohio—Cincinnati	Jan. 22-Feb. 5	6	
Ohio—Dayton	Jan. 30-Feb. 6	12	
Pennsylvania—Allentown	Jan. 30-Feb. 6	2	
Pennsylvania—Butler	Jan. 30-Feb. 6	1	
Pennsylvania—Johnstown	Jan. 30-Feb. 6	5	
Pennsylvania—McKeesport	Jan. 30-Feb. 6	2	
Pennsylvania—Philadelphia	Jan. 30-Feb. 6	54	16
Pennsylvania—Pittsburgh	Jan. 30-Feb. 6	5	1
Pennsylvania—Warren	Jan. 1-Feb. 1	10	2
Tennessee—Nashville	Jan. 30-Feb. 6	8	
Utah—Ogden	Jan. 1-31	1	
Utah—Salt Lake City	Jan. 30-Feb. 6	2	
Smallpox—Insular.			
Philippine Islands—Manila	Dec. 12-Jan. 2	2	2
Smallpox—Foreign.			
Austria—Prague	Jan. 9-16	5	
Belgium—Liege	Jan. 9-16	1	1
Brazil—Rio de Janeiro	Jan. 3-10	34	22
Canada—Ontario	Dec. 1-31	13	
Chile—Antofagasta	Dec. 1-31		3
China—Shanghai	Dec. 19-26		6
Colombia—Barranquilla	Jan. 12-18		1
France—Paris	Jan. 16-23	17	9
Great Britain—Glasgow	Jan. 22-29	71	2
Great Britain—Hull	Jan. 16-23	1	
Great Britain—Liverpool	Jan. 16-23	1	
Great Britain—London	Jan. 16-23	3	
Great Britain—Manchester	Jan. 16-23	2	
Gt. Britain—Newcastle-on-Tyne	Jan. 16-23	3	
Great Britain—Nottingham	Jan. 9-16	5	1
Great Britain—Sheffield	Jan. 9-16	1	
India—Bombay	Jan. 5-12		6
India—Karachi	Jan. 3-10	2	
Mexico—Tampico	Jan. 24-31		1
Netherlands—Rotterdam	Jan. 16-23	1	
Russia—Moscow	Jan. 2-9	2	2
Russia—Odessa	Jan. 9-16		1
Russia—St. Petersburg	Jan. 9-16	18	3
Spain—Barcelona	Jan. 10-20		5
Spain—Santander	Jan. 18-25	4	2
Turkey—Smyrna	Jan. 3-18		9
Yellow Fever—Foreign.			
Brazil—Rio de Janeiro	Jan. 2-9	1	
Mexico—Merida	Jan. 17-30	1	1
Mexico—Tehuantepec	Jan. 17-30	2	2
Mexico—Vera Cruz	Jan. 23-30	1	1
Cholera—Insular.			
Philippine Islands—Manila	Dec. 12-Jan. 2	9	8
Philippine Islands—Provinces	Dec. 12-Jan. 2	44	33
Cholera—Foreign.			
India—Calcutta	Dec. 26-Jan. 9		30
Turkey in Asia—Dindieh	Dec. 12-19		2
Turkey in Asia—Kerbeia	Dec. 11-22		422
Turkey in Asia—Messieb	Dec. 18-20		32
Plague—Insular.			
Philippine Islands—Manila	Dec. 12-Jan. 2	1	1
Plague—Foreign.			
Australia—Queensland, Cairns	Dec. 5	2	
Rio de Janeiro	Jan. 3-10	10	5
India—Bombay	Jan. 5-12		186
India—Calcutta	Dec. 26-Jan. 9		33
India—Karachi	Jan. 3-10	8	5
Mauritius	Dec. 31-Jan. 7	55	37
South Africa—Natal	Dec. 5-12	2	

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending February 11, 1904:

BROOKS, S. D., Surgeon. Granted leave of absence for four months from April 1, 1904, with permission to go beyond the seas.

CLARK, TALIAFERRO, Passed Assistant Surgeon. To proceed to San Juan, P. R., and assume temporary charge during the absence of the Chief Quarantine Officer. February 9, 1904.

FOX, CARROLL, Assistant Surgeon. To report, on July 25, 1904, to the recorder of examining board at Manila, P. I., for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

GOLDBERGER, JOSEPH, Assistant Surgeon. Granted leave of absence for one month from February 10th.

GREENE, J. B., Passed Assistant Surgeon. Granted fifteen days' extension of sick leave from February 10th.

HOLT, J. M., Assistant Surgeon. To report, on July 25, 1904, to recorder of examining board at Manila, P. I., for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

KING, W. W., Assistant Surgeon. To report, on March 9, 1904, to chairman of examining board at Washington, D. C., to determine his fitness for promotion to the grade of passed assistant surgeon.

MAGRUDER, G. M., Surgeon. Granted leave of absence for two days from February 13th.

MOORE, DUNLOP, Assistant Surgeon. To report, on July 25, 1904, to recorder of examining board at Manila, P. I., for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

RAMUS, CARL, Assistant Surgeon. To report, on March 9, 1904, to chairman of examining board at San Francisco, Cal., for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

RICHARDSON, T. F., Assistant Surgeon. To report, on March 9, 1904, to the chairman of examining board at Washington, D. C., for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

VOGEL, C. W., Assistant Surgeon. To report, on July 25, 1904, to recorder of examining board at Manila, P. I., for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

Boards Convened.

Board convened to meet at San Francisco, Cal., for the examination of an officer of the Revenue Cutter Service, February 13, 1904. Detail for the board—Passed Assistant Surgeon W. G. STIMPSON, chairman. Assistant Surgeon CARL RAMUS, recorder.

Board convened to meet at the marine hospital, Port Townsend, Washington, February 15, 1904, for the examination of an officer of the Revenue Cutter Service. Detail for the board—Passed Assistant Surgeon J. H. OAKLEY, chairman. Passed Assistant Surgeon M. H. FOSTER, recorder.

Board convened to meet at the marine hospital, San Francisco, Cal., March 9, 1904, for the purpose of examining Assistant Surgeon CARL RAMUS to determine his fitness for promotion to the grade of passed assistant surgeon. Detail for the board—Passed Assistant Surgeon W. G. STIMPSON, chairman. Passed Assistant Surgeon RUPERT BLUE. Passed Assistant Surgeon H. S. CUMMING, recorder.

Board convened to meet at Washington, D. C., March 9, 1904, for the purpose of examining certain assistant surgeons to determine their fitness for promotion to the grade of passed assistant surgeon. Detail for the board—Assistant Surgeon General A. H. GLENNAN, chairman. Assistant Surgeon General G. T. VAUGHAN. Assistant Surgeon General H. D. GEDDINGS, recorder.

Board convened for the purpose of examining certain assistant surgeons to determine their fitness for promotion to the grade of passed assistant surgeon. Detail for the board—Assistant Surgeon General L. L. WILLIAMS, chairman. Assistant Surgeon General W. J. PETTUS. Passed Assistant Surgeon V. G. HEISER, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of the Medical Department of the United States Army for the week ending February 13, 1904:

BLANCHARD, R. M., First Lieutenant and Assistant Surgeon. Left Fort Thomas, Ky., February 11th, on seven days' leave of absence.

BLOOMBERG, HORACE D., First Lieutenant and Assistant Surgeon. Relieved from further duty at Camp Jossman, Guimaras, and ordered to Camp Bumpus, Tacloban, Leyte.

CHAMBERLAIN, W. P., First Lieutenant and Assistant Surgeon. Left Cabana Barracks, Cuba, *en route* to Manila, P. I.

DE SHON, GEORGE D., Captain and Assistant Surgeon. Reported for duty at Fort Des Moines, Iowa.

HANSELL, HAYWOOD S., First Lieutenant and Assistant Surgeon. Will proceed to Peking, China, for duty with Legation Guard.

HEARD, G. P., First Lieutenant and Assistant Surgeon. Relieved from further duty at Parang, Mindanao, and ordered to Cottabato, Mindanao, for duty.

HUNTINGTON, P. W., First Lieutenant and Assistant Surgeon. Relieved from further duty at Cottabato, Mindanao, and ordered to proceed to Parang, Mindanao, for duty.

QUINTON, WILLIAM W., Captain and Assistant Surgeon. Ordered to Camp Jossman, Guimaras, for duty.

TURNBULL, WILFRID, First Lieutenant and Assistant Surgeon. Left Fort Monroe, Va., February 9th, on seven days' leave of absence.

WADHAMS, SANFORD H., First Lieutenant and Assistant Surgeon. Will proceed to Iloilo, Panay, for duty.

Promotions.

The following named assistant surgeons have been promoted to captain and assistant surgeons, to rank from January 30, 1904: C. C. COLLINS, LOUIS T. HESS, and WALTER D. WEBB.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 13, 1904:

BRISTER, J. M., Assistant Surgeon. Ordered to the naval hospital, Naval Home, Philadelphia, Pa.

STUART, A., Assistant Surgeon. Detached from the naval hospital, Naval Home, Philadelphia, Pa., and ordered to the *Marietta.*

WHEELER, W. M., Surgeon. Detached from the *Nipsic* and ordered to the *Philadelphia.*

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Births, Marriages, and Deaths.

Married.

GIERING—SHUTLER.—In Baltimore, Maryland, on Saturday, February 6th, Dr. Herman J. Giering and Miss Agnes Shutler.

INGRAM—DAVIS.—In Wilmington, Delaware, on Tuesday, February 2nd, Dr. Earle Hoopes Ingram, of Philadelphia, and Miss Josephine R. B. Davis.

KLOTZ—SAVAGE.—In San Francisco, California, on Tuesday, February 2nd, Dr. J. Bernard Klotz and Miss Gertrude E. Savage.

ROBINSON—KIP.—In Omaha, Nebraska, on Saturday, February 6th, Dr. Ernest Robinson, of Kansas City, and Miss Mary Kip.

Died.

ADLER.—In Devon, Pennsylvania, on Thursday, February 11th, Dr. John Mercer Adler, in the seventy-seventh year of his age.

DODD.—In Cincinnati, Ohio, on Sunday, February 7th, Dr. Charles W. Dodd, in the forty-fifth year of his age.

HARDON.—In Atlanta, Georgia, on Sunday, February 7th, Dr. Virgil O. Hardon, in the fifty-fifth year of his age.

KEYES.—In Keyser, West Virginia, on Thursday, February 4th, Dr. Frank C. Keyes, in the thirty-sixth year of his age.

KREHBIEL.—In New York, N. Y., on Thursday, February 11th, Dr. August Krehbiel, in the sixty-fifth year of his age.

MILLS.—In Columbus, Ohio, on Sunday, January 31st, Dr. J. T. Mills, in the sixty-sixth year of his age.

ROE.—In Woodbury, New Jersey, on Thursday, February 4th, Dr. Joseph B. Roe, in the sixty-ninth year of his age.

VERNON.—In Rushford, Minnesota, on Monday, February 1st, Dr. Harry Scott Vernon.

WHEELER.—In Boston, Massachusetts, on Thursday, February 11th, Dr. Charles Augustus Wheeler, in the sixty-eighth year of his age.

WINTER.—In Kingfield, Maine, on Friday, February 5th, Dr. Fred Granville Winter, in the forty-seventh year of his age.

New York Medical Journal

AND

Philadelphia Medical Journal.

CONSOLIDATED.

A Weekly Review of Medicine

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Original Communications.

TERTIARY SYPHILIS OF THE NOSE AND PHARYNX.*

By W. SCOTT RENNER, M. D.,

BUFFALO. N. Y.

The division of syphilis into primary, secondary and tertiary stages was first adopted by Phillipe Ricord and, although this division is convenient for descriptive and therapeutical purposes, it has no claim to scientific accuracy and is not clinically correct, for, as in other infective diseases, the signs and symptoms of the various stages are often coexistent and thus blend insensibly one with another. Therefore, we must remember that the expression tertiary syphilis is only used for the sake of convenience to express the latest manifestations of syphilis which are more refractory to treatment than the earlier signs.

The signs of the tertiary stage usually appear during the third and fourth year after infection and after all secondary symptoms of the disease have disappeared. They may, however, occur much earlier, during the secondary stage of the disease, as early as a few months after infection, or they may be delayed until some debilitating cause weakens the general health of the patient, sometimes as long as ten, twenty, thirty, and even fifty years after infection. The late manifestations, however, generally occur between the eighth and fourteenth year after infection.

In favorable cases and under proper treatment no tertiary manifestations may present themselves, the patient having been cured during the secondary stage of the disease. Halsund (1) has pointed out that the tertiary manifestations make their appearance on account of want of treatment, insufficient treatment, or treatment commenced too late in the progress of the disease. He found that of 514 cases of tertiary syphilis, 160 cases had had no treatment, 284 had had insufficient treatment, and that only 70 had had energetic treatment.

Tertiary syphilis is a part of either the acquired or the hereditary form of the disease. The acquired form, of course, is most frequently found in adult life, while the hereditary form is most frequently found in children.

Tertiary lesions of hereditary syphilis occur at two periods of child life:

First. In children who soon after birth had secondary syphilis and who have not been properly or successfully treated. In them the tertiary stage is apt to show itself during the second year. It may occur, however, earlier or later in these children, as late, for instance, as in the second class of children about to be mentioned.

Second. As the form of the disease known as syphilis hereditaria tarda or congenita tarda. This form occurs in children whose parents had the disease a long time before their marriage, on account of which the poison had become unusually weakened. This form occurs at about puberty, or more correctly from the eighth to the fifteenth year, although it may be delayed until much later.

This form of latent hereditary syphilis must be distinguished from what Erb (2) has described as the occult form, which is a late form in which there have been no primary or secondary evidences of the disease. This occurs sometimes in women at the climacteric period whose husbands had syphilis before marriage, so that the child or children became infected through the semen of the father and the infection was carried from the child through the placenta to the mother, in whom no recognized manifestations of the disease were found until the tertiary lesions made their appearance at the menopause, probably twenty years after the birth of the child who infected her.

Tertiary lesions of the nose and throat may occur at any time at which other tertiary lesions are found in other parts of the body, but when tertiary manifestations of syphilis make their appearance twenty, thirty, or fifty years after infection, they invariably appear in the nose or throat, and when a patient has a gumma or gummata in the nose or throat later than ten years after infection, one can safely promise that tertiary lesions will not show themselves in other parts of the body later. It is remarkable how frequently it occurs to any laryngologist to see tertiary lesions of the nose and throat in patients who have never had any other tertiary lesions. Many of these patients give no history of a primary or secondary stage. Some of these, of course, are of the occult form, occurring in women at the menopause. Two such women have quite recently come under my observation.

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* Accepted as a candidate thesis for the American Laryngological Association, June, 1903.

Gumma followed by disintegration and cicatrization is as characteristic of the tertiary stage as condyloma is of the secondary stage, or as the hard chancre is of the primary stage of syphilis.

Lesions of tertiary syphilis occur in the nasal, nasopharyngeal or oropharyngeal cavities as manifestations either of the acquired or of the hereditary disease, and both forms may leave evidences of their having occurred in the shape of deformities of the exterior of the nose or of the interior of the nasal and pharyngeal cavities; the degree of deformity depending, not only upon the amount of destruction caused by the disease, but more especially upon the extent of contraction the scar tissue thrown out by the healing process may have undergone. The tertiary lesions here, as elsewhere, of both hereditary and acquired disease, are identical in most respects. There are, however, some distinctive signs not found in the respiratory tract, which distinguish them. Other slight differences are dependent more on the time of life than upon the form of the disease.

The ulceration in congenital syphilis is, however, usually much more rapidly destructive than in the acquired form of the disease.

Tertiary syphilis of the upper air passage occurs principally in the mucous membrane or in the bony and cartilaginous framework of these parts. In the mucous membrane the submucosa is primarily affected by the development of a gummatous change. This change occurs in two forms, viz., either as a diffuse infiltration or as a circumscribed node known as a gumma. Both of these forms of infiltration are at first made up of granulation tissue resembling the granulation tissue of the primary sore. This tissue is mostly made up of small spheroidal cells, but polyhedral and giant cells are occasionally found. Very few blood vessels are found in this new tissue.

The gummata found in the nose, mouth, and pharynx may vary greatly in size, from the size of a grain of wheat to that of a hickory nut. In the tongue and some parts of the body where there is abundance of tissue, gummata are found the size of a walnut or of an apple, but in the mucous membrane of the upper air passages they naturally cannot attain such a size, especially in the nose and pharynx where the mucous membrane is often at the same time the mucous lining of the nasal and pharyngeal cavities and the periosteum or perichondrium of the underlying bony or cartilaginous framework. Here the gummatous process commencing in the mucous membrane may extend to the bone and cartilage, or commencing in the bone may extend to the mucous membrane.

The diffuse gummatous infiltration, like the circumscribed gumma, commences in the mucous membrane. It is simply a superficial infiltration of the membrane which breaks down to form a superficial ulcer. This form of gummatous deposit was first described in 1877 by Schuster and Sanger (3). They described it as a transition stage between a condyloma and a true gumma.

I shall describe in detail the various manifestations of the circumscribed gumma, also known as node or syphiloma, and the diffuse gummatous deposit, with their results and variations in the various parts under consideration commencing in the nose with the circumscribed node or gumma. (I have included in my description the nose, mouth, and pharynx, on account of the intimate relation of the mouth to both pharynx and nose.)

GUMMATA OF THE NOSE.

Gummata are much more frequently found here than is the diffuse form of infiltration, and occur as a rule much later in the course of the disease, frequently ten to twenty years after infection, the patient having in the interim not suffered from any manifestation of the disease whatever. In other cases they occur a few months after infection and before the secondary symptoms have disappeared. Gummata are most frequently found upon the anterior portion of the sæptum and on the lower turbinated bones, but may attack the mucous membrane of any part of the interior of the nose. A gumma here, as on all parts of the mucous membrane, is a flat oval tumor raised considerably above the surrounding mucous membrane, deep red in color. It is covered with an intact mucous membrane, is soft in the centre, from which point it eventually begins to break down to form a characteristic ulcer. Before it breaks down it cannot be distinguished from a tuberculoma by its appearance. It is seldom seen, however, by the physician at this stage because it is not accompanied by any pain. It is easily distinguished from a traumatic hæmatoma of the anterior portion of the nasal sæptum and the abscess which usually follows such an extravasation of blood. Such abscesses are always caused by some injury, such as a blow or fall on the nose, and their formation is always accompanied by pain and some fever. They are almost always bilateral, while the development of a gumma is insidious, without pain, and is usually unilateral. A gumma is sometimes difficult to distinguish from an hypertrophy of the nasal mucous membrane, especially when occurring in the mucous membrane of the turbinated bones (4). Gummata may also be confounded with sarcomata and carcinomata, especially if the surface is smooth. Antisyphilitic treatment will soon clear up the diagnosis in doubtful cases. Usually when the case comes under observation the gumma has already broken down, when the resulting ulceration is characteristic. This ulcer is round or oval in form with sharp cut smooth borders. The ulcer is deep and its base is covered with a thick adherent yellow or yellowish-white deposit of necrotic tissue. The surrounding tissue is very red and very much thickened. The discharge from the ulcerated surface is serous and bloody, and sometimes more or less purulent, and frequently has an offensive odor. The odor is not so characteristic as it becomes when the bone is involved, which will be described later.

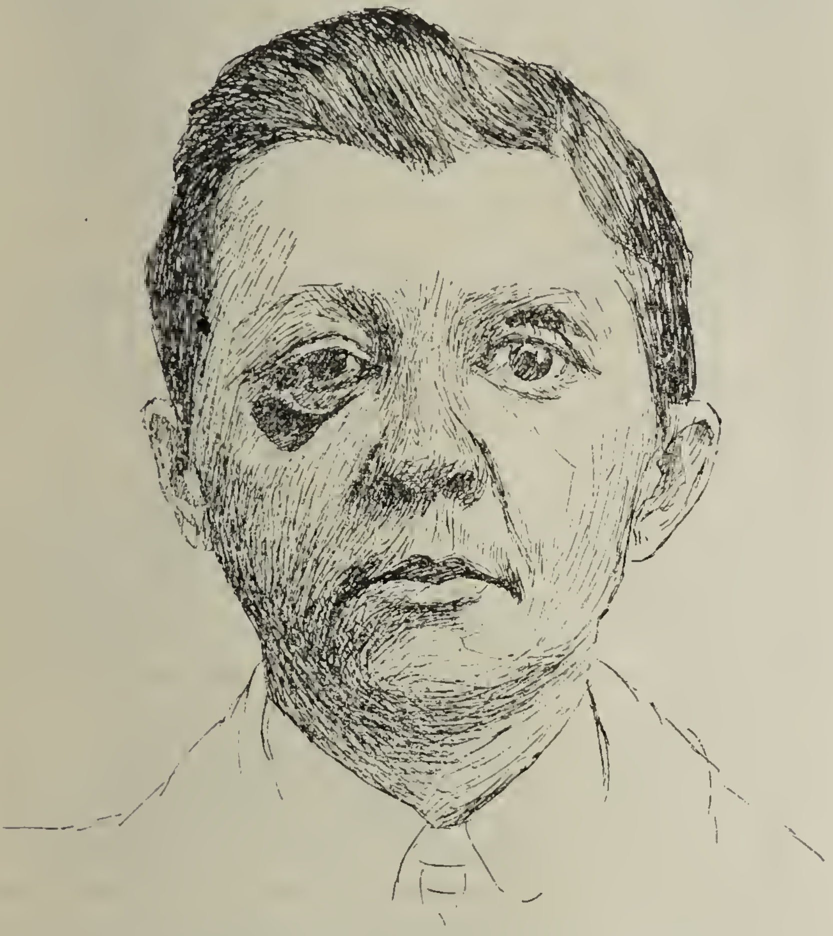


Fig. 1.—A sketch made for the author from a photograph of a patient under his care, where the tertiary disease had extended from the nose into the maxillary and frontal sinuses, causing necrosis of the anterior walls of both sinuses.

When the mucous membrane of the nose is attacked the gummatous process, especially in its circumscribed form, unless promptly arrested by antisyphilitic treatment, extends to the underlying portion of the bony framework as a periosteitis or a perichondritis. In this way but a small portion of the sæptum or of a turbinated bone may be affected. But if the whole interior of the nose is destroyed, we cannot consider that the destruction has been unusually extensive or severe. When the periosteitis is established there is considerable pain, which persists until the pus breaks through, when the pain disappears. The fistula through which pus discharges from such a periosteitis, especially of the nasal sæptum, looks like an ulceration. At the bottom of such an ulceration or fistula denuded bone can be made out with a probe. Such a periosteitis may, like the circumscribed gumma of the mucous membrane over the anterior portion of the nasal sæptum, be mistaken for a traumatic abscess, except that there is not a history of trauma, etc.

Syphilitic periosteitis in the nose is always accompanied by a characteristic odor, which is very offensive. If the case does not come under observation until some time after the formation of a fistula, one will find necrotic pieces of the bony framework robbed of their membranous covering. Some of these pieces of bone may be found lying loose in the nasal cavity, others are probably still adherent. Sometimes individual bones, such as the lower turbinated bones or the vomer, are necrosed entire, which causes difficulty in removing them through the anterior nares. Sometimes the necrosed bones separate themselves and fall into the pharynx and even into the larynx. Death has resulted from such an accident. Or we may not have an opportunity of seeing the case until the sæptum and the turbinated bones have all necrosed and fallen out, when we find the interior of the nose filled with hard dried crusts of mucous and pus more or less offensive in odor, but not having the extremely foul odor which is encountered while there are still portions of necrosed bone in the nose. This destruction of the framework often unites the nasal fossa with the maxillary sinuses and may extend to the outer wall of the antrum and into the frontal sinuses and their outer walls (Fig. 1).

Destruction of the nasal sæptum is almost always of syphilitic origin, especially when the bony as well as the cartilaginous portion is attacked. The cartilaginous portion may be perforated by a simple catarrhal erosion of the part, or lupus or tuberculosis may destroy it. Tuberculosis but rarely at-

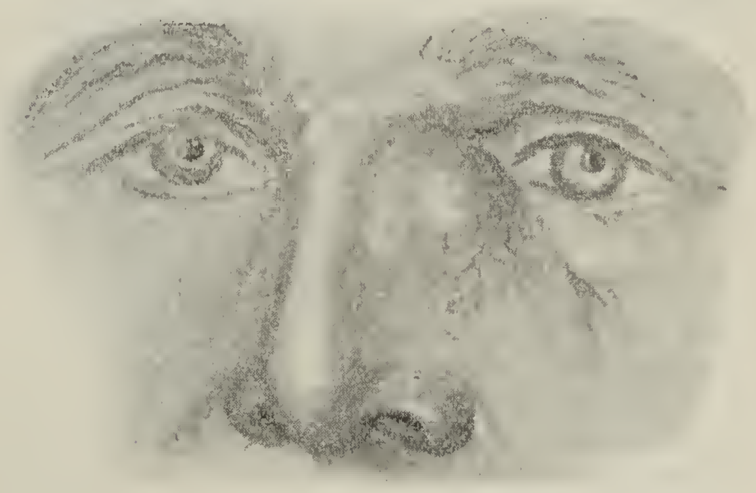


Fig. 2.—Copy made for the author of Fig. 3. Tafel XXXIII. Dr. P. H. Gerber's *Atlas der Krankheiten der Nase.* It represents a periosteal gumma of the exterior of the nose. It occurred in a woman 53 years old, 24 years after infection.

tacks the bony sæptum, the hard palate, or the cervical vertebræ.

Circumscribed and diffuse gummatous formations may attack the external nose. Circumscribed gummata may attack the nasal bones or the nasal processes of the superior maxillary bones (Figs. 2 and 3).

The ossa nasi are sometimes attacked so that the periosteal syphilitic process surrounds them completely and they become completely necrosed. This results in the most severe grade of saddle nose (Fig. 4). As a rule, however, the saddle nose is caused by the contraction of the scar tissue on the inside of the nose, and where there has been no implication of the nasal bones the force exerted by the contraction of the syphilitic scar tissue is then sufficiently strong to overcome the resistance of the outer bony framework of the nose and cause many unsightly deformities, of which the *nez en lorgnon*, described by Fournier, is the most characteristic (Fig. 5). In this particular deformity the upper, bony part of the nose is intact, while the lower, movable part seems to be shoved into it, as the small tube of an opera glass is shoved into the larger one. There results from this at the union of these two parts of the nose a fold of the skin on each side which gives its characteristic appearance to the nose. By pulling down the tip of the nose in these cases the deformity and the folds disappear and the nose becomes straight.

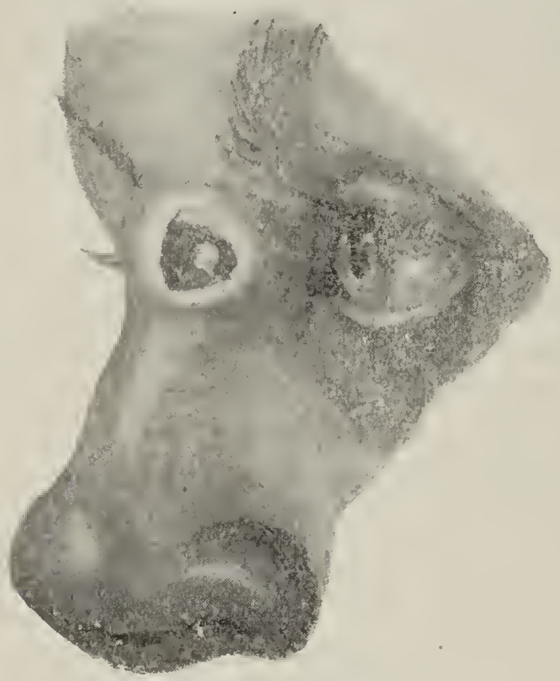
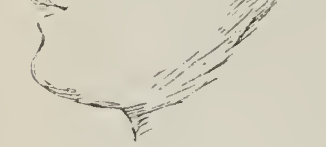


FIG. 3.—Copy of Fig. 4 Tafel XXXIII, of Gerber's *Atlas*. It represents an ulcerated gumma of the exterior of the nose.



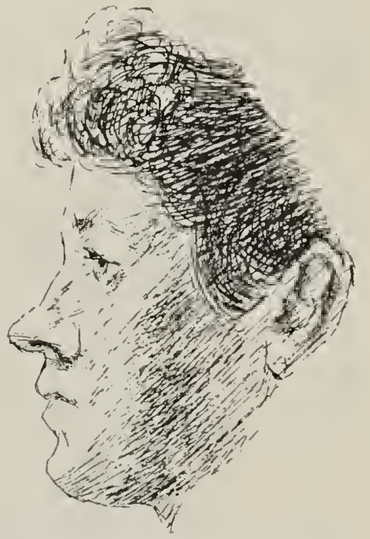


FIG. 4.—Copy of Fig. 1 in *Spatformen* Hereditary Syphilis *in der oberum luftwegen*, by Dr. Gerber (1894). It represents the saddle nose of syphilis.

FIG. 5.—Copy of Fig. 2 from the same source as the last figure. It represents the *nez en lorgnon* of Fournier.

The alæ nasi are not infrequently attacked by the gummatous process. Here it is known as lupus syphiliticus. It is found as a tumor-like enlargement of one or both alæ of the nose. This may be nodular or the whole surface may be uniformly indurated. The surface of such a tumor is blueish-red or copper-red in color. The breaking down of this lupoid form is followed by perforation of the ala of the nose or by an irregular defect of it, or its complete destruction.

The case which I am about to narrate illustrates this condition. It is one of a very few cases of lupus syphiliticus which have come under my observation. It is as follows:

CASE I.—Mr. E. S. came to consult me on June 10, 1902. He stated that he came for an ulceration of the right ala of the nose, which had been treated for some time as lupus of the nose by four different physicians, one of whom was an oculist; the other three were men thoroughly familiar with the lesions of syphilis.

On examination I found a flat glistening scar of the upper lip on the right side which extended in the nose to a perforation of the cartilaginous portion of the nasal sæptum, the borders of which were still ulcerated. The whole of the tip of the nose was much indurated and a small portion of the right ala of the nose was destroyed. The parts about the destroyed part were much indurated. He could remember nothing of having been infected with syphilis, could give no history of primary or secondary lesions. I told him his trouble was of syphilitic origin, although it resembled lupus very much, but that it could be arrested if he followed out instructions. Inunctions of blue ointment and the ingestion of potassium iodide soon benefited him and convinced his physicians, who were personal friends of his, of the nature of his lupoid trouble. His nose was cured in a short time with but little external deformity, and that may be easily corrected by a small plastic operation, which we hope to do as soon as he has been under treatment for a little while longer.

Besides the saddle nose mentioned above, other unsightly deformities of the external nose may follow in the more destructive cases. The nostril may be narrowed or completely occluded by membranous and fibrous adhesions, or the cutaneous portion of the nose, or the tip of the nose, may be pressed down even with the face by becoming adherent to the upper lip; or the nose may become very small on account of the destruction of the tip and alæ by the gummatous process.

The diffuse gummatous infiltration in the nose is much rarer than the circumscribed gumma. It was first described as it occurs in the nose by Chiari, of Vienna (5), and by J. N. Mackenzie, of Baltimore (6), in 1887. Chiari described it as usually occurring on one side of the nose. It occurs here as a considerable thickening of the mucous membrane of the turbinated bones and of the sæptum. It is usually accompanied by a moderate amount of bad smelling discharge. The diagnosis of this diffuse infiltration in the nose is usually very difficult, for the primary infection of the patient had probably taken place years before the patient came under observation, and no association is found in the mind of the patient or physician between the old trouble and the present nasal obstruction. Indeed, in many of these cases the patient has no knowledge of ever having had any syphilitic trouble. Therefore, the present condition of the nasal mucous membrane is quite likely to be mistaken for an ordinary chronic hypertrophic rhinitis, for the thickening surrounding a foreign body impacted in one of the fossæ, or for the thickening of the nasal mucous membrane which so often accompanies a purulent discharge from one of the accessory sinuses of the nose. This form of gummatous deposit here, as elsewhere in the respiratory mucous membrane, breaks down to form what Bosworth (8), in the second edition of his book on *Diseases of the Nose and Throat*, has described as superficial syphilitic ulcer. He describes this form of ulcer in the following words: "This form of ulcer is usually met with on the sæptum, although it is to be found on the floor of the nose or on the surface of the turbinated bodies. Its borders are moderately well defined and the mucous membrane surrounding it is perfectly natural in appearance, there being no areola of redness. Its surface is, however, somewhat depressed in the centre, although it is usually flush with the surrounding membrane. Its surface is covered with a coating of thick, stringy, and grayish-yellow mucopus, usually discolored by the deposit of impurities from the inspired current of air. If the deposit be removed, the exposed surface is found to be of a grayish-pink color."

The difficulties which may arise in recognizing the superficial infiltration in the nose are illustrated in the cases which I am about to report.

Case II.—Mr. K. came to me on January 4, 1896, complaining of nasal obstruction, for which he had been treated for a long time by a physician who suspected him of having no constitutional trouble but lithæmia. His nose had had several operations performed upon the turbinated tissue and the sæptum just previously to his coming under my observation. I found upon examination that these cuts had not healed, that there were superficial raw surfaces upon both lower turbinated bones and upon both sides of the sæptum. These surfaces appeared to be ulcerated, at least they had not the healthy granulating appearance that such surfaces should have after operations of the sort they had been subjected to. This made me suspect syphilis or tuberculosis. I questioned him closely concerning syphilis. He persistently, and I believe honestly, denied any knowledge of having had such a trouble. He had nothing about him except loss of flesh which might indicate tuberculosis, and a thorough search for physical evidence of such a disease in his lungs and elsewhere proved negative, although he was in ill health, was losing flesh, and was unable to do his work. No gummata or scars were to be found anywhere. I refrained from any radical treatment of nasal obstruction of which he still complained, put him upon tonic treatment, but did not give him any antisyphilitic treatment, with the idea of waiting a few days until I had a chance to cure the sores by local treatment if possible, for he was so positive that he had not had syphilis and I was not certain that the ulcerations might not be simply the operation wounds, although I very much doubted it, but felt that if they healed under antisyphilitic treatment, I should not know whether they were cured by the local or constitutional treatment. After waiting but a week he presented himself one morning with a small gumma of the hard palate about an inch from the alveolus in front, and at one side also near the alveolus there was a broken down gumma, the last of which had commenced to form about the time he came to me and which neither of us had noticed, for it was not as large as a pea when it commenced to break down. The one in the median line was not larger than an ordinary bean and of about that shape. Both these gummata had practically developed and the one broken down since I had last seen him, for I had not seen him from the 6th to the 10th of the month. I discovered them on the 10th.

The diagnosis was now easily made and under proper antisyphilitic and local treatment the gumma disappeared. The ulcerations in the nose and mouth healed. The nasal obstruction became absorbed and his general health improved with marked increase in weight in a very short time. After undergoing a proper course of treatment he has remained free from all syphilitic manifestations up to the present time. Neither he nor I have been able to find out when he had the initial lesion.

Case III.—Mr. C. came to me for treatment of nasal obstruction on October 12, 1896. He had a deflected sæptum and both nasal passages were very much obstructed by what appeared to be ordinary hypertrophic tissue. On the convex side of the deflection there was some superficial ulceration. I questioned him very closely concerning whether he had had syphilis. This he denied, and as both his wife and children were healthy and he was too young to have had syphilis a great many years before marriage, I dismissed the suspicion and thought that the erosion was probably due to the formation of crusts over the convex portion of the sæptum. I operated several times on his nose. The relief to the obstruction was not satisfactory; the wounds did not heal readily. I questioned him repeatedly in regard to a history of syphilis, always receiving the same answer. I finally saw him but occasionally and, although he could breathe through the nose, the result was not satisfactory to me, until one day he presented himself for examination and incidentally informed me that his family physician had opened a boil in his mouth just back of the front teeth. This I recognized on examination to be a small gumma. I again questioned him in regard to syphilis. He finally admitted that he had had a sore that his former family physician, who had recently died, had thought might be specific. An experienced dermatologist had said, however, that it was not. This had taken place some time before marriage. He had had no recognized secondary lesions and had had no antisyphilitic treatment. He improved very rapidly under inunctions of blue ointment, the ingestion of potassium iodide, and the use of cleansing washes, and all nasal trouble disappeared. There was also improvement of his general health, which had been more or less impaired. No destruction of any part of the bony framework occurred in either of these cases, although they were both operated upon during the active disease of the parts. He had from time to time small gummata upon the posterior wall of the pharynx and in the nose, but these have not made their appearance since 1899.

CASE IV.—Mr. T. came to me for sore throat and nasal obstruction on July 7, 1897. The throat trouble soon disappeared. He had a spur on the nasal sæptum and what appeared to be hypertrophic rhinitis. I operated for the relief of both these conditions with some relief, which was, however, only temporary. The wounds healed in this case so slowly that I feared that there might be some constitutional trouble. There were no evidences of tuberculosis. I questioned him in regard to syphilis, which he emphatically denied having had. The nasal obstruction was complete and, although I again attempted to operate, each sitting was followed by some loss of flesh and want of appetite, but no fever. Finally he was referred to his family physician for general treatment. This physician, an able and distinguished general practitioner, found evidences of intestinal indigestion, for which he treated him for two or three weeks, until one day he discovered an ulcer on the posterior pharynx wall, just back of the palate. He sent him back to me, when I immediately recognized the ulcer on the posterior pharynx wall to be syphilitic in character. He also had a characteristic syphilitic ulcer on both the left side of the sæptum and the lower left turbinated bone. The ulceration of the sæptum evidently was due to a syphilitic periosteitis, but it was fortunately well back on the sæptum and at a point on which I had not operated. I curetted the ulcer on the sæptum and turbinated bone at once, and touched both the sæptum and the turbinated bone with a strong solution of silver nitrate. I also touched the ulcer in the nasopharynx with the same solution and gave him cleansing washes to use with an insufflation of aristol.

Although he had been treated for months and was almost discouraged, I could now reassure him. In three or four weeks the ulcers had healed, with only a small perforation well back on the bony part of the sæptum, where it can do no harm. He gained in health, strength, and weight, and was for a time quite well, but ultimately became insane and is now in the Buffalo State Hospital, where he has been for a couple of years.[1]

CASE V.—Mr. P. came to me in January, 1898. He had been extensively operated on for an hypertrophied condition of the nasal mucous membrane, which was replaced by superficial ulcerations over the places that had been operated on I had no hesitation in telling him that he had syphilis. He said that he knew nothing of having been infected and for the time being I lost my patient. He returned to me, however, later and said that after leaving me he had consulted both his family physician and the specialist who had operated on him. The first advised him not to take any of my medicine. The specialist admitted that I probably was correct. He did not return to me for several months. When he returned I put him on inunctions of blue ointment and potassium iodide internally. He improved quickly under this treatment, so much so that I turned him over to his family physician in a very short time, who continued the antisyphilitic treatment for some time after to my knowledge.

CASE VI.—Mrs. S., a young woman twenty-six years of age, came on the recommendation of her physician to see me on September 10, 1902. She said that she had suffered from an ulcerated condition of the interior of her nose for a long time. Examination of her nose revealed the fact that both sides of the interior of her nose were extensively ulcerated, over the anterior surface of the cartilaginous part of the sæptum, and the anterior ends of both turbinated bones. These ulcerations seemed to me from their appearance to be breaking down diffuse gummatous infiltrations. I sent her back to her physician for a history of her case. From his letter I gleaned these facts: That nine months before he sent her to me she went to him to consult him regarding a vaginal discharge which he diagnosticated as gonorrhœa, which diagnosis was confirmed by the microscope. Three weeks later she developed a pelvic peritonitis of gonorrhœal origin. This disease was contracted from her husband and she tried to get a divorce on that ground but was denied it. The physician further stated in his note that he considered her virtuous, and that he did not believe that she had ever had syphilis. He also stated that the ulcers in the nose were much like those she had in her pharynx. In an earlier part of his letter describing her personal history he described in the following words a pharyngeal ulceration which he had treated: "About two years ago she had a bad chronic ulcerative pharyngitis which responded well to local and tonic treatment. I was suspicious, at the time, of tuberculosis."

On further questioning my patient as to her past history I learned the following facts: That she had been treated seven or eight years before for a disease of her eyes by Dr. Elmer Starr, an ophthalmologist, whom I called on, and from whom I learned that he had treated her for an iritis which he had suspected was specific, although he had not been able to discover any history of infection. I further learned from her that a short time before she was treated by Dr. Starr she had an attack of what was called typhoid fever. While she had the typhoid (?) she had a swelling of her cervical glands on the right side, which persisted for a long time, and she had in her throat a large ulcer which also lasted for a long time, and which was covered with a white coating. When the coating came away it left a hole which she thinks was in her tonsil. Could a better description of a primary sore of the tonsil be given than she gave me, several years after its occurrence? Her typhoid may have been only the general manifestation of her infection. The moral part of this case is not really important in this paper, but it is interesting from the fact that she was then "keeping company" with the man who subsequently married her and who eventually gave her gonorrhœa. I easily made a diagnosis of tertiary syphilis of the nasal cavity in this case. The nasal ulceration healed readily under cleansing local treatment. She was at once put on inunctions of mercury and potassium iodide internally. She has greatly improved and is now earning her living working in a dry goods store and is keeping up the constitutional treatment.

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[1] Since the writing of this paper he has recovered from the insanity.

Ordinary and characteristic lesions of the nasal fossæ and the exterior of the nose are easily recognized, and they require no histories of cases to illustrate their recognition, but the cases which, as you see, have given the most trouble are those in which there was either an infiltration of the nasal mucous membrane, resembling hypertrophic rhinitis, or where the infiltration was partly broken down into superficial ulceration, a condition which, although only suspicious, would be easily recognied as syphilis if the patients had given a history of having had the primary or secondary disease. Therefore, it became necessary to wait until some characteristic sign showed itself before a positive diagnosis could be made. It is true I might have given potassium iodide or mercury in those cases, but then, even though the cases should have improved, I should never have felt so certain of the diagnosis as I was after I saw the small gummata; and I believe we should have a positive diagnosis before the treatment of the case. It may seem peculiar that so many people should have had the disease and not know it. Some, of course, know it and deny it, but a great many patients have the first and second stages in so light a form that they do not know that they have had anything the matter with them. Then, again, many physicians do not recognize the signs of syphilis on the skin and mucous membrane, although they are well marked. Many ladies have acquired it and it is not thought best by the physician in attendance that they should know the nature of their trouble; or they may have it in the occult form, as we said before, at the menopause.

(To be continued.)

SOME POINTS IN THE CARE AND USE OF THE STATIC MACHINE.

By THOMAS W. BROCKBANK, M. D.,

PHILADELPHIA.

There are probably few single pieces of apparatus in the offices of the modern physician capable of such wide range of usefulness as a first-class static machine, when properly understood and efficiently handled; and there is probably also no single piece of apparatus so disappointing and unsatisfactory when not understood and properly cared for.

In my opinion, a large amount of the dissatisfaction caused by static machines is due to the claims made by manufacturers, and they are all alike in this respect. Take the descriptive catalogue of any dozen makers of static machines and see what they claim for them. You will find that after making an extravagant claim for general superiority over all other makes, they assert that unlike all other machines theirs is not affected by weather conditions, and will work in all climates, at all seasons of the year.

If this assertion were true of any make of machine, and untrue of all others, surely the fortunate possessor of such a machine would have "a thing of beauty and a joy forever." But is it true? To this I would say, most emphatically, *No*—and if makers of static machines would recognize this fact and offer their machines to physicians with the full acknowledgment that certain conditions are necessary for the proper working of the machine, and that it is entirely beyond the power of any maker of static machines to control these in so far as the construction of the machine is concerned; and if they would state the plain, unvarnished truth and, when a machine is sold, instruct the buyer how to overcome these difficulties, there would be much less complaint and discontent concerning static machines, and many a machine that is to-day standing idle and condemned as being no good, would be in a condition to do satisfactory therapeutic work. This applies to all static machines without exception, the assertions of the makers to the contrary notwithstanding.

I read, a few days ago, a copy of a letter written by a physician in the far West, in which he states that after reading an article before a certain medical society on the uses of the static machine, he was surrounded by all present who were owners of static machines, and in wonderment they asked him 'how he did it,' stating that they were unable to get such results and much of the time were unable to get a current from their machines at all.

His answer, according to the letter, was "My machine was made by ———— and Company," leaving the impression that the reason they were not getting results was because they had the wrong machine; and right here I wish to register a most emphatic protest against any such misleading statement, because, as I have said, and I can easily demonstrate it, weather conditions affect all makes of static machines.

I happen to own a static machine made by the same maker as the one owned by the doctor who asserted that the satisfactory class of work done by him was because of his particular make of machine.

I believe the machine referred to to be equal to any static machine on the market to-day, and in some respects superior, but to assert that it is not affected by atmospheric conditions is a mistake. I purchased my machine during the winter months—the most favorable season of the year to expect a machine to work—and in one month from the time it was placed in my office I was unable to get even the smallest current from it.

I wrote to the makers for an explanation, and in reply they asked me to look over the adjustment and see that everything in that line was right. I did this, assuring them that everything was adjusted properly, but that I was unable to get any current.

After considerable correspondence they finally, and very wisely (?), concluded that there must be some cause for the trouble, and that the cause was not in any faulty construction of the machine, but at the same time they did not give any hint as to what the trouble might be.

If they had said to me "the interior of your machine is probably damp," they would have struck the root of the trouble; but, of course, since they, like all other makers of static machines, affirm that their machine is not affected by dampness, they could not well admit the truth after asserting to the contrary.

The fact of the matter was, however, that dampness was the cause of the whole trouble, and as soon as I rendered the interior dry I had no further trouble as long as I kept it so.

Here we come to the practical part of the question: How to keep the interior of a static machine dry. There are only two ways—either locate in a dry climate or use some artificial means of drying and maintain a dry condition.

Of the first method I have had no practical experience, but of the second I have had considerable; and, for the purpose of finding some means more satisfactory than the one I am using, I have experimented not a little, but all to no purpose, so I will not discuss those that have failed, but only speak of the only one that is of real value, namely, the use of *fused chloride of lime.*

This I buy at the laboratory in ten-pound lots, in a hermetically sealed can. The term "hermetically sealed" may sound as though the contents would be dry, and in the ordinary sense this is probably true; but if you put the contents of one of these hermetically sealed cans into your static machine and expect to get good results, then what I have said in this article will not have been of much value to you, for it will prove to be a snare and a delusion, because the lime contains a large amount of water of crystallization—in fact, almost to the point of saturation; to prove this place a pan of it in a hot oven and see it liquefy.

HOW TO PREPARE THE LIME.

If you place it in dishes and put it in an ordinary oven it will take a long time to dry it—as much as two or three days; and, as boiling does not injure it, I place the lime in a large galvanized iron dish pan, place it over a good fire, and boil and bake it until it is perfectly dry—dry as chalk. I then divide it into two parts and place it in two earthen baking dishes, transfer it quickly to my static machine, close the doors tightly, and let stand for one hour. Try this method, and if your static machine has been working badly or not at all (owing to interior moisture), you will be surprised at the improved condition.

I have seen a machine from which not the slightest current could be obtained treated as above described, and in less than an hour it gave off a splendid current with a ten inch spark between the sliding poles.

Another important matter in order to get the best results is to keep your machine *clean* inside and out.

The exterior can be kept clean by a daily dusting and rubbing with a chamois leather. The metal parts and glass plates will in time become coated with a sort of carbon-like substance, which will materially interfere with the proper generation and condition of the current; to overcome this it will be necessary to open the case occasionally, and thoroughly clean all interior parts, including the case. Select a dry day for doing this. Manufacturers direct this to be done with alcohol, taking care not to affect the coating of the plates.

For the past year I have been using gasoline with perfectly satisfactory results. Gasoline will not injure any of the parts, is thoroughly effectual, evaporates quickly, and can be used freely.

During very damp weather, and in humid climates, moisture will collect on the outside of the machine and lower the quality of the current. To remedy this I place under my machine a Bunsen burner, attached by a hose to a nearby gas bracket, and light it, letting it burn for an hour or so—a coal oil lamp will do as well. A trial of this plan will prove its value.

All external metal parts, including electrodes, sliding poles, connecting rods, chains, etc., should be kept clean and brightly polished. The platform should be kept clean and should have solid glass legs not less than ten inches high. The ordinary pegs of wood with a glass cup four or five inches high will not give the best results, and will permit of a great loss of current. Even with the solid glass legs some care is necessary to procure the best results.

On one occasion I placed a patient on the platform, started the machine at a moderate speed, and took in hand the brass point electrode for the purpose of giving a local spray; on approaching my patient I found that I had to hold the electrode within two inches of my patient before any perceptible effect was noticed. At first I was at a loss to account for the condition, as everything appeared to be in good condition.

I pushed the sliding-poles together until a spark passed, and found that I could not get a spark more than two inches in length. I then removed the conducting rod, and at once a splendid flow of current across a gap of ten inches was produced. This proved that the fault was not with the machine, as the output of current was up to the standard and showed that the platform was not affording perfect insulation, and on close examination I found the difficulty to be due to a very thin film of dust on the glass legs, which acted as a conductor for the current and thus destroyed the therapeutic effect.

I report this condition to demonstrate how apparently trivial causes will interfere with the proper working of electric machines, and to show how necessary it is to have everything about the static machine, both inside and out, in perfect condition, in order to get the best results.

Another very important matter which should not be neglected—which is, in fact, absolutely essential to obtain the best therapeutic results and to make it possible to utilize the full current capacity of a static machine—is the matter of grounding. Many physicians neglect this matter altogether and others do it only in an imperfect manner.

Since only one polarity of the static current can be used at any time, it is desirable to create a high potential difference between the two poles; and this only can be done by producing a means of easy and complete escape of the polarity not in use to the earth. To effect this a perfect system of grounding for both poles of the machine and also for the different electrodes is essential.

This grounding must be metallic. Some physicians provide (?) for the grounding of the machine by hooking a brass chain on the indifferent pole and allowing the other end to fall on the floor, expecting the dry and poor conducting material of the floor to carry the current off. This is at the best a very poor method, and is not productive of good results.

My method of grounding is as follows: For the machine I bore a small hole through the floor underneath it, through which I pass a brass chain, and to this I attach a stout piece of copper wire, and in turn I twist the other end of the wire around the main gas pipe; on the other end of the chain a small hook is placed, to connect it with the sliding-pole of the machine which is not in use. This hook can be transferred from one pole to the other, according to which pole is to be used in treatment.

For grounding the electrodes, I stretch a piece of copper wire across my office and attach one end of it by an extension down the side of the wall to the water pipe. To this I attach my active electrode by means of a brass chain with a hook on each end. By this means I produce a perfect system of grounding and increase the therapeutic effect of the current very materially.

Some of your readers may say that I have gone into unnecessary details to express my thoughts, and to them I would say that I am not writing with the intention of instructing those who already know, but in the hope that I may be of some help to a very large number of physicians who own static machines, and who have had little or no instruction in their management or operation; unfortunately there are many such.

There are many other valuable points to be discussed, but they will do for another meal—to be taken after this one has been digested and assimilated.

5530 GERMANTOWN AVENUE.

Wisconsin State Medical Board Examination.—The following physicians have been licensed to practise medicine in Wisconsin after passing successfully the examination held at Milwaukee, on January 12th: Dr. C. J. Schoenfeld, of Chicago; Dr. L. S. Shauger, of Ogdensburg, Wis.; Dr. G. W. Mitchell, of Evanston, Ill.; Dr. Edward A. Robertson, of Milwaukee, and Dr. W. A. Day, of Ladysmith, Wis.

THROMBOSIS OF THE CAVERNOUS SINUS: WITH A REPORT OF THREE CASES.

By HENRY ROTH, M. D.,

NEW YORK,

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Infective thrombosis of the dural sinuses is a well recognized condition, and in recent years has been subjected to successful operations. Those situated at the base of the brain are most frequently involved, and the lateral sinus is the seat of thrombosis in the great majority of instances. Involvement of this sinus is usually secondary to suppurating middle ear disease. Of the various sinuses, the cavernous is the least frequently involved. Dwight and Germain[1] have reported four cases of cavernous sinus thrombosis, and collected 178 cases reported in literature up to 1902, making a total of 182 cases upon which to base an interesting study.

During the past year three cases of cavernous sinus thrombosis have come under the writer's observation, in the service of Dr. Parker Syms, at Lebanon Hospital; they gave the following histories:

CASE I.—Daniel J. M., age twenty-eight years, was admitted to the Lebanon Hospital on May 30, 1902. Family and previous histories are good. For several days previous to the first symptoms, the patient had suffered from pain in the thigh and on the left side. On May 26, 1902, the left side of the face began to swell, and at the same time some redness developed over the left temple. The swelling and redness gradually increased. Patient stated that on the 29th, or the day before admission to the hospital, he had a discharge of pus from the nose. He had considerable pain in his head, felt very sick, and his condition grew steadily worse. When admitted to the hospital his temperature was 104° F., pulse 130, and respirations 36. The patient had the appearance of one suffering from profound sepsis. There was a painful, diffuse swelling, extending over the left cheek, left temple, and ear. The entire swelling looked red and had the appearance of a diffuse phlegmon. Behind the left eye there was an area of apparent fluctuation, but on aspiration no pus could be obtained. Alcohol dressings were applied over the face. The mouth was irrigated with pyrozone every half hour, as there was a decided caries of several molar teeth in the left upper jaw. Whiskey and strychnine were administered every three hours. On the following day the patient complained of a great deal of pain in his head; the redness of the face had not changed to any extent; temperature was from 102° to 105.2° F., pulse from 112 to 120, and respirations from 24 to 40. A swelling of the lids of the left eye was observed, some œdema and ecchymosis of the ocular and palpebral conjunctiva on the same side. Examination of the eyes by Dr. William Cowen revealed a diplopia and bulging of the eyeball. On June 1st, the patient began to cough, was somewhat delirious, attempted to get out of bed, and urinated involuntarily. Under ether anæsthesia, he was operated upon by Dr. William Cowen and Dr. Parker Syms. An incision was made over the left eye, in line with the eyebrows. The orbital cavity was explored behind the globe of the eye, but no pus was found. The frontal sinus was perforated without discovering pus. The antrum of Highmore was perforated above the first molar tooth, on the left side, but without getting any pus. On June the 2nd, 1902, the patient was very delirious, vomited, refused sponge baths, temperature was 104.2° to 105.6° F., pulse 120 to 148, respirations 32 to 50. There was a marked cough, but very little expectoration; patient was more and more delirious. June 3rd, the temperature ranged between 103° to 106° F., pulse 136 to 152, respirations 40 to 52, profuse perspiration, very marked delirium, involuntary urination; patient was rapidly growing worse. After the first appearance of the eye symptoms, they became gradually more prominent, and two days after the first signs in the left eye, both eyes were bulging, upper and lower lids œdematous and ecchymosed; some opacity of the left cornea was present for about a day before the patient died, on June the 4, 1902. No permission could be obtained for an autopsy.

CASE II.—Wm. L., aged six years, was admitted to Lebanon Hospital on July 23, 1902. The following history was obtained from the father: Eight days before entering the hospital the mother noticed a small pimple on the tip of the nose. Three days later an abscess developed over the left leg, near the external malleolus. The abscess of the leg was incised and drained by the family physician. On the day before admission, the patient became delirious, and rapidly passed into a state of coma. On examination a small furuncle was found on the tip of the nose, with a red line running from it up to the base of the nose. Both eyes were bulging, and the upper and lower lids on both sides were œdematous and ecchymosed. The child was very delirious and highly irritable; temperature 105° F., pulse from 120 to 160, respirations from 30 to 60. The packing being removed from the incision in the leg, revealed a periosteitis. The patient was anæsthetized and operated on by Dr. Roth. The furuncle on the nose was incised; pus was found to extend towards the base of the nose. The line of redness was incised and traced into the right orbit. Both upper lids were incised, some pus being found in the right orbit behind the eyeball. Both orbits were drained. As there were a number of lines of redness extending on the forehead, these were incised and drained. After the operation, 10 c. c. of antistreptococcus serum were administered. In spite of active stimulation and the administration of bromides with chloral, the patient became worse, had several convulsions, was very delirious, and died on July 24th at 4 a. m. Permission for an autopsy could not be obtained.

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[1] *Boston Medical and Surgical Journal*, May, 1902

Case III.—John H., aged seventeen years, was admitted to Lebanon Hospital, July 22, 1902. Five days before patient entered the hospital, he noticed a swelling on the left side of the upper lip. This being pustular, was incised and drained. Two days before admission, he noticed some pain in the back of his head, and some stiffness of the neck. When admitted to the hospital, he presented nothing unusual about the lips or face, with the exception of a small crust on the left side of the upper lip. On the 23rd, his temperature ranged from 105° to 103.2° F., pulse 114 to 112. He complained of pain in the back of his head, was very delirious, and said that there was something the matter with his left eye. He had rigidity of all the postcervical muscles; some dilatation of the pupil. The icecap was applied to the head and cold applications to the left eye. He had shown, on July 22nd, a swelling of the upper and lower eyelid of the left side, together with some redness and twitching of the eyeball. On July 23rd, the right eye began to show the same signs—swelling, discoloration of the eyelids, and bulging of the eyeball. His temperature, on July 24th, ranged from 103.2° to 105° F., pulse 96 to 84. On the same day, he began to show signs of sphincteric relaxation. On the 25th his temperature ranged from 104.6° to 105° F., pulse was 84 to 72. On the 26th, temperature was 105.2° F., pulse down to 84; had convulsions of the left hand and Cheyne-Stokes respiration. For several days previous to his death he was very delirious, and had to be restrained in bed. There was decided rigidity of the neck, and some retraction of the abdominal walls. No permission for an autopsy.

A study of these cases shows that, in each instance, the primary cause was an infection, generally considered trivial. In the first case, a carious tooth in the upper jaw was undoubtedly the starting point for a fatal infection. In the second case, the thrombosis could be traced back to a furuncle on the nose, and in the third case, a furuncle on the upper lip, which was incised early, must be assumed as the point from which the infection spread along the venous blood current up to the cavernous sinus.

These cases demonstrate the danger and gravity of infective lesions about the face, and of the great importance of prophylaxis in treatment. Sepsis was most pronounced in the first case. Cerebral symptoms were marked in all, but of greatest diagnostic value were the eye symptoms. From observation of these patients, the writer is forced to consider thrombosis of the cavernous sinus a very grave and fatal disease, which is usually secondary to some infection about the face or mouth. It remains a source of regret that a post mortem examination was not permitted in any of the cases. The causative agent, in the great majority of cases, is the staphylococcus aureus or albus and the streptococcus. The infective process may spread by contiguity of tissues, but, in most instances, it is by continuity of the inner coats of the veins or the neighboring sinuses. The infection spreads through the branches of the angular, supraorbital, or frontal into the ophthalmic vein and then to the cavernous sinus, or through the pterygoid plexus toward the dental and maxillary veins. The primary lesions which may be followed by thrombosis of the cavernous sinus, are furuncles, carbuncles, cellulitis, erysipelas of the face, nose, or upper lip, dental caries, alveolar abscess, or orbital cellulitis.

In 182 cases, studied by Dwight and Germain,[2] the eye was the source of infection in four cases, the nose in nine, the mouth in fourteen, the face in thirty-four, and the lips in two cases. Phlebitis develops in the infected region and spreads up to the cavernous sinus, where a thrombus forms, which rapidly extends to the sinus on the opposite side or to one of the other basal sinuses. The thrombus breaks down, and infected particles are carried into the general circulation, giving rise to pulmonary infarctions or pyæmic abscesses. Meningitis or brain abscess may develop by contiguity of tissues.

The symptoms of cavernous sinus thrombosis are frequently obscured by those of the primary lesion or of a coexisting meningitis and cerebral abscess. The original infection gives rise to septicæmic symptoms, which are aggravated by the involvement of the sinus. A decided change for the worse takes place and the patient assumes the appearance of one extremely sick. The temperature will be very high and may be marked by pronounced remissions, especially if a pyæmic condition develops. This will be associated with chills and profuse perspiration. The pulse is usually rapid but, as a result of brain pressure, may become slow. As a result of dissemination of septic emboli, local signs and symptoms may appear, especially pulmonary, as in the first of the reported cases. Headache is an early and prominent symptom and is very severe, particularly where meningitis is present. Vomiting occurs as the result of cerebral irritation. Convulsions were present in one of our cases. Delirium is marked and may be violent, and may change to mania. Gradual stupor develops, followed by coma, from which the patient may never rally. The most characteristic symptoms and signs of cavernous sinus thrombosis are the result of stasis in the ophthalmic vein and its branches. Interference with the return flow in these vessels gives rise to eye symptoms, which are pathognomonic of the condition. Swelling of the eyelids, ecchymosis and œdema of the skin and conjunctiva on the affected side, are the first indications of involvement of the cavernous sinus. The superficial veins may be dilated and appear as red lines which are painful and tender on pressure. Bulging of the eye develops soon after the first appearance of the local signs, as the result of stasis in the orbital vessels; the latter condition, in turn, gives rise to dilatation of the retinal veins; choked disc may be present toward the end; the cornea may be hazy, and ulceration is not unusual. Pressure upon the motor nerves of the eye gives rise to diplopia and complete immobility of the eye, and loss of sight is a possible symptom. Photophobia and pain in the eye may be present. The pupil is at first small and later is fully dilated. These eye symptoms are at first unilateral. But as the thrombosis rapidly spreads to the opposite sinus, they become bilateral, and the picture, once seen and appreciated, can never be forgotten. The eye symptoms may be caused by a postbulbar phlegmon or abscess, which eventually may lead to thrombosis of the sinus. In orbital cellulitis, however, the septic symptoms will not be quite so severe, nor will the changes in the eye be quite so pronounced, and finally, the condition is usually unilateral. Some involvement of the meninges is almost constant, but a differential diagnosis between thrombosis and a meningitis may be made by the absence of eye symptoms. Furthermore, the pyæmic symptoms will be lacking, chills may be absent, and convulsions will be more frequent with meningitis.

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[2] *Boston Medical and Surgical Journal*, May, 1903.

As remarked above, cavernous sinus thrombosis is a very grave condition, and Dwight and Germain,[3] in concluding their study, state that "it is an extremely fatal condition. If not always fatal, it is always serious, and fatal in the vast majority of cases."

The three patients whose cases are reported died within ten days from the onset of the disease, as the result of exhaustion or septicæmia.

The treatment of cavernous sinus thrombosis has so far been unsatisfactory, and most observers admit that, once the condition has developed sufficiently to be recognized, the patients are beyond hope. When the eye symptoms appear, the patients are usually profoundly septic and in a precarious condition which, in most cases, precludes relief from any surgical operation. Various operations are recommended, such as free incisions, drainage of the orbit, and even enucleation of the eyeball with curetting of the orbit. All these measures, however, do not attack the seat of the trouble, and can be of very little value.

In the first of Dwight and Germain's cases, an intracranial operation was performed. Through a Krause incision, the cranium was opened, the dura incised, the temporal lobe raised and the cavernous sinus incised with a narrow bistoury. This was followed by the escape of dark semiclotted blood. After packing with gauze, the œdema and exophthalmos improved immediately, but the patient died six hours and a half later.

Dwight and Germain cite an operation performed by Hartley,[4] on a patient of Knapp's. This operation was performed a month after their own. A thrombus was removed from the sinus, which, on microscopical examination, proved to be a soft, round-celled sarcoma. The patient lived for three months after the operation. The writer admits that he was unaware of these operations when the reported cases were under observation, otherwise, he might have attempted to open the sinus in the third patient. In the other two, sepsis was most pronounced, and the condition such that a Krause-Hartley operation was out of the question and gave little promise of relief. This is a formidable operation, but considering that the condition is practically hopeless, it would seem perfectly justifiable and the only rational procedure.

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THE NECESSITY OF A RELIABLE SIGN OF COMPLETE ANÆSTHESIA.

By CHARLES S. WHITE, M. D.,

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From daily observation it is apparent to most of us that the administration of anæsthetics is receiving more attention than formerly, yet we are witnesses to the fact that many operations are attempted, interrupted, or actually completed, while the patient is but partially under the anæsthetic. This, in some instances, is due to the impatience or zealousness of the operator, but in the preponderance of cases the fault is with the anæsthetist, who informs the operator that the patient is ready for incision, and just as soon as the knife is used the patient cries out, makes tense the muscles, or ineffectually attempts to free himself. We know that penetration of the skin elicits more pain than the same trauma inflicted upon muscular tissues, but if the subject for operation is thoroughly anæsthetized, no evidences of incision should be manifested by reflex act. We say the patient feels no pain at such a time, so what does it matter? Even though the pain be not recorded in a memory cell, the shock of such an operation is increased, the operation is prolonged, and the surgeon (and this applies especially to abdominal work) has a new force to contend with, namely, the tense recti muscles, and it is surprising how great the resistance these guardians of the abdomen offer, and how the hand is fatigued in battling with them. It is the practice of most operators, when such a condition is present, simply to defer their work until the patient is absolutely relaxed, knowing full well that such a procedure insures better, cleaner, and faster work.

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[3] *Boston Medical and Surgical Journal*, May, 1902.

[4] *Archives of Ophthalmology*, 1900, p. 77.

No one accustomed to the use of chloroform and ether depends upon any one reflex or condition to ascertain the patient's condition, but relies to a great extent upon the pupils, pulse, respiration, color, movements of the eyes, rigidity, and general appearances collectively, to post him. Nevertheless, he sometimes finds himself in a quandary, and for a few seconds is unable to differentiate between the cyanosis and weak pulse of anæsthetic poisoning and the same phenomena due to nausea. Hippocrates himself would be puzzled, and we should not be astonished because inexperienced anæsthetists lose cases which might have been saved by prompt measures. There is such a small percentage of men who have received instruction in this important department of surgery yet who endeavor to administer anæsthetics, that the mortality is not surprising.

Is there any one sign by which the anæsthetist can tell in every case that the patient is thoroughly under and relaxed before an incision is made? My experience leads me to say there are no positive signs in all cases by which we can be guided, though general rules apply to many. The loss of the corneal reflex has been used for years as an indication of the anæsthetic state, and it is depended on to this day by a great many men. I would characterize the practice as unscientific and useless, and the application of this test a score of times during a single operation is postively barbarous. In children, especially, it is unreliable. We now hear little of the "Simpson snore," but that was said to be a good guide. The condition of the pupils is probably most to be depended upon, but any anæsthetist of wide experience will not place implicit confidence in the movements of the iris. The classical signs are large pupils, reacting to light, partial anæsthesia; small pupils, contracting slightly or not at all to light, moderate to deep anæsthesia; and wide pupils not reacting, profound and dangerous anæsthesia. We may say that the pupils, as an index, stand in the same relation to anæsthesia as the pulse does to fever. While, in the majority of cases, an accelerated pulse *does* indicate fever, how many physicians are willing to dispense with their thermometers? The pupils may be a valuable asset in nine out of ten cases, but that is far from perfection. I am confident that my experience is not exceptional, but the pupils in so many cases have been misleading that we need a sign more constant. In several cases in the last six months, the anæsthetic given slowly, never were contracted pupils produced, notwithstanding that the patient was undoubtedly under the influence of chloroform; and in another instance, in order to keep the patient relaxed, the iris was scarcely visible and did not react to light, while the pulse remained good and no especial evidence of shock was reported subsequently. In many cases, I have announced, after carefully noting small pupils, that the patient was ready for operation, and have been quite crestfallen on hearing mutterings as soon as the incision was made. In circumcision cases this is not rare. Other anæsthetists have had similar experiences, and I know of one instance in which a house physician was assaulted by a colored woman who, he thought, was "under." Simply because the patellar reflex is lacking or the jaw clonus is present, we cannot say that a pathological condition exists. The rule holds good with the action of the pupil. Occasionally the pupils are irregular, and in another instance adhesions may be an obstacle to the free action of the muscle, and in highly nervous or sensitive individuals, the iris may be most capricious. All in all, this is a guide that is far from infallible and entirely too much confidence is placed in it.

A sign which has appeared more constant, is the stretching of the sphincter ani; the patient if deeply anæsthetized remains perfectly quiet and breathes naturally during this period; but for obvious reasons this test is not applicable in all cases.

Anæsthetists need a sign upon which they may place the utmost reliance and presence of which may justify them in saying fearlessly to the surgeon, "He is ready." It would prove a boon to the surgeon, the patient, and anæstheist, and it remains for intelligent observation to detect one.

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The Anglo-American Medical Association of Berlin, realizing the difficulties which beset the path of the stranger, has been organized to place its services at the disposal of physicians intending to study in Berlin, who are cordially invited to attend the weekly meetings. Any information regarding work to be had in Berlin will be gladly furnished by the president, Dr. J. H. Honan, Albrecht Strasse, 22, and by Dr. Albert J. Mayer, Dr. David Shannon, or Dr. William W. Graves.

FRONTAL SINUSITIS AND OPHTHALMOPLEGIA INTERNA PARTIALIS.

By H. MANNING FISH, M. D.,

NEW ORLEANS.

Much has been written of late in regard to diseases of the accessory sinuses, and very naturally by the rhinologist. In this article will be presented some cases described more especially from the standpoint of the oculist, as possibly he will note some symptoms and conditions that the former would overlook. I will cite several cases, acute and chronic or latent with exacerbations, the majority of which came to consult me as an oculist.

Case I.—Miss H., age twenty-three years. First visit, March 15, 1903, on account of her left eye, which pained continually for three days, worse by near work and in bright light; deep-seated continual pain in bone over the eye, severe enough to prevent sleep the two preceding nights; marked œdema extending up on to forehead around the eye and almost down to the upper lip, both lids so swollen as to be nearly closed, parts very red and angry looking. Pinching the skin produced but little pain, but tapping over the frontal sinus and pressure over the sinus and in the upper inner angle or orbit caused intense pain; pressure over the antrum of Highmore and on the upper gums (she had no upper teeth) was painless; conjunctiva injected; no difference in size of pupils (no anisocoria). Right eye and right side of the face normal in appearance; no pain on tapping or pressure tests. Eye excursions normal. No constitutional symptoms. Far point for each eye, 50 cm., she accepted a—1 D., each eye. Near point right eye 18 cm., left eye 35 cm., direct and consensual light reaction painful (left eye). Patient said her distant vision was always good until she had the present trouble, when it became blurred for a few days, pseudomyopic, so atropine was instilled in each eye. Nasal examination; left side, mucous membrane in upper part of passage hyperæmic, middle turbinal swollen compared with the right, and merely touching it with blunt probe produced hæmorrhage, no discharge, no history of polypi or discharge. After cocainizing I probed and syringed left frontal sinus. March 7th, no change and patient reported another sleepless night; same treatment. March 9th, marked improvement, swelling reduced, parts not so red and angry, patient slept somewhat on Saturday night, and well on Sunday night. There was a clear serous discharge and a small polyp in the fissura semilunaris; I removed the polyp and syringed again. March 10th, redness and œdema entirely gone, conjectiva clear, no more pain, and tapping and pressure produced none; fissura olfactoria and fissura semilunaris now normal or reestablished; I removed another small polyp from latter. March 27th, near point with glasses (+ .62 and + .75) 14 cm. for each eye, case discharged.

Case II.—Miss F., twenty-two years of age. Had worn with comfort for months glasses correcting her hyperopia; her record showed, under date of February 18, 1902, near point with glasses 12 cm., or normal for each eye. January 12th, patient complained of pain in and about left eye for the past six days, unilateral headache, could not read five minutes, etc. Outward appearance of left eye normal, reaction to direct and consensual light reflex painful, no anisocoria, fundus normal; near point left eye 28 cm., right eye 14 cm.; no history of trauma. During the next two weeks patient called six times, symptoms unchanged; near point, left eye, taken each visit, varied between 30 and 35 cm.; pressure test and tapping test sometimes painful, but never severely so, nasal examination frequently made absolutely negative, even as to hyperæmia. Several attempts under cocaine to probe the frontal sinus were fruitless, as the anterior end of the middle turbinate projected very far forward and its removal was advised, and on January 24th, operation was attempted, but unsuccessfully, owing to cocaine poisoning. January 28th and 31st, symptoms less severe; near point left eye 18 cm. each time. February 4th, left eye, lacrymation; near work impossible; near point, 29 cm. February 9th, 27 cm.; 11th, 24 cm.; 14th, 27 cm. February 18th, patient complained of such pain in the left eye (near point 30 cm.) as to be unable to sleep, and as a palliative, atropine was given her to take home and instil for two days. February 21st, complete internal ophthalmogplegia, no pain. February 28th, pain commencing again. March 4th, severe pain in left eye, operation consented to. March 14th, near point, right eye, 15 cm.; left eye, 30 cm. (estimated); steady pain in left eye; tapping test and pressure test, slight pain left side; both eyes normal in appearance, pupils alike in size. Removed anterior end of the middle turbinate under chloroform anæsthesia. March 19th, I probed and syringed left frontal sinus; near point, right eye, 11 cm.; left eye, 10 cm.; no pain in or over left eye on tapping test and pressure test. Sinus was syringed on five or six visits. Near point left eye, taken repeatedly during four weeks following, was always normal. Patient reported ability to do near work and an absence of the old constant pain in and over left eye. A slight whitish discharge characteristic of an open empyema was frequently noticeable after the parts were entirely healed, showing that the sinus was discharging and a wash was given to use at home.

Case III.—Young man, twenty years old. First visit November 11, 1902. Patent empyema of two years' standing of each frontal sinus. Daily syringing and injections of a germicide. Every day when the young man came there was a stream of pus running down between the anterior end of middle turbinate and the external walls in each nostril. November 26th, he complained of pain in his left eye from near work, and said his left cheek was swollen. The lower lid and the tissues under it were œdematous and somewhat red; they were normal the day before when I treated him. Pressure tests on all orbital bones, both sides, negative. Examination of the right nostril showed the usual stream of pus, while in the left nostril (fissura semilunaris) there was no running pus. Syringed both sinuses. November 28th (did not see patient on the 27th) the pus stream was again running in fissura semilunaris in each nostril. The œdema and redness, together with the eye symptoms, were entirely gone. Some thick pus had dammed up the left frontonasal duct; the secretion, pent up but twenty-four hours, had caused a pressure stasis and asthenopia, which quickly disappeared on the reestablishment of drainage. January 22, 1903, case discharged. No recurrence of asthenopia or œdema to present writing.

Case IV.—Young lady referred to me by Herr Dr. X., when I was an assistant in a Vienna clinic. She was the worst sufferer from acute sinusitis I ever saw. For three days and nights she had suffered from the most intense pain in her forehead and eyes; sleep has been out of the question, and she was nearly hysterical when I saw her. There was no œdema, eyes injected and heavy, lacrymation, near work impossible. On account of her pitiable condition I did not subject her to full examination, an unnecessary procedure, as a slight tap over each sinus produced acute pain; this and the history of the sudden onset after a cold indicated the diagnosis of the case. The doctor told me that he did not think I could do anything with her, as she was beside herself from suffering and anxiety, and advised me not to attempt any treatment that day; so I did nothing more than use the speculum and insert gently a cotton-wound probe, assuring her that I would not hurt her any more the next day and surely would relieve her. I found the nasal passages perfectly normal, save the middle turbinate swollen on each side; no discharge. The following day, I placed a pledget of cotton dipped in cocaine in the fissura semilunaris, probed and inserted a cannula and injected a little water into each frontal sinus. She returned the next day another person, entirely relieved of her symptoms. I syringed again and dismissed the case.

Case V.—Student of Tulane College, age seventeen years, called October 17, 1903, to have his eyes tested. For the past few days, finds it impossible to study, cannot read five minutes, has severe pains in and over the eyes, especially in the morning, which are worse when leaning forward, light hurts his eyes, pains in the head irrespective of any attempt to do near work, though this aggravates his symptoms. Three years ago had the grippe, when he had the same severe symptoms for three days, eye lids puffy at that time. A year and a half ago had similar trouble during an attack of the measles. In the last few months has had frequent nose-bleed, lids often puffy (fifteen times or more), and has been able to study only at times without trouble; symptoms of eye strain were frequently present to a greater or less extent. Right eye, vision 20/30, which a minus glass increased to 20/20, near point, 30 cm.; left eye, vision 20/20, near point, 32 cm. Neuralgic pains about the eyes, forehead, temples, and vertex; severe pains all about each frontal sinus on pressure. Told to call on Monday, when I would examine his nose. October 19th (Monday), same picture; each near point removed 31-32 cm., and I found the lower turbinates greatly swollen, the middle turbinates red and tender, although cocainized, the left one soggy and completely filling upper nasal passage. I probed the left frontal sinus, and in less than an hour I took the near point again; right eye, 31 cm.; left eye, 9 cm. October 20th, patient reported a profuse yellowish discharge from left nostril, coming on soon after leaving my office the day before and continuing all the afternoon; complete relief from pain and headache on left side; right side, neuralgic pains as before. Near point, right eye, 32 cm.; left eye, 10 cm. I tried to probe on the right side, but did not succeed. October 31st, same condition as day before; near point, right eye, 26 cm.; left eye, 10 cm.; left side, both turbinates present normal appearance, lower one not swollen and middle not tender to touch. I succeeded in probing right frontal sinus. Patient did not call until requested to do so, on the following Saturday, the 24th. He had returned to college entirely relieved of all his symptoms, had had the same foul discharge on the right side the day following last treatment. Near point, normal 9-10 cm., each eye, and no trouble to study. This patient at seventeen years of age with a normal or emmetropic eye should have a near point of 9 cm., giving him an accommodation range of eleven dioptres ($100 \div 9 = 11.$ D.). Frontal sinusitis reduced his range to a little over three dioptres ($100 \div 30 = 3^1/_3$. D.) or to less than $^1/_3$ the normal. He had a slight amount of astigmatism. This patient was given no glasses, his eyes were not "treated," in fact nothing was done, save drainage of the frontal sinuses.

The most constant, hence the most often complained of, symptom of a frontal sinusitis, acute or latent with exacerbations, is eyestrain or asthenopia consequent to an accommodation paresis.[1]

In Case II it was the chief symptom present. Tapping tests and pressure tests made frequently were often negative and never caused more than slight pain, no more than one sometimes finds by pressing or tapping the same region of a patient suffering from simple eyestrain. Under atropine her symptoms practically all disappeared, the pathological condition of the frontal sinus severe enough to reduce her amplitude of accommodation to $^1/_3$ the normal caused her no discomfort when the ciliary muscle and sphincter iridis were at rest. Nasal examination always negative. Aside from an occasional slight pressure test pain, she had no symptoms whatever on which to base a diagnosis, save those consequent to the ophthalmoplegia interna partialis. She had accepted her glasses for months. Under date of February 18, 1902, her near point for each eye was 12 cm. In January, 1903, unilateral asthenopia suddenly appeared, there was a marked recession of the near point of the left eye; it remained at 25 to 35 cm. (with glasses) continually during several weeks, with the exception of an interim of two or three days when it was 18 cm.; on establishing drainage of the frontal sinus it returned to 10 cm. and remained there. The right near point was always normal.

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[1] In the original article I said quite a little on the symptoms and therapy—on the symptoms because in subacute cases they are so little known, and the therapy because I advocate a more conservative treatment than that commonly adopted. Owing, however, to the length of the paper, I have omitted those remarks, reserving them for future publication.

Case III, with a purulent flow from each frontal sinus of two years' standing, had no symptoms of asthenopia until the flow was temporarily checked, when asthenopia and œdema appeared at once and as quickly disappeared on the reestablishment of the flow.

In regard to the frequency of sinusitis, or more particularly closed sinusitis, I think it occurs much oftener than the literature would lead one to believe. Most of the published cases are of the severe type, with one or more of the following symptoms: severe neuralgic pains, fierce headaches, œdema, redness, epistaxis, exophthalmus, tenderness on pressure or tapping on the orbital bones, orbital infiltration or perforation, fistula, paralysis of some nerve controlling the excursions of the eye, or in purulent infections, some constitutional symptoms, such as chill, fever, loss of appetite, vertigo, nausea, and vomiting, etc. The mild cases do not figure at all. But we have seen that a sinusitis that can cause a distressing asthenopia may have no other symptoms, save neuralgia, and even this symptom may be entirely lacking. With the above picture in mind (of the severe type as generally published) the result is that, in a mild case, sinusitis may not even be suspected, and, if it is suspected, and there are found none of the stormy symptoms, it will often not be diagnosticated; the milder cases, with but an occasional attack of asthenopia or neuralgic pains and no corroborative symptoms, are very apt to be overlooked. I wish to especially emphasize this point, namely, that a sinusitis may not be manifested by a single symptom, save an exhaustion of accommodation or a recession of the near point, and for this reason it may not be diagnosticated. I have had several just such cases. One little girl, out of school a year and a half on account of weak eyes, with a near point, one eye of 30-33 cm., had no symptoms whatever of sinusitis, save the recession of the near point with its consequent unilateral asthenopia. After treating the frontal sinus, same side, the near point was 7-8 cm. Other eye always normal. Had I not known this fact I should not have had the result in this case that I did have; no amount of treating her eye would have done any good. Many cases have been disclosed in autopsies, which were never suspected *in vivo*. Hajek (1) cites cases accidentally discovered.

That there is often a failure of diagnosis, especially in mild cases, is not surprising when we consider two points—1st, there is frequently an almost complete, and, at times, an entire absence of any nasal diagnostic symptoms, there may be an absolutely negative finding by the rhinologist, and 2nd, the symptoms, in the acute stage and during exacerbations, manifest themselves especially in and about the eye, and the writers of works on ophthalmology do not, as a rule, touch the nose or any of its appendages. I once saw a case in a foreign eye clinic of a woman with exophthalmus, redness and marked œdema of both lids and extending over the forehead and cheek, frontal pain and tenderness to touch, all symptoms unilateral and sudden in onset, no constitutional symptoms. Opposite side normal in every respect. The chief of the clinic said it might be due to sinusitis and asked an assistant, a rhinologist, to make a nasal examination, and his report was negative: "no secretion." This "negative finding" I thought was more of a positive finding in favor of a sinusitis; had there been a nasal secretion there probably would have been no venous stasis. I afterwards asked the rhinologist if he had ever done any sinus work. His reply was again negative. This patient was not seen again.

I find sinusitis to be a very frequent cause of ophthalmoplegia interna partialis, in fact a paresis is almost invariably present to a greater or less degree. I have seen so many cases of accommodation affection from sinus involvement, and that, too, beyond the peradventure of a doubt, as their accommodation range and power were restored to normal by drainage or ventilation alone (in one case the near point of 30 cm., taken immediately before treating the frontal sinus, returned to 9 cm. within an hour) that I now look at once for a sinus involvement in all cases of diminution of range or power in emmetropia or after correction in ametropia, unless evidently due to some other trouble; still such authorities as Fuchs, Oliver, St. John Roosa, Silex, de Schweinitz, Schmidt-Rimpler, Swanzy, Thorington, and others do not mention it as an ætiological factor in partial paralysis of accommodation. Schmidt-Rimpler gives "trigeminal neuralgia" and Swanzy a "cold," but the trigeminal neuralgia may be but an accompaniment to the paresis, both due to a sinusitis rather than the cause of the paresis; and the paresis from a cold is best explained through the existence of a sinusitis.

In the cases I have cited it is demonstrated that sinusitis can cause a paresis of both the sphincter iridis and ciliary muscle; the sluggish pupil, the frequency of photophobia, and especially the pain from consensual light reflex, prove the paresis of the sphincter; the ciliary paresis is shown by the loss of accommodation range and power. This loss may be so slight in one case as to be entirely masked by the fact that the near point taken at different times is normal, the paresis being proved only by the inability to maintain prolonged accommodation; while, in another case, it can amount to an almost complete paralysis. Again, in one and the same case, there may be a normal near point with accommodation power to a limited extent only (for an hour or so), subject to intermissions when the near point recedes, greatly reducing the range of accommodation and prohibiting near work entirely; these changes or interruptions being variable as to frequency and duration and from no ascertainable cause—in other words, of nervous or hysterical origin.

Ziem (2) attributes the asthenopia of frontal sinusitis to a passive orbital hyperæmia or engorgement. Engorgement in the muscular tissues retards their movements, making them slow and painful; in the iris incomplete contraction, enlarged sluggish pupil (frequent), anisocoria (when unilateral), photophobia, painful direct and consensual light reflex, and in the ciliary body asthenopia, recession of the punctum proximum, reduction of accommodation range and power, and the spasm sometimes resulting from the increased effort necessary to overcome this reduction. This sluggishness of the ciliary muscle, this loss of tonicity, would retard its relaxation to a certain degree as well as its contraction, which would account for the occasional temporary dimness of distant vision sometimes complained of, pseudomyopia, following the spasm, the sluggish ciliary after adjustment for near work failing to relax quickly.

Sinusitis by causing engorgement of the ciliary muscle and so retarding its natural contraction and relaxation and reducing accommodation range and power, thus invoking ciliary spasm, I consider to be an ætiological factor of myopia, and to account for many cases diagnosticated as hysterical asthenopia, and the neurasthenia of childhood, the last named being " caused by a rapid exhaustion of the accommodation " (Swanzy) (3). The eye comes into the world hyperopic or emmetropic; congenital myopia is an extremely rare exception. Myopia appears generally in early youth, the result of the use of the eyes for near work in the school room or in an occupation that requires steady close work. " It has been proved by many investigations that acquired myopia is found exclusively among those who must strain their eyes over near work " (Fuchs) (4). The rule is, myopia appears in school life and increases in degree and percentage in a direct ratio to the number of years spent over the school book. Myopia is an acquired abnormal condition, the result of eyestrain according to the accommodation theory, the theory now generally accepted. This accommodation theory accounts for both myopia and its characteristic lesions, the *mécanisme producteur* being ciliary cramp or spasm, which produces, 1, " pseudomyopia, a temporary condition which generally becomes permanent, real myopia " (Fuchs); and 2, a traction of the chorioid. The ciliary muscle (originally called tensor chorioideæ) is inserted well back into the chorioid, some fibres extend nearly to the optic nerve or disc (Martin) (5). "This traction, extending little by little even to the posterior limits of the chorioid gives rise to retinal irritation, exudates, pigment spots, atrophy of the chorioidal tissues (crescent), and in some cases a displacement en masse of the posterior segment of the chorioid, causing an enlargement of the scleral ring, encroachment of the retina on the papilla, and an abnormal direction of the retinal vessels " (Martin).

" Spasm of accommodation . . . which is often produced by long work at some near point is apt to bring about harmful uveal and retinal changes with anteroposterior stretching of the eye ball " (Oliver) (6). Out of 22 cases of accommodation cramp, Ott (7) found 20 to be myopic two years later.

The oncoming of myopia in very young children is gradual, insidious, and usually unaccompanied by asthenopia (de Schweinitz). There are no subjective symptoms. The child one day discovers that he does not see so well in the distance as formerly, or it is at first noticed by the school teacher that he does not see the board as well as the others. The pneumatic cavities are present and open in extreme youth. Schmidt (8) says they are congenital (cellules), and fully developed in proportion to the skull at the time of the change of the teeth. The frontal sinus, a prolongation of an anterior ethmoidal cell, appears during the second year (Poirier) (9) and is fully developed at five years of age (Castex) (10), appears at the end of the first year attaining the size of a pea at seven years (Steiner) (11). Cases of pus in the antrum and the ethmoidal cells at two years have been published by Harke (12).

Myopia, then, appearing in adolescence and being the result of accommodation tension, what is the condition that produces it in some children while the great majority of them, working under the same conditions in the same school room with same tasks, light, etc., successfully stand the strain and retain a hyperopic or emmetropic eye? That they do, is a self evident fact, and but proves that the unfortunate minority have succumbed to a task that the average eye could perform with impunity; something has reduced their ability to maintain prolonged accommodation below that of the average eye; some factor has caused a weakness of the ciliary muscle, an accommodation paresis. Ciliary affection due to a latent sinusitis is of variable degrees, now simulating a paralysis, now allowing the patient a limited continual accommodation power, even in adult life. An affection of the ciliary in a very young child, even though it may cause no symptoms of asthenopia on account of the very great range of accommodation, and so permit a continuance of near work, could, however, provoke a spasm and a pseudomyopia from the increased effort necessary to overcome the paresis. The almost invariable effect of a closed sinusitis, acute or latent, being a reduction of accommodation power, and an accommodation spasm being the cause of myopia, I think we can reasonably name sinusitis as an ætiological factor of myopia, especially when we remember the frequency with which child life is subject to coryzas from colds or the many children's diseases. Case I, a lady, twenty-two years of age, came to me with ciliary spasm, pseudomyopia, of but a few days' standing; her far point for each eye was about 50 cm.; she accepted a minus glass (each eye). She was positive that her distant vision had been affected, "blurred," only since the trouble (sinusitis) set in. She herself connected the two conditions. Here was a case of pseudomyopia from ciliary spasm invoked by an almost total loss of accommodation range, the cause being an acute frontal sinusitis, and the diagnosis being unquestionable. At that time the idea of a causal relation between sinusitis and myopia had not occurred to me or I would not have instilled atropine before relieving the sinusitis; it would be of interest to know if the spasm would have been relieved without its use. The explanation of the ciliary spasm being bilateral when the violent symptoms of sinusitis were confined to but one side I can only surmise; possibly, the severe inflammation of one frontal sinus, extended per continuitatem to the other, affecting it to a more or less degree; or, premising there was no affection on one side, it may be that the nerve innervation being of equal strength to each ciliary muscle, and necessarily increased to overcome the paresis of the affected side, caused a spasm of the unaffected side as well. Sinusitis, then, being capable of invoking ciliary cramp in an adult, how much more readily could it do so in childhood, when the lens is so much softer. Martin, who has made an exhaustive study of myopia, says, in regard to the different morbid phenomena presented by myopes as a class, that would reveal or indicate some diathesis or general cause of myopia: "In young myopes ordinarily you find no disclosing phenomenon (*phenomène révélateur*), except sometimes migraine or epistaxis," each of which is an occasional accompaniment or symptom of sinusitis.

In several of my cases of ciliary cramp in children, pseudomyopes, where the correcting hyperopic glasses failed to be accepted, i. e., the cramp returned and cycloplegics had to be used the second and third time, there were present symptoms of sinusitis, such as neuralgia and frontal pains, even when under full cycloplegia, epistaxis, aggravation of frontal pains, and vertigo when leaning forward, etc.

The rôle played by heredity in the ætiology of myopia is a questionable one, that is as a direct cause; as an indirect cause, it is responsible for a large percentage, in that, on account of the almost universally prevalent idea among the laity and many of the profession as well, that myopia is hereditary, the child, if the parent or grandparent is a myope, is neglected; whereas, if taken to an oculist in time, myopia might have been prevented.

In another article I shall endeavor to show the identity or at least the striking similarity between latent sinusitis and many cases diagnosticated as hysterical asthenopia.

In résumé ophthalmolegia interna partialis, coming on suddenly, appearing at different intervals and of variable degrees (position of near point changeable) in an emmetropic eye, or one made so by correction, when not attributable to some known cause, is very suggestive of a sinus involvement.

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THE USE OF FORMALDEHYDE AS A PRESERVATIVE IN URINE.*

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Since formaldehyde has come to supply the chief place as a disinfectant, and is, in 40 per cent. solution, used as an antibacterial agent by the profession for the preservation of urine when an immediate examination is not to be made, it would be of interest to know if there are any contraindications to its use in urinary analysis.

Having a subject to examine for life insurance, and not expecting to make the analysis of urine for twenty-four hours, I put into an empty four ounce sterile bottle a few drops of formaldehyde. The urine was then voided directly into the bottle, the bottle tightly corked, and the contents examined on the following day.

Examination: It was of a clear amber color, with specific gravity 1024, and reaction faintly acid. On applying Heller's test, a reaction analagous to that of albumin was immediately obtained. The heat and nitric acid test was then used. No change took place in the appearance of the urine by boiling or on the addition of acid, until after it had stood for some minutes, when a clouding began at the top and gradually involved the total bulk of the urine. After standing a few hours, a sediment, in appearance like that of albumin, was deposited in the bottom of the tube.

As far as I have been able to observe, all negative (non-albuminous) formalinized urines, if boiled and treated with nitric acid, throw down a precipitate on being allowed to stand a few minutes, but with this variation, that urines of weak acid or alkaline reaction require more time, and the resulting precipitate is denser and smaller in amount.

A second specimen of urine from the same subject, no formaldehyde being used, examined three hours after being voided, had the following characteristics: It was very turbid, the turbidity being due to excess of amorphous urates. The specific gravity was 1024, and the reaction faintly acid. Neither albumin nor sugar was present. There was no reaction of any kind to Heller's test or the heat and nitric acid test, except a disappearance of the urates on boiling.

These results led to further investigations, from a summary of which I make the following deductions. It is to be understood that all control tests were made with urine free from albumin and with a 40 per cent. formaldehyde solution:

(1). The addition of formaldehyde to freshly voided urine will prevent the turbidity arising from excess of urates, and, if added later, will clear the urine immediately.

(2). With a mixture composed of definite parts of negative urine and formaldehyde, with either Heller's or the nitric magnesium tests, a distinct band is formed at the point of contact, which is perhaps a shade lighter then that from albumin, and has sharply defined lines. The opaque band produced by the formaldehyde is in all other respects like that of albumin, except that it widens a little more rapidly.

In a proportion of two drops of formalin to the ounce of urine free from albumin, there was no reaction to Heller's test, except some crystallization at the top of the urine, occurring if the mixture was allowed to stand about six hours. In my hands this change has taken place only with the strength mentioned.

With four drops to each ounce, the result was unreliable, but certain urines may give a reaction in some hours.

Six drops give a reaction in sixteen minutes.

Eight drops give a reaction in six minutes.

Ten drops give a reaction in four minutes.

Twelve drops give a reaction in three minutes.

Fourteen drops give a reaction in two minutes.

Sixteen drops give a reaction in one and one half minutes.

Thirty-two drops give a reaction at touch.

These tests were made with mixtures prepared at the time. If the different strength mixtures of formaldehyde and negative urine are allowed to stand some hours before testing, the reaction with Heller's test is obtained in from two thirds to one half the time stated above.

With Heller's test, the opalescent band does not form at the point of contact, but about $^1/_{16}$th of an inch above the acid; but with urines of low specific gravity (1010) this space may be increased. Later, this band descends to close contact with the acid. It will not redissolve readily on agitation, but does so if allowed to stand three hours, except when larger amounts of formaldehyde are used (fourteen to sixteen drops), when a longer time is required.

(4). If the bulk of the urine exceeds that of the acid, a sediment may form in the opaque zone, which is later deposited at the point of contact or at the surface of the urine; this, however, is redissolved after a lapse of twelve hours.

(5). Urines of high specific gravity containing formaldehyde seem to be more susceptible to nitric acid with Heller's test than those of less density, and the greater the proportion of formaldehyde, the quicker is the reaction.

While the transparency of the urine before testing is not affected at once, yet in from twelve to twenty-four hours the mixture becomes practically decolorized and a thick sediment is deposited, if a strength of twelve to sixteen drops to the ounce is used. If this decolorized urine is then filtered, boiled, and acidified, the normal color of the urine will be restored, and unless an excess of acid is added, the weight will be approximately the same as when voided.

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* Read before the Medical Society of the City and County of Denver, December 15, 1903.

I am greatly indebted to Professor E. C. Hill, who kindly made a chemical and microscopical examination of the urine and of the sediment mentioned above as resulting from the action of formaldehyde on normal urine. His report is as follows:

> The specimen of urine containing formaldehyde (sixteen minims per ounce), submitted by Dr. Kenney for examination, showed a white ring closely resembling that of albumin with the nitric magnesium test; the same urine without formalin gave no such reaction. The heavy, creamy, spontaneous sediment in the formalinized sample appeared under the microscope as roundish, colorless, highly refractive bodies similar to the spontaneous deposit sometimes thrown down from aqueous solutions of formaldehyde, but the forms were generally larger, as might be expected in a weaker solution. The dried deposit, which weighed less than the added formaldehyde, gave the same reactions as formaldehyde, and I consider it the polymeric form of the latter, paraformaldehyde or paraform. Formaldehyde is a strong reducing agent, decolorizing a potassium permanganate solution and producing a mirror with silver nitrate. Slowly through the catalytic action of the atmospheric oxygen, and rapidly in the presence of oxidizing agents, such as nitric acid, it polymerizes into the solid state. I had already observed microscopically the same deposit in the urine as Dr. Kenney exhibited, but had not used the formalin as a preservative in sufficient quantity to interfere with the albumin tests. His discovery is of considerable practical importance, particularly to life insurance examiners.
>
> E. C. Hill.

In view of these findings, might it not be well to sound a note of warning in regard to the use of formaldehyde for this purpose? If the examiner is hurried in making his tests, and especially if he has no opportunity for further investigation, he may do a grave injustice to his client, not only by rendering it more difficult for him to procure insurance, but by entailing on him much needless worry and anxiety.

It is possible that further investigations of this subject may demonstrate the bearing of formaldehyde on other work in uranalysis, especially as regards microscopy and the different methods of examining for solids.

Since writing the above, explaining the deceptive action of formaldehyde on urine, my attention has been called to an article written by Introna, and published in an Italian journal, an abstract of which appeared in the November 14th number of the *Journal of the American Medical Association*, as follows:

> Formaldehyde Test for Albumin in Urine.—Introna has found that formaldehyde causes the coagulation of albumin in solution and recommends a new test for albuminuria based on this fact. He adds 1 c. c. of formaldehyde to 56 c. c. of urine. If it is free from albumin the fluid remains clear, but in the presence of albumin it becomes turbid and a flocculent precipitate is gradually deposited, consisting entirely of the albumin. The test can be hastened by heating to boiling point, in which case the precipitate is deposited without delay. For quantitative estimation by weight he adds 20 c. c. of formalin to 100 c. c. urine and heats for half an hour in the water bath, concluding by the technic of the Scherer test. He also asserts that formol may be substituted for the Esbach reagent in quantitative clinical diagnosis. He tabulates the results of various tests of solutions of albumin of known concentration, comparing them with the results obtained with the formalin. In every instance the exact proportion known to exist was reproduced with the latter, while the results of boiling and adding acetic acid were always a little below the correct figure.

Taking as a fair control test a 1 per cent. egg albumen solution, the following results were obtained:

(1). The heat and nitric acid test gave the usual reaction as in albuminous urine, namely, slight clouding on boiling and a precipitate on the addition of nitric acid. Heller's test also gave the typical reaction.

(2). When a mixture composed of 1, 2, or 4 c. c. of formaldehyde and 56 c. c. of 1 per cent. egg albumen solution was boiled, it became more transparent then before. Upon adding nitric acid it became clouded, and a precipitate was thrown down.

(3). The addition of nitric acid to the albumen solution, without heat or formaldehyde, produced a slight degree of clouding.

(4) The. addition of nitric acid to a mixture containing 1 c. c. of formaldehyde to 56 c. c. of albumen solution without heat produced an immediate and marked clouding and precipitation.

(5). The addition of 1 to 4 c. c. of formaldehyde to 56 c. c. of albumen solution without heat, produced no clouding or coagulation, either immediately, or after the mixture had stood for twenty-four hours. At the end of this time nitric acid was added and clouding appeared instantly.

(6). Four drops of nitric acid added to nonalbuminous urine containing no formaldehyde gave a negative result.

(7). Testing with urine containing from one half to one per cent. of albumin, the simple addition of formaldehyde without heat or acid produced no change until the lapse of twelve to twenty-four hours, when a precipitate resulted.

(8). Albuminous urine containing the proportion of formaldehyde recommended by Introna as a reagent clouds *more slowly* with heat, and with a denser and smaller coagulum than is the case if the formaldehyde is omitted. But in a proportion of from four to six parts of formaldehyde to fifty-six of urine, the mixture becomes after a time practically solid.

Conclusions.

After arriving at the results herein given, which were obtained after a very careful and patient investigation of the subject, I offer the following for consideration:

(1). Formaldehyde as an artificial ingredient of the urine will lead to deceptive results in uranalysis by *(a)* making the urine appear albuminous when it is negative; *(b)* not giving a typical reaction when albumin is present.

(2). The reliability of Introna's test, namely, the use of formaldehyde in albuminous urine as a reagent, is to be questioned, inasmuch as the effect of formaldehyde on negative urine is the same, though to a more marked degree, as that on albumin in solution, the difference in the color and density of the precipitate being, in my opinion, immaterial.

(3). As a factor in the production of a possible pseudoalbuminuria the therapeutic use of urotropin is a subject well worthy of extended observation and study.

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The Medical Library and Historical Journal, now one year of age, has made a successful record in its unique field, being devoted to medical libraries, bibliography, history, and biography, its articles not being drawn from encyclopædias, but written by the best modern authorities, who strive to present facts in an interesting and attractive manner. It is the official organ of the International Association of Medical Librarians, and publishes the transactions of that body, as well as those of the leading medical historical societies. For any physician who is interested in the history of our profession and wishes to know to what his present status is due, we cannot think of a more suitable publication from which to obtain the necessary information. The list of last year's contributors contains the names of many of the brightest and most advanced men in medicine. Communications should be addressed to *Medical Library and Historical Journal,* 1313 Bedford Avenue, Brooklyn, N. Y. The magazine is a quarterly, and may be obtained for $2.00 per annum.

THE COMPARATIVE DIGESTIBILITY OF RAW, PASTEURIZED AND STERILIZED MILK.

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ASSISTANT CHEMIST, MARYLAND AGRICULTURAL EXPERIMENT STATION.

Although much has been written of milk the last few years, very few data are available showing the digestive coefficients of raw, pasteurized, and sterilized milks respectively. The writer cooperated with the bacteriologist of the Maryland Agricultural Experiment Station in conducting a number of experiments to compare the digestibility of these milks when they were given to young calves, and for the benefit of those interested in this line of work who have not had the opportunity of reviewing the report containing the results of these experiments, an extract of the report is here given.

The general plan of the work was to feed the calves through a preliminary period of three days, and then a regular period of three days, the milk used being analyzed during the entire time, while the undigested matter was collected and analyzed only during the regular period. The feeding was done first with raw, then with pasteurized, and then with the sterilized milk, using the same calf for each kind of milk and in some cases repeating the series with the same calf. The raw milk was given fresh in the morning from the mixed milks from two cows; part of this same milking was put away to be given in the evening. The milk to be pasteurized or sterilized was taken from the same two cows. The pasteurizing was done at a temperature of 167° F. for ten minutes. While the sterilizing was done by heating the milk to 190° F., at which temperature it was allowed to remain half an hour. The quantity of milk given was adjusted to about what the average calf would require for moderate growth.

The following tables and notes give the results of the experiments with each animal; where no figures are given the calf's condition was so serious that the feeding had to be discontinued before the experiment was completed.

SERIES I.

Table 1. Calf No. 1.

	Protein per cent.	Fat per cent.
Per cent. digested of whole milk, raw....	96.16	97.06
Per cent. digested of whole milk, pasteurized	95.51	96.71
Per cent. digested of whole milk, sterilized	——	——

In the first series, which was carried through with calf No. 1, the animal appeared to be in a perfectly healthy condition until the sterilized milk was given, when, at the end of the preliminary period, the calf commenced to scour so badly and continued to do so, so long, that the raw milk had to be substituted, when the scouring stopped within twenty-four hours. The calf gained one pound during the period he was fed on raw milk and three and one half pounds in the same time while being fed on the pasteurized milk.

SERIES II.

Table 2. Calf No. 2.

	Protein per cent.	Fat per cent.
Per cent. digested of whole milk, raw....	97.79	99.04
Per cent. digested of whole milk, pasteurized	93.90	96.39
Per cent. digested of whole milk, sterilized	——	——

In the second series a different calf was used from that used in Series I. The calf entered on the preliminary period of feeding with raw milk in a perfectly healthy condition and continued so throughout the periods with the raw and pasteurized milk; but at the end of the preliminary period with the sterilized milk the calf commenced to scour violently, the fæces were very thin and white containing undigested casein, the animal was given bismuth subnitrate to check the scouring; the sterilized milk being continued during this time, the medicine had no effect. Although it had proved very efficient in other cases of scouring, the scouring continued until raw milk was substituted for the sterilized milk, when it stopped in a very short time. The calf gained nine pounds during his period with raw milk and five pounds while being fed on the pasteurized milk.

SERIES III.

Table 3. Calf No. 1.

	Protein per cent.	Fat per cent.
Per cent. digested of whole milk, raw....	70.30	89.75
Per cent. digested of whole milk, pasteurized	94.40	98.59
Per cent. digested of whole milk, sterilized	——	——

The third series was carried through with calf No. 1. The calf was in good condition at the beginning of the preliminary period with raw milk and continued so until the second day of the regular period, when his bowels were very loose but not sufficiently so to be called scouring. While being fed with the pasteurized milk the calf was in a perfect condition and continued so throughout the period. The calf remained in a good condition until thirty-six hours after commencing to give the sterilized milk, when scouring set in and continued for three days or until raw milk was substituted. After his bowels had got in a normal condition the sterilized milk was again fed and he again commenced to scour in about twenty-four hours after the first feeding. This time the feeding with the sterilized milk was continued four days and efforts were made to check the scouring with drugs, but it continued until raw milk was substituted for the sterilized milk, when it stopped within twenty-four hours. The table shows that 70.30 per cent. of the protein and 89.75 per cent. of the fat given in the raw milk and 94.40 per cent. of the protein and 98.59 per cent. of the fat in the pasteurized milk was digested, this is 24.1 per cent. of protein and 5.15 per cent. of fat in favor of the pasteurized milk. This is so at variance with the results obtained in every other case as to be abnormal, and was evidently due to some disturbing element which we could not account for, except the looseness of his bowels already cited. The calf gained five pounds during his period on raw milk and two pounds while receiving the pasteurized milk.

SERIES IV.

Table 4. Calf No. 3.

	Protein per cent.	Fat per cent.
Per cent. digested of whole milk, raw....	95.44	98.31
Per cent. digested of whole milk, pasteurized	93.76	96.37
Per cent. digested of whole milk, sterilized	94.00	98.64

The fourth series was carried through with calf No. 3. He was in good condition during his period with raw and pasteurized milk and remained so during his period with sterilized milk, being the first calf from which we had been able to collect the fæces while being fed on sterilized milk. The table shows that more of the raw milk was digested than of the sterilized milk, while more of the sterilized was digested than of the pasteurized. In the period with raw milk the calf gained four pounds; he lost one pound on the pasteurized milk; and neither gained nor lost while being fed on the sterilized milk.

SERIES V.

Table 5. Calf No. 2.

	Protein per cent.	Fat per cent.
Per cent. digested of whole milk, raw....	93.92	96.51
Per cent. digested of whole milk, pasteurized	89.59	94.40
Per cent. digested of whole milk, sterilized	80.30	92.18

The fifth series was carried through with calf No. 2. He was in good condition while receiving the raw milk, and continued so until the regular period with pasteurized milk was started, when his bowels became loose and his fæces were troublesome to collect; this looseness only lasted one day, when the bowels again became normal and remained so until the regular period with the sterilized milk, when they were again loose for two days. The calf gained one pound on raw milk, two pounds on the pasteurized milk, and lost one pound on sterilized milk.

SERIES VI.

Table 6. Calf No. 4.

	Protein per cent.	Fat per cent.
Per cent. digested of whole milk, raw	95.68	97.31
Per cent. digested of whole milk, pasteurized	94.94	96.46
Per cent. digested of whole milk, sterilized	——	——

The sixth series was carried through with calf No. 4. He was in a healthy condition during the entire time he received the raw and the pasteurized milks, but on the second day's feeding with sterilized milk, scouring set in and continued until the raw milk was substituted. The calf gained three pounds while receiving the raw milk and two pounds while receiving the pasteurized milk.

Upon reviewing the average results of the six series, we find the digestive coefficients are, with one exception, slightly in favor of the raw milk. Considering the general character of the milk, its high digestibility and the accuracy of the chemical methods used in the analysis, the difference in the digestibility of the milks differently treated is sufficient to warrant drawing a conclusion; especially as the parallel results in the same series agree so closely.

The result of the experiments when the sterilized milk was given was unexpected and widely different from the established theory in regard to the action of such milk on the animal's stomach. Sterilized milk is usually supposed to cause constipation and is often advocated as a cure for scours in calves. Instead it had the opposite effect when given to the calves used in these experiments. It has been noted that, out of six times in feeding with sterilized milk, four cases of severe scouring resulted. So pronounced and unusual were these results, that we determined to make repeated trials, and so sterilized milk was given to six different calves, while others in the same yard received raw milk. The calves receiving the sterilized milk all scoured within forty-eight hours after their first feeding, while those receiving the raw milk remained in a normal, healthy condition. In comparing the results of the raw and pasteurized milk we see that although the difference in favor of the raw milk is small, it is constant and, so far as is practical with our conditions, it is conclusive.

It is of course difficult to determine without experiments, how near the digestive coefficients found for these milks, when they were given to calves, would compare with the digestive coefficients of the milk similar treated when given to infants. In taking up this work with milk, calves were selected only after every effort had been made to obtain infants for the work, and it seemed probable that calves would be more susceptible to any change in the milk than any other animal available. It was of course with a full understanding that there was a wide difference in their digestive organs as compared with those of man, and also that calves were not so sensitive in all respects as a human being. Nevertheless, it was assured that any change in the milk which would prove to be harmful or which would make milk less digestible when given to a calf, should certainly be looked upon with suspicion before being given to an infant; especially as the cow's milk is the natural food for the calf and the experiments were conducted when the calves were about two weeks old, at which time they are very susceptible to any irregularity in their feed.

Therapeutical Notes.

Purgative for Pregnant Women.—Lutaud, according to *Journal de médecine interne*, for January 15th, gives:

℞ Castor oil	30 grammes (1 ounce);
Syrup of rhubarb	20 grammes (⅔ ounce);
Alcohol	15 grammes (½ ounce);
Peppermint oil	2 grammes (30 minims).

M. For one dose.

Gargle in Scarlatina.—*Journal médical de Bruxelles*, for January 21st, quotes *Journal des pharmaciens* as recommending the following pleasant gargle for children:

℞ Thymol	of each...3 grammes (45 grains);
Oil of cinnamon	
Tincture of vanilla	20 grammes (⅔ ounce);
Alcohol	100 grammes (3⅓ ounces).

M. Ten drops in a half glass of tepid water.

Bronchitis of Children.—*Journal de médecine interne*, for January 15th, gives the following as an efficacious expectorant:

℞ Sodium benzoate	2 grammes (30 grains);
Powdered terpene	20 centigrammes (3 grains);
Syrup of tolu	30 grammes (1 ounce);
Syrup of acacia, enough to make	120 grammes (4 ounces).

M. Take the whole in twenty-four hours.

Coryza.—Pugnat, according to *Nouveaux remèdes*, for January 8, 1904, recommends the following method of making topical applications in coryza:

℞ Cocaine hydrochloride	of each 5 grammes (75 grains);
Menthol	
Liquid petrolatum	100 grammes (3⅓ ounces).

M. Use a small quantity every three hours.

Toothache.—*Nouveaux remèdes*, for January 24th, recommends:

℞ Carbolic acid crystals	of each 2 grammes (30 grains).
Menthol	
Cocaine hydrochloride	
Chloral hydrate	
Guaiacol	

M. Triturate to form a paste.

This mixture is caustic and analgetic; its causticity may be increased by adding more carbolic acid.

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THE NEW YORK EYE AND EAR INFIRMARY.

Like many another hospital, this venerable institution finds itself running behind hand financially. The prospect of relief from this state of things has heretofore seemed so dim that it was recently announced that the governing board had practically come to the conclusion that the infirmary would have to be discontinued. That this conclusion is definitive we shall decline to believe so long as we are not compelled to believe it. We assume that it is only with the greatest reluctance that the board would consent to close the hospital, for they are public-spirited as well as conservative men, and they are justly proud of the infirmary's history as an institution of relief and as a means of elevating ophthalmology and otology in America. All over the country there are to be found able ophthalmologists and otologists who gained their important start in special knowledge within the old walls of the New York Eye and Ear Infirmary.

But it is not alone on account of its length of service or of its prominence in the specialties to which it is dedicated that the infirmary ought at all hazards to be perpetuated, though these are good enough reasons. A motive still more urgent is the fact that, with all the activity of this institution and others devoted to the same purposes, the facilities for treating eye and ear diseases in New York are certainly not unnecessarily ample. Of course it is not specially incumbent on the governing board of the infirmary to see to it that these facilities are not impaired, though doubtless they feel some such incumbency in a certain sense. The real responsibility rests with the people of New York, and we shall be much surprised and disappointed if they do not rise to the occasion.

THE MEDICAL PROFESSION AND THE "OPTOMETRY" BILL.

We have already, in our issue for January 23rd, editorially called the attention of our readers to the tricky device of the prime movers in this insidious measure, in sending out postal cards to members of the medical profession requesting their signature to the assertion that "as a physician, I deem its passage by the Legislature of the State to be in the interest of scientific advancement and for the good of the public." In that editorial we laid bare the specious falsity of the claim made by the supporters of the bill. We also then stated that so innocent did the circular to physicians and the wording of the bill itself appear, that we feared lest not a few physicians might at first blush be taken in by it, and sign and return the postal card, as requested, thereby playing into the hands of this dangerous attack in flank on the profession. Our fears are confirmed by a letter which Dr. Bristow has kindly permitted us to see, written to him by B. B. Clark, president of the Optical Society. Therein Mr. Clark states: "I have up to the present date received [the support of?] nearly 25 per cent. of the physicians of the State who favor the bill." It is more than probable that if this statement is true,—and by no means all the statements made in support of this bill are true—the majority of the signatories have been entrapped. Of all our readers, therefore, we would beg, Do not sign any postal card or other document endorsing the bill. On the contrary, write to your representative expressing your earnest opposition to it. Should you, by any chance, have signed the postal card referred to, follow at once the advice given by Dr. Frank Van Fleet, the chairman of the Committee on Legislation of the Medical Society of the State of New York, viz., write forthwith to the president of the Optical Society recalling your endorsement, and stating that it was given under a misapprehension. At the same time write to your representative, informing him that you were misled into signing the card and that you have withdrawn your endorsement, and also urge upon him to oppose the measure. If you are in doubt or seek further information, Dr. Van Fleet will be glad to furnish it on request.

THE SURGERY OF INTERCOSTAL NEURALGIA.

Dr. Chipault and Dr. Le Für have recently reported in the *Gazette des Hôpitaux* what they seem to regard as an original procedure in the treatment of intercostal neuralgia (they do not, however, appear to have made themselves acquainted with the earlier operations of the same general nature which have been successfully carried out in this country by Keen, Abbe, and others). Their case was that of a man, aged forty-eight years, who had for a period of four years suffered excruciating neuralgic pains in the course of the eighth, ninth, and tenth intercostal nerves of the right side, and also around the umbilicus. There were violent crises, which had grown in intensity as the time progressed. The man had been treated at various hospitals and heavily dosed with the usual anodynes and soporifics—he had taken of morphine even up to 80 centigrammes *per diem*—but without permanent improvement. He had drifted into a deplorable state of general health, and had frequently contemplated suicide. The crisis used to occur at intervals which varied in length from a few minutes to a few hours. There was also a zone of hyperalgesia corresponding to the distribution of the nerves above mentioned. There was no evidence of tabes, the reflexes were rather exaggerated, and there were none of the usual vesical or rectal complications of tabes. The diagnosis arrived at was that of a *névrite radiculaire,* a neuritis of the roots of the affected nerves at the seat of their origin from the medulla spinalis. Accordingly, with the view of conveying surgical relief where drug-giving had failed, a vertical incision was made over the sixth and seventh dorsal spinous processes, which point had been found—by previous experiments on the cadaver—to correspond to the level of the origin of the roots of the affected nerves. The incision was prolonged till room was obtained for the removal of three of the posterior vertebral arches. The dura mater was then incised; the three nerve roots sought for were fully exposed, and were found to emerge from a well defined and sharply limited area of cicatricial arachnitis. The affected piece of arachnoid was removed; the diseased nerve roots excised; the dura mater sutured; and the external wound treated *secundum artem.* The patient left the hospital free from pain, thirty-five days after the operation. Slight neural crises have since occurred; but not approaching—even remotely—in intensity or in frequency, those from which the patient had suffered before the operation. Chipault and Le Für hope for a fair proportion of success for their procedure, in cases of inveterate spinal neuralgias.

THE TUBERCULOUS PATIENT IN SOCIETY.

With the widespread knowledge of the infectious nature of tuberculosis, there has come within recent years an unfortunate attitude of the general public against the consumptive who spends his life in the midst of healthy people. The dread of the bacillus has taken deep root in the minds of the people, and the prejudice that goes with half-knowledge of the simple facts of ætiology often results in great injustice to the consumptive. Julius Friedlaender, of Berlin, in a recent article on the social status of the consumptive, (*Tuberculosis,* Vol. i, No. 10) forcibly calls attention to this condition of affairs. He deals chiefly with the consumptive belonging to the better situated classes, who is a person of education and fit to associate with the best of mankind. Such a patient has often spent several months in a sanitarium where his disease has perhaps been favorably influenced. Upon returning to the circle of acquaintances and associates in which he moved before he was taken ill, he frequently meets with the keenest distrust and most unreasonable fear of infection at every step.

Such a patient has only one remedy, namely, to pretend that he is perfectly healthy and to disguise his illness. So it often happens that such patients will rather swallow their sputum or will secretly expectorate anywhere rather than expose themselves to curious glances and whispered comments, by the use of a pocket flask or other device, the usefulness of which has been taught them in the sanitarium. To the public the sputum flask is not a mode of preventing the spread of the disease, but a betrayal of the presence of a communicable disease. There can be no question that the hypocrisy of the consumptive, which is thus forced upon him by society, reacts viciously both upon himself and upon the persons in his surroundings, promoting the spread of the disease infinitely more than the mere social intercourse or business association with a consumptive who knows thoroughly well how to take care of his sputum.

The point that Friedlaender makes is that the intelligent part of the public must be made to understand that the consumptive who has been through a course of treatment at a sanitarium or who has been privately instructed in the methods of prophylaxis is not dangerous to associate with. He is certainly less dangerous than the man who fears to use the proper measures for the care of his sputum, lest he becomes a social outcast. A consumptive who has been properly trained at a sanitarium or at home has the methods of prophylaxis so thoroughly incorporated into his daily routine that they become as a very part of his being.

The greatest injustice to the consumptive, however, is shown in the so called "open" health resorts, i. e., in places where consumptives go on account of the "climate," without placing themselves under medical surpervision or entering a sanitarium. In such places the consumptive has a great deal to suffer from the public's exaggerated fear of "contagion." During the dull season, when the healthy patrons do not crowd the hotels, the consumptive is welcomed everywhere with open arms and his cough is not noticed, so long as he pays his bills. When the "season" is at its height, however, and the hotels are packed to their utmost capacity, the landlords often do their best to get rid of the consumptive, as he is not an attraction to the other patrons. So, in some European resorts the tuberculous patient has been known to wander from one place to another in search of accommodations, and to be requested to leave on some pretext or other, or else compelled to leave through the multiplicity of petty annoyances which hotels managers can so cleverly devise when there is need. The statements just made are applied by Friedlaender to European resorts, such as San Remo and Nervi. In this country, where democratic customs demand a more just consideration of individual rights, this injustice to the consumptive by hotel keepers is far less frequently seen and yet instances of it occur, and many a consumptive who travels much can tell tales not unlike those related by the author mentioned.

The whole question of the relation of the consumptive to society at large has a broader significance. The very fact that there is fear and prejudice against him renders it necessary for him to hide his disease, at times through the mere necessity of having a roof over his head for the night. The result is, of course, that rooms that have been occupied by consumptives in hotels and boarding houses, especially in the "health resorts," are never disinfected, as they should be, after the patient leaves the premises. The very fact that he has to conceal his disease renders it impossible for him to take even the ordinary precautions in expectorating. Thus, this unreasonable attitude toward the consumptive strikes back at the very persons who have the greatest prejudice against associating with tuberculous individuals.

The public must unquestionably be taught more about the true status of the ætiology of tuberculosis and must be impressed with the comparatively insignificant danger of transmission when all precautions are taken.

"KORSAKOFF'S DISEASE."

About fifteen years ago, the late Professor Korsakoff, of Moscow, described a peculiar combination of symptoms occasionally observed among chronic alcoholics, which he and others believed to be an independent disease and named *polyneuritic psychosis*, or *cerebropathia psychica toxæmica.* It is merely a syndrome, the clinical manifestation of which includes the two cardinal features, a typically toxic or alcoholic multiple neuritis and a peculiarly marked psychosis involving the memory and the conceptions of time and space.

This amnesia is peculiar and characteristic. The patient seems, as it were, to have no notion of the proper relationship of time and space. Things of the past are spoken of as being in the future and the more recent events are hopelessly lost or confounded with the more ancient. Places are badly jumbled and erroneously located. For instance, a patient whom I saw in consultation only a few days ago chatted pleasantly and logically about having just come in from the garden, where she had been picking some flowers, and had become covered with burrs and thistles. She pointed them out to us on her person and endeavored to pick them off as well as her paralyzed arms would permit her. These false conceptions, the pseudoreminiscences, are very evanescent and can be very easily repressed. Between the amentia of Meynert and this psychosis there is a close analogy. The amnesia, disorientation, pseudoreminiscence, and confabulation constitute its chief traits. Tiling avers that the intellect and judgment *per se* remain intact. Some authors (Jolly, Bonhoffer, Sorey, Cole, and others) believe that these troubles are closely allied to delirium tremens; but others hold that the latter is only an exciting cause. As Pershing well says, the psychosis is of the greatest importance. In fact, it is almost pathognomonic of this syndrome, for it is sometimes fully developed when the nerves are but slightly affected, and it may even appear in advance of the neuritis.

In the recorded cases all the women presented marked multiple neuritis. To these my own case may be added. Neuritis was absent, however, in nine per cent. of the men. There is nothing distinctive about the polyneuritis when it is present. Indeed, Babinski, Jolly, Gudden, Bonhoffer, and others, do not believe that the polyneuritis is a necessary accompaniment of the psychosis. The latter, in fact, is regarded as a primary form of mental confusion of toxic origin. Chancellay affirms that the speech is characteristic. Turner denies this, though in two of his cases it was described as "thick" and "drowsy." There are no distinctive pupillary reactions, but the pupils are often abnormal. A feeling of *bien-être* and a happy-go-lucky temperament have been noted by some of the writers.

Three fourths of the cases occurred among chronic alcoholics. Other possible factors in the causation, however, have been mentioned, namely, typhoid fever, pyæmia, jaundice, malaria, and arsenical and perhaps lead poisoning. Ever since the recent Manchester epidemic of multiple neuritis, many clinicians have been inclined to doubt the possibility of this disease ever being produced by alcohol alone; and yet Oppenheim never found a case of polyneuritic psychosis with the characteristic mental phenomena in other than alcoholic individuals.

Opinions in regard to the prognosis seem to vary. Tiling sums them up by saying that in the non-alcoholic cases it is favorable, in the alcoholic unfavorable. In the alcoholic cases that recover, there is always more or less mental defect left. According to Soukhanoff and Boutenko complete recovery was exceedingly rare. It occurred among the alcoholics, but did not exceed two per cent.

In the few careful post mortem examinations that have been made, there was nothing discovered that was at all characteristic or uniform.

In conclusion, it must be admitted that Korsakoff described a most striking syndrome occasionally observed among chronic alcoholics, especially women. Very few (Korsakoff, Sollier, Chancellay), especially at the present day, believe that this is a new and independent disease. Whether the two sets of symptoms, the psychic and neuritic, are merely coincident phenomena dependent upon the same active cause (Regis, Raymond, Lépine, Perrin), or whether the primary trouble is a multiple neuritis with psychic symptoms (Seglas, Oppenheim, Atwood, Ross, Cole) or a primary psychosis with an accidentally associated polyneuritis (Babinski, Gudden, Jolly, Bonhoffer), time and further investigation only can decide.

It is not a simple multiple neuritis with psychic symptoms, as many are inclined nowadays to regard it; or, if it is, we shall have very materially to enlarge or modify the common conception of multiple neuritis. Even Turner, who endeavors to explain the loss of the relationship of time and space, the pseudoreminiscence and the consequent confabulation, upon the basis of the mental isolation of the patient through the shutting off of his normal afferent impulses by the widespread neuritis, is obliged to invoke the implication of the cortical association or tangential fibres to account for the psychic confusion and other symptoms. Some of his patients had exaggerated knee jerks and other reflexes; while two of them, he frankly admits, did not show any of the ordinary signs of alcoholic multiple neuritis. He conceives therefore that there is a central as well as a peripheral polyneuritis.

Cole (*Brain*, xxv, 99) has recently brought forth from his pathological investigations some striking evidences of the implication of the whole nervous system, central as well as peripheral, in most if not in all cases of alcoholic polyneuritis. The degeneration in the three cases he examined was widespread throughout the entire cerebrospinal axis, and was not attributed to the peripheral neuritis. In some cases the peripheral nerve fibres, in others the central fibres, were most implicated. Even the nerve cells of the cortex were altered, which fact he made use of to explain the psychosis in these cases, especially the alcoholic ones. This is a most important matter, for it may oblige us to revise our textbook descriptions of multiple neuritis and to admit into the description a class of cases wherein the reflexes are exaggerated instead of being lost, the muscular atrophy is absent and the electrical reactions are unchanged.

Chronic alcoholic intoxication of the central and peripheral nerve fibres is, for the present, the most accurate explanation of Korsakoff's syndrome. This literally makes of it a combined central and peripheral disease, both dependent upon the same cause and both having a more or less similar pathology and pathogenic basis. More than this we cannot positively assert; much less can we identify it in toto with any now well established clinical entity. It is so remarkable and characteristic a syndrome that it deserves a far more careful study than it has hitherto received at the hands of American clinicians and pathologists. L. HARRISON METTLER.

BALSAM OF PERU IN COMPOUND FRACTURES.

In *Presse médicale* for December 30th, Dumont states that Van Stockum, of Rotterdam, treats compound fractures without any attempt at conventional asepsis, removing simply any foreign bodies from the surface of the wound, and then covering the latter thickly with balsam of Peru, getting it well into the irregularities of surface. If the wound is small, it is filled by means of a syringe. The fracture is then treated as a simple one. A dressing is made of gauze saturated in balsam and absorbent cotton, and the limb is put in plaster or an extension apparatus. There is always fever for three days, which subsequently disappears. At the end of three weeks, the bandages are removed to find either a cicatrized wound or one granulating heathily with no sign of inflammation. No amount of pressure will bring pus. The mortified tissues are mummified, and the fracture has united or is doing well. Van Stockum calls his results "marvelous." It is not impossible that the balsam, containing cinnamic acid, causes a protective leucocytosis, for the occurrence of fever certainly shows a preliminary sepsis. This "embalming of compound fractures" merits investigation by our native surgeons.

POISONING BY BROMOFORM.

Dr. A. L. Oberdorfer reports in the *Archives of Pœdiatrics* for November the case of a girl four years and a half old who was ordered five drops of bromoform thrice daily for a week, in the treatment of pertussis. As the treatment was satisfactory it was ordered to be continued. On the second day of the second week, staggering drowsiness, coma, rapid and feeble pulse, shallow and stertorous respiration, muscular relaxation, contracted pupils insensitive to light and loss of conjunctival reflex supervened. An odor of bromine was perceptible in the breath. The treatment was hypodermic strychnine and gastric lavage, but cyanosis set in, and this was discontinued. Recourse was then had to nitroglycerin and ammonia, elevation of the feet, artificial respiration and rhythmic traction of the tongue, and finally to the administration of oxygen. Under this treatment the child got well by the fourth day. On examination of the bottle containing the bromoform it was found to consist of two well-defined layers; the lower one muddy, the upper more transparent, of an oily viscid consistency. Analysis showed the fluid to consist of free bromine and hydrobromic acid. Decomposition rather than cumulative action is thought to have been the cause of the toxic symptoms. It is clear, however, that caution is needed in the use of this drug.

HOSPITAL BOOK AND NEWSPAPER SOCIETY.

Physicians and others can confer a favor on this organization by sending them books, magazines, or newspapers for free distribution to hospitals, public institutions and wherever else needed; the supply of fiction, juvenile reading, and German is never equal to the demand. The Adams and American express companies and the New York Transfer Company will deliver such matter free, but express should be prepaid when it is sent through other channels. Five hundred dollars added to the society's annual income would cover all expenses. Some 42,000 patients are now regularly supplied. A special plea is made for the July, August, and September numbers of *Harper's*, *Scribner's*, and the *Century*.

News Items.

Society Meetings for the Coming Week:

TUESDAY, *March 1st.*—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, *March 2nd.*—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; New York Genitourinary Society; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, *March 3rd.*—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, *March 4th.*—Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Manhattan Clinical Society.

SATURDAY, *March 5th.*—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending February 20, 1904:

	Week end'g Feb. 13.		Week end'g Feb. 20.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	721	14	975	25
Diphtheria and croup	327	56	447	44
Scarlet fever	346	30	448	25
Smallpox	..	..	3	1
Chickenpox	110	..	159	..
Tuberculosis	264	142	371	192
Typhoid fever	24	4	21	5
Cerebrospinal meningitis	2	..	..	3
Totals	1,794	246	2,424	295

In the Department of Otology at Columbia University, Dr. Gorham Bacon has succeeded Professor A. H. Buck as professor.

Appointment at Mount Sinai Hospital.—Dr. Seymour Oppenheimer has been appointed laryngologist and otologist to the Mount Sinai Hospital Dispensary.

The Mutual Life Insurance Company, of New York, has appointed Dr. A. G. Jenner medical referee for Wisconsin, directing a corps of 700 medical examiners.

Bequests to Hospitals in Brooklyn.—Through the will of the late Mr. Christoph Kunzel, of Jamaica, the Brooklyn Home for Consumptives will receive $500.00, and the German Hospital, at St. Nicholas Avenue, $3,000.00.

Dr. William A. Myers, the well known surgeon of the Bushwick and Deaconesses' hospitals of Brooklyn, has been ordered south to recuperate from his recent severe attack of rheumatism and prostration brought on by overwork and grief at the death of his father.

Deafness in New York Schools.—Superintendent Maxwell, it is said, states that over one eighth of the children attending the public schools are afflicted with some form of deafness; of these, only some three per cent. are aware of their affliction.

Spitting in the Streets.—The police are beginning to look out for violations of the city ordinance against spitting; four offenders have been fined and sixteen arrested for spitting on the One Hundred and Sixteenth Street station of the west side elevated road.

The New York County Branch of the New York State Medical Association held a regular meeting on February 15th, at which the following was the programme: Some X Ray Skiagrams of Excision of the Elbowjoint, by Dr. John H. Branth; The Treatment of Pneumonia, by Dr. W. Gilman Thompson. Discussion by Dr. E. G. Janeway, Dr. George L. Peabody, Dr. Lewis A. Conner, Dr. S. A. Brown, and others.

Gift of False Teeth a New Charity.—It is said that a requisition for free false teeth has come to the Health Commissioner from North Brothers Island for the use of the tuberculous patients. The Health Commissioner, the report says, is inclined to accede to the demand, recognizing the necessity of perfect mastication on the part of tuberculous patients to assure digestion and assimilation of their food.

Mount Sinai Hospital, Lexington Avenue, Sixty-sixth and Sixty-seventh Streets.—Preparatory to removal of the hospital to its new buildings at Fifth Avenue and One Hundredth Street, this hospital has discontinued the admission of patients at the old hospital. A reception will be held at the new buildings on the afternoon and evening of March 15th and 16th, and the institution will be prepared on the following Monday to admit patients to all departments.

Alumni Society, St. John's Hospital, Brooklyn.—A regular meeting of this society was held on Saturday evening, January 31st, in the County Medical Building, at which Dr. W. S. Simmons read a paper based on a series of cases in which Typhoid Fever and Appendicitis occurred simultaneously. Dr. W. S. Hubbard reported a case of Neurasthenia; Dr. W. H. Rankin one of Typhoid Fever with Perforation of the Intestine Simulating Appendicitis, and Dr. W. S. Simmons one of Rupture of a Postcæcal Appendicular Abscess Following Typhoid Fever. Dr. Hubbard, Dr. Rankin, and Dr. J. Elliot Langstaff discussed the paper of the evening. General remarks followed the report of cases. The president, Dr. R. S. Royce, was in the chair, with the following members present: Dr. Simmons, Dr. Hubbard, Dr. Rankin, Dr. J. Elliot Langstaff, Dr. Knight, Dr. Bartow, and Dr. Happe. Arthur H. Longstreet, M. D., secretary, 20 Seventh Avenue, Brooklyn.

Dr. Thomas Addis Emmet's Golden Wedding.—A curious coincidence in connection with the golden wedding of Dr. Thomas Addis Emmet, which occurred in New York on February 14th, was a similar celebration on the part of his cousin, Mr. W. J. Emmet, of New Rochelle, which took place on the 15th.

Bequests to Jewish Institutions.—Among the hospitals and other charitable institutions benefited by the will of the late Mr. Louis Gans, one of the founders of the Montefiore Home, are: The Montefiore Home for Chronic Invalids, $25,000; Mount Sinai Hospital, $2,500; United Hebrew Charities, $2,500; Home for Aged and Infirm Hebrews, $1,000; Hebrew Technical Hospital, $1,000; Beth Israel Hospital, $1,000; Lebanon Hospital, $1,000; Colored Orphan Asylum, $1,000; Hebrew Sheltering Guardian Society, $2,500; Hebrew Orphan Asylum, $2,500; Hebrew Widows' and Orphans' Home, $2,000.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g Feb. 20.		Week end'g Feb. 13.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	49	13	58	16
Diphtheria	70	11	58	17
Scarlet fever	106	13	104	11
Typhoid fever	142	12	103	12
Consumption	..	66	..	68
Cerebrospinal fever	..	..	..	..

Several Philadelphia Nurses will soon embark for Japan, to render services during the war in the East.

Two Thousand Dollars was bequeathed to the St. Joseph's Hospital of Philadelphia by the will of Louisa M. Wollaver.

Municipal Hospital.—A smallpox pavilion, which will accommodate one hundred patients, will soon be opened in the Municipal Hospital, of Philadelphia.

The Cooper Hospital of Camden has received one hundred dollars from the American Dredging Company, in recognition of services rendered to their employees.

Forty Assistant Medical Inspectors have been appointed in Philadelphia, whose duties will comprise the supervision of the health of the districts to which they are assigned, including the medical inspection of schools.

The Jefferson Medical College Hospital has in active operation a well organized and conducted out-patient department devoted exclusively to diseases of the rectum. The department is in charge of Dr. J. Coles Brick.

St. Luke's Hospital, of Philadelphia, has been closed on account of smallpox, which two nurses in that institution contracted. On the whole, however, the disease has shown marked signs of abating during the past two weeks.

Allegheny County Medical Society.—The following officers have been elected for the ensuing year: President, Dr. T. M. T. McKennan; first vice-president, Dr. J. P. Blackburn; second vice-president, J. Hartley Anderson; recording secretary, Walter F. Donaldson; corresponding secretary, Thomas Wray Grayson; treasurer, William B. Ewing. The membership of the society is increasing rapidly.

The Methodist Hospital of Philadelphia will break ground soon for a new dispensary building on Wolf Street, between Thirteenth and Broadway. The plans are for a two story building, forty by eighty feet. The building is rendered possible by the recent gift of $15,000 to the hospital by Mary Robinson Burton.

Obituary.—Dr. William F. Buchanan, of Philadelphia, a well known physician and a veteran of the civil war, died of heart disease at his home on February 16th. He graduated from the University of Pennsylvania and Philadelphia College of Pharmacy. Dr. Horace W. Burg, one of the best known physicians in Northumberland county, died in the Medico-Chirurgical Hospital of Philadelphia on February 16th.

Typhoid Fever Increasing in Philadelphia.—During last week, more new cases of typhoid fever occurred in Philadelphia than in any week since April, 1903, there being 142 new cases and twelve deaths. The disease prevails in thirty-one wards in Philadelphia. The exciting cause of this renewed outbreak is being looked for, and the usual admonitions to boil the water have been issued. It is not unlikely that the thawing of polluted ice in the Schuylkill River may have contributed to the outbreak.

Medical Inspection of Philadelphia Schools.—The committee of hygiene has under discussion the method of school inspection by the forty new assistant medical directors recently appointed in Philadelphia. The objects in view are: First, the identification of all pupils needing medical care. Second, the prompt exclusion from school of all pupils suffering from transmissible diseases. Third, the exclusion from school until appropriate medical treatment has been begun of all pupils suffering from other diseases. Fourth, the detection of defects of sight and hearing, and of deformities that may be corrected or improved by medical aid.

The Transmission of Contagion by Health Inspectors is said to be the bone of contention between the school boards of Philadelphia and the authorities, according to the following reported statement by a Philadelphia physician: "When a case of smallpox, diphtheria, or scarlet fever is reported to the health bureau, the house in which the patient is confined is quarantined, and no one is permitted to enter or leave the premises, except the attending physician or the assistant medical inspector of the bureau of health. It is just here where the danger of carrying the disease comes in. The inspector visits the house, sees the patient, and then hurries off to the school houses in his district. When he arrives the children are formed in line and walk past him; in fact, come in direct contact with a person who has just left the bedside of a person suffering from smallpox or some other contagious disease."

Frankford Hospital.—The trustees of the Frankford Hospital of Philadelphia have made the following appointments: Major staff, Dr. R. Bruce Burns, senior surgeon; Dr. Charles P. Brady, junior surgeon; Dr. Joseph P. Ball, general medicine; Dr. Charles M. Stiles, diseases of the eye; Dr. John W. Wilkins, diseases of women; Dr. B. Frank Walters, Jr., diseases of ear, nose, and throat; Dr. Samuel Bolton, diseases of children; Dr. Elmer E. Keiser, nervous diseases.

To the associate staff, Dr Benjamin Pennebaker, Dr. W. Ehwurzel, Dr. O. H. Sterner, Dr. F. F. Cassidy, Dr. George Hall, Dr. H. Pilkington, Dr. George R. Knight, Dr. Fox Chase, Dr. W. H. Morrison, Holmesburg; Dr. A. H. Boyer, Bridesburg; Dr. A. D. Carson, Wissinoming; Dr. Elmer B. Kyle, Kensington; Dr. J. H. Bolin, Tacony; Dr. H. A. P. Neel, Tacony; Dr. W. A. Rocap, Olney; Dr. John Sibbald, and Dr. John Bacon, Torresdale.

The following physicians were accorded full hospital privileges: Dr. George C. Hanna, Dr. M. K. Henry, Dr. J. Mellor, Dr. Alfred Grey, Dr. W. O. Martin, Dr. S. Raughley, Dr. Frank Embery, and Dr. D. P. Boyer.

Bequests of Wealthy Philadelphians.—In adjudicating the estate of Henry C. Cochran, who died December 18, 1902, President Judge Hanna, in the Orphans' Court, on February 12th, awarded a balance of $152,548.18 for distribution among the heirs, and allowed among others these bequests to the institutions named: Pennsylvania Hospital, $10,000; Presbyterian Hospital, Presbyterian Home for Widows and Single Women, Presbyterian Orphanage, Presbyterian Home for Aged Couples, $5,000 each; Gynecean Hospital, Polyclinic Hospital, Medico-Chirurgical Hospital, Old Men's Home, Old Ladies' Home, Home for Infants, Home for Incurables, Working Home for Blind Men, Industrial Home for Blind Women, Home for Aged and Infirm Colored Persons, Children's Country Week Association, Sanitarium Association, Union Benevolent Association, Rosine Association, Union Home for Old Ladies, $1,000 each; Children's Aid Society, Home for Inebriates, Pine Street Day Nursery, Day Nursery, Northern Day Nursery, Philadelphia Dispensary, Northern Dispensary, $500 each. The same judge, in adjudicating the estate of Sarah Louise Burke, who died November 26, 1900, awarded a balance of $41,531.33 for distribution, and allowed bequests of $300 each to St. John's Orphans' Asylum, St. Joseph's Orphans' Asylum, St. Vincent's Home, Maternity Hospital, House of Good Shepherd, St. Ann's Widows' Asylum, Little Sisters of the Poor, St. Joseph's Hospital, St. Agnes's Hospital, and St. Mary's Hospital.

GENERAL

Physicians Elected to Wilkes-Barre School Board.—At a recent election, held in Wilkes-Barre, Pa., four out of the successful candidates for positions on the school board were physicians.

Smallpox in Minnesota.—In the course of the week ending February 6th, seventy-eight cases of smallpox from sixteen counties were reported to the State board of health.

Minnesota State University.—If the epidemics of typhoid fever and diphtheria at this institution are not quickly brought under control, it will be necessary to close for the remainder of the year.

Statement of Mortality in Chicago for the Week Ending February 20, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on estimated midyear populations of 1,950,000 for 1904 and of 1,885,000 for 1903:

	Feb. 20, 1904.	Feb. 13, 1904.	Feb. 21, 1903.
Total deaths, all causes	651	661	627
Important causes of death—			
Acute intestinal diseases	29	14	13
Bright's disease	41	40	40
Bronchitis	35	30	50
Consumption	70	71	60
Cancer	21	25	24
Convulsions	20	20	20
Diphtheria	12	11	8
Heart disease	50	36	42
Influenza	5	7	10
Measles	0	0	7
Nervous diseases	20	31	26
Pneumonia	170	175	144
Scarlet fever	9	5	6
Suicide	7	6	13
Typhoid fever	8	4	18
Violence (other than suicide)	20	33	16
Whooping cough	0	0	6

There were one hundred and seventy deaths reported from pneumonia during the week—a little more than one fourth (26.1 per cent.) of the total 651 deaths from all causes. Since the first of the month there have been 496 pneumonia and 195 consumption deaths reported, and since the beginning of the pneumonia season, November 1, 1903, there have been 1,831 pneumonia and 863 consumption deaths reported. Out of the total of 8,757 deaths from all causes reported during the period consumption caused 9.8 per cent. and pneumonia 20.9 per cent. No smallpox was discovered during the week, and at the close there was but one case remaining at the Isolation Hospital. On the same date last year there were 52 cases in the hospital. Thus far this year there have been only 14 cases, with one death. During the corresponding period of 1903 there were 84 cases removed to hospital, of which number 15 died. The measles and whooping cough record, noted in the last week's Chicago bulletin, is still maintained—no deaths from the former in six weeks, nor from the latter in seven weeks.

The Jewish Hospital, of Cincinnati, O., is about to construct a nurses' home, this being made possible by the gift of $15,000 from Mr. Joseph Josephs, of that city.

No Pay for an Unregistered Physician.—A case was settled in the city court of Savannah, Ga., recently in a suit on open account for medical services rendered, the amount involved being $142.75. It developed that when the services were rendered the physician had not been registered, and the point was made that he was not entitled to payment. The contention was upheld by the jury.

Novel Swindle in Rochester, N. Y.—A suave talker has been visiting the citizens of Rochester lately, stating that he represents the local board of health and has for sale under their auspices a chest protector. The "protector" is of flannel, lined, so the man says, with asbestos, and will positively prevent any infection of the air passages. He urges immediate purchase, as the price will soon go up and the board of health will in any case insist upon its use. The swindler makes a strong plea, and can be frightened off only by a threat to telephone the police.

Benton Harbor, Mich., Hospital Association.—This body has purchased a site and taken the final steps to incorporate the Benton Harbor Hospital.

Dr. R. B. Donaldson, of Washington, D. C., celebrated his golden wedding on February 14th; he has been a resident of the District for over sixty years.

St. Paul, Minn., City Hospital has the following internes for the current year: Dr. Tobias Birnberg, Dr. Edward L. Mauer, Dr. William S. Frost, Dr. Albert G. Schultz, Dr. Carl Louis Larson, and Dr. H. O. Skinner.

Johns Hopkins's Loss by Fire.—There is a report to the effect that Mr. John D. Rockefeller has offered to give $1,500,000 to this institution in order to cancel the university's losses through the recent fire in Baltimore.

The Audrain Medical Society was organized at Mexico, Mo., on February 14th, with the following officers: President, Dr. C. T. Varnon; vice-president, Dr. M. E. Crawford; secretary and treasurer, Dr. C. A. Rothwell, all of Mexico.

Bequest to a Covington, Ky., Hospital.—The will of the late Henry C. Hallam, former circuit court clerk of Kenton county, leaves $500.00 to St. Elizabeth Hospital, conducted by the Little Sisters of the Poor at Covington.

Dr. James Madison Laird, a graduate of New York University and for twenty years a well known practitioner in Deepwater, W. Va., died in the Sheltering Arms Hospital, of that town, on February 16th.

The Lincoln County, La., Medical Society was organized at Brookhaven on February 9th with the following officers: President, Dr. J. W. Bennett; vice-president, Dr. J. T. Butter; secretary and treasurer, Dr. Solon Wilson.

A State Hospital in Iowa is to be established for the care of tuberculous patients. It is stated that there were 150,000 deaths in the United States from the disease during the past year, and that over $750,000,000 was disbursed on its account.

Bequest to Waltham, Mass., Hospital.—By the will of the late Mary Sophia Walker, among other handsome bequests, one of $5,000 is made to Waltham Hospital, the income only to be used to maintain a free bed. The Boston Lying-In Hospital, Children's Hospital, Convalescent Home, House of Mercy, and Episcopal City Mission, all of Boston, each receive $1,000.

Riverside Accident Hospital at Buffalo.—Changes are being made in this institution at 118 Swan Street, by which it will be possible to establish a properly equipped maternity ward. An operating room will also be fitted up on the third floor.

Licensed to Practise in District of Columbia.—The following physicians have been licensed by the board of medical supervisors of the District: Dr. John B. Briggs, Jr., Dr. Carl L. Davis, Dr. Arthur C. Fitch, Dr. James A. Flynn, Dr. William A. Quinn, Dr. Charles E. Reed, and Dr. Oden R. Sudler.

Mortality of Michigan During January, 1904.—There were 3,126 deaths reported to the secretary of State for the month of January, corresponding to a death rate of 14.7 per 1,000 population. The number was 184 larger than that registered for the preceding month, and is also greater than the number for January, 1903. By ages there were 490 deaths of infants under one year of age, 210 deaths of children aged one to four years, and 982 deaths of elderly persons over sixty-five years of age. The age distribution was practically the same as for the preceding month. Important causes of death were as follows: pulmonary tuberculosis, 176; other forms of tuberculosis, 25; typhoid fever, 57; diphtheria and croup, 83; scarlet fever, 34; measles, 12; whooping cough, 19; pneumonia, 412; influenza, 101; cancer, 134; accidents and violence, 180. There were one death from smallpox, which occurred in Kalkaska county.

Examination for Assistant Army Surgeon in April.—The examination of applicants for appointment as assistant surgeon in the United States army will be resumed in Washington, D. C., immediately after the close of the present session of the Army Medical School. It will embrace the full examination (as heretofore), at the conclusion of which those found qualified will be commissioned. Full information as to the requisite qualifications for appearance for examination, method of application, nature and scope of examination, etc., may be obtained upon application to the surgeon general, United States army, at the War Department. The examining board will probably reassemble about the middle of April next, and those desiring to present themselves before the board should make application at once. Applicants are restricted in age to thirty years, and one year's hospital experience or its equivalent in private practice is required.

The Proposed Optometry Bill.—Dr. Alvin H. Hubbel, of Buffalo, writes to us repeating the arguments against this insidious measure which we urged with all the force of which we were capable in a leading article in our issue for January 23rd. He further says:

"The professional sentiment of Buffalo is shown by the following resolutions, which were unanimously adopted at the meeting of the Buffalo Academy of Medicine, January 18, 1904:

Whereas, Certain persons in this State have sent to physicians a copy of a proposed bill which will give to opticians official recognition by the Board of Regents, and other rights and privileges which belong to those who have completed the study of medicine as already prescribed by law, and

Whereas, In certain cases, at least, very decided harm can be done to patients unless the person who prescribes glasses for them has a knowledge of medicine as well as optics, and

Whereas, The general proposition in the bill now proposed has already been condemned by the Medical Society of the State of New York; therefore

Resolved, That the Buffalo Academy of Medicine is unalterably opposed to giving the privilege of the practice of medicine to any persons not qualified for this responsibility by a knowledge of the fundamentals of medicine, to wit, anatomy, physiology, chemistry, pathology, physics, and hygiene, as demanded by the State examining boards, and

Resolved, That a copy of these resolutions be forwarded to our representatives at Albany and that they be requested to use all honorable means to defeat this measure.

Edwin A. Bowerman, M. D.,
Secretary."

Pith of Current Literature.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT.

January 19, 1904.

1. Evil Results of Deep Cervical Incisions During Labor, By HOFMEIER.
2. Koplik's Spots, Diazo-Reaction and Fever in Measles, By O. MUELLER.
3. Eosinophile Cells in Sputum, By W. HILDEBRANDT.
4. New Bone Formation After Resection of the Ribs, By L. BALDASSARI, and A. GARDINI.
5. Prognostic Significance of Constant Rapid Pulse in the Course of Pulmonary Tuberculosis, By S. STERLING.
6. Case of Nervous Entorrhœa, By H. RICHARTZ.
7. Case of Spinal Tubercle, By E. OBERNDŒRFFER.
8. Ovariotomy in Pregnancy, By K. HEIL.
9. Operative Craniotomy in Cerebral Syphilis, By BAYERTHAL.
10. Evisceration and Spondylotomy, Followed by Version and Perforation in Incomplete Uterine Rupture, By G. VOGEL.
11. Splenectomy for Idiopathic Hypertrophy, By F. BAYER.

1. **Dührssen's Incisions.**—Hofmeier reports two cases of labor in women upon whom in a previous confinement Dührssen's quadrilateral incisions of the cervix had been made. In the first case, there was prolonged labor with death of the fœtus and ultimate artificial dilatation of the cervix with bags. In the second case death of the mother and child took place after a very difficult labor, the former dying of a rupture of the uterus with internal hæmorrhage. Hofmeier points out the danger of these incisions, and says that if cervical incisions are necessary, they should be limited to the anterior and posterior walls of the cervix avoiding the lateral cuts, as thus the vessels, at least, are not likely to be injured. The complications in both the recorded cases, were to be traced to the former quadrilateral incisions.

2. **Koplik's Spots.**—Mueller concludes from a study of the literature and of his own cases that the Koplik spots are a frequent and early symptom of measles, but he has found them present in rötheln also, as have Widowitz and Matta-Coco. The spots must not be regarded as pathognomonic of measles unless measles and rötheln are the same disease. The diazo-reaction was also marked during this epidemic, appearing in the urine with the fever, reaching its height with the rise of temperature accompanying the eruption, so that it cannot be regarded as an early symptom of measles, either. As to the fever, Mueller says that in the epidemic he observed, the catarrhal stage showed a short abrupt rise of temperature, followed by an intermission of one or two days, with a subsequent rapidly rising fever which remained continuous for about four days falling by crisis. The fever was rarely remittent in type.

3. **Eosinophile Cells in the Sputum.**—Hildebrandt regards all such cells as show eosinophile granulation as eosinophile cells without regard to their form or size. He found them present in the sputum of two cases of bronchial asthma as well as in the nasal secretion; in the expectoration of persons with pulmonary tuberculosis they were also seen; but in neither of these affections can the finding be regarded as having a diagnostic value.

4. **New Formation of Bone.**—Baldassari and Gardini have experimented to ascertain the best means of promoting the formation of new bone after resection of the ribs when the periosteum was retained. They find the best method to lie in the insertion under the periosteum and between the ends of the cut ribs, of the piece of rib or of a similar piece, which has been removed and which has been sterilized by boiling. This method has the advantage of providing the necessary calcium salts for regeneration of the bone, it can be easily sterilized, and fits the area of resection.

5. **Rapid Pulse in Phthisis.**—Sterling considers the prognostic value of the pulse in pulmonary tuberculosis. He says that a normal pulse-rate in the course of phthisis is prognostically a good sign, while a constantly rapid pulse, in an afebrile state, offers a poorer prognosis varying with the rapidity of the pulse. In the first stage of the disease, a rapid pulse is an especially bad sign. Erethism or nervousness cannot cause a constantly rapid pulse, nor is there is any connection between the latter and sex or the tendency to hæmoptysis. Influenza has the power to lower the pulse of the tuberculous. The outlook is good in cases in which the pulse rate is lowered by rest, cold compresses over the cardiac region, the bromides and cardiac sedatives. The prognosis is better in cases, also, in which a distinct slowing of the pulse becomes evident during the course of the disease unless this is due to renal or arterial disease or a complicating pleurisy.

8. **Ovariotomy During Pregnancy.**—Heil insists that every pregnant woman who complains of abdominal pain referable to the genital region, should be carefully examined. Laparotomy is to be performed in every case in which the diagnosis hinges between extrauterine pregnancy and intrauterine pregnancy with an ovarian cyst. The tube of the affected side is to be left, if possible, in order to avoid disturbing the uterus. The abdominal route is always to be chosen.

BERLINER KLINISCHE WOCHENSCHRIFT

January 18, 1904.

1. Shot Wound of the Pancreas and Acute Hæmorrhagic Pancreatitis (*To be concluded*), By M. BORCHARDT.
2. Experiments with the Internal Administration of a Tuberculous Antitoxine, By F. FIGARI.
3. Gout and Its Treatment, By FALKENSTEIN.
4. Progressive Muscular Dystrophy in Mother and Child, By M. BRASCH.
5. Syphilis and Tabes (*Continued*), By W. ERB.

1. **Internal Administration of Tuberculous Antitoxine.**—Figari took the blood of animals immunized against tuberculosis, containing antitoxic substances, made a powder of it and gave it to guinea pigs. He found that the agglutinative power of these animals increased, and they be-

came more resistant to lethal doses of tuberculin, some of them even remaining alive. The powder was administered to a tuberculous man who improved and gained in weight.

4. **Progressive Muscular Dystrophy in Mother and Child.**—Brasch records two cases of this character, and concludes that Erb's contention that the various forms of this disease are identical, is correct. A child, eight years of age, suffered from a typical infantile atrophic form of progressive muscular atrophy. The mother, aged forty-two years, had a hypertrophic form of dystrophy, which appeared after the birth of the dystrophic child. These circumstances render the cases recorded very unusual.

January 25, 1904.

1. Prognosis of Malignant Growths of the Chorioid (*To be continued*), By J. HIRSCHBERG.
2. Active Immunization of Man Against the Typhoid Bacillus, By K. SHIGA.
3. Ætiology and Pathology of Tabes, with Special Relation to Syphilis, By F. LESSER.
4. Syphilis and Tabes, By W. ERB.
5. Gunshot Wound of the Pancreas and Acute Hæmorrhagic Pancreatitis, By M. BORCHARDT.
6. Aphorisms as to the Genesis of Phthisis in Man and Animals, By E. VON BERING.

2. **Immunization Against Typhoid.**—Shiga succeeded in immunizing himself and another physician by means of so called free receptors and the sera from their own bodies was examined. The production of agglutinins showed a distinct difference in the two men. Shiga's serum had a much greater agglutinating quality than his companion's, as he had had typhoid fever twelve years previously.

3. **Syphilis and Tabes.**—Lesser found that of ninety-six patients dying of locomotor ataxia, twenty-eight per cent. showed evidences of syphilis, while of all other cadavers of men above thirty-five years of age, but nine and one half per cent. gave signs of previous luetic infection. He regards tabes, therefore, as a syphilitic disease representing a quaternary stage of the disease which can be compared in its resistance to mercury and iodides to the interstitial orchitis and the glazed tongue. He believes the spinal cord changes to be due to syphilitic inflammation.

4. **Syphilis and Tabes.**—Erb brings his present study up to the inclusion of 400 cases of locomotor ataxia out of 1,100 men of the better class. His findings are the same as those of his former results, that is, that out of every 100 cases of tabes, ninety patients had previously been infected with syphilis. Scarcely three per cent. can be entirely excluded as never having been infected. Among tabetics, four to five times as many syphilitics are found as among an equal number of non-tabetics in the same class of society. Erb concludes from this that only those persons who have not been infected, can consider themselves as practically immune from locomotor ataxia. There is probably no relation between tabes and gonorrhœa, although most tabetics have at one time or another had the latter disease. Syphilis alone can probably not evoke locomotor ataxia: it may be a particular form of syphilis which does this injury, but probably some other conditions are also essential. Erb concludes by saying that tabes is doubtless, in the majority of cases, a disease of syphilitic origin, but it is not at present demonstrable, although it is probable, that all cases are due to luetic infection.

5. **Pancreatic Gunshot Wounds.**—Borchardt narrates the case of a woman of thirty years of age, who was seen suffering from a tremendous abdominal hæmorrhage, due to a gunshot wound of the pancreas. The bleeding came from the pancreatic vein, the pancreas bleeding very little. Borchardt says that the pancreas must not only be sutured after an injury, but must be tamponed as well. He discusses acute pancreatitis which has a tendency to recurrence. The disease demands immediate surgical intervention if the general condition will permit it. This does not hold for infectious pancreatitis, however.

ZENTRALBLATT FUER CHIRURGIE.

January 9, 1904.

1. Intracapsular Resection of the Hypertrophic Prostate Gland, By L. RYDYGIER.
2. Treatment of Fractures of the Humerus by Balanced Extension, By GEISSLER.

1. **Intracapsular Resection of the Prostate.**—Rydygier prefers the sagittal incision extending from the root of the scrotum to near the anus for intracapsular resection of the enlarged prostate gland, but thinks that the circumrectal elliptical incision combined with the perpendicular cut offers a better field for reaching the gland in difficult cases. He incises the capsule at the side rather than in the median line to avoid possible injury to the urethra. All injuries to urethra and bladder should be avoided if possible, as their purposeful opening does not facilitate the operation and only complicates the after treatment. The total extirpation of the gland is not necessary to produce a symptomatic cure, and the author suggests resection of the gland leaving that portion intact which lies against the urethra. In cases in which the enlarged middle lobe alone is responsible for the symptoms, the lateral resection is, of course, not necessary. The intracapsular resection is free from danger and has no evil results, so it should be undertaken in an early stage of the disease, so that the patient may be protected, as far as possible, from the disagreeable results upon the bladder and kidneys of disturbed bladder function.

January 16, 1904.

1. Treatment of Congenital Luxation of the Hip, By M. REINER.
2. Permeability of the Vas Deferens After Suture Following Section or Resection, By H. VULLIET.

1. **Congenital Luxation of the Hip.**—Reiner believes that up to the twelfth or even the fifteenth year of life, Schlesinger's method is applicable to cases of congenital dislocation of the hip. When reposition has failed, the treatment consists in forcing the femur sharply into such a position that its head will slip into the acetabu-

lum, then to cause fixation of the bone for two or three days in plaster of Paris, and to attempt forcible reduction once more at the end of this time. Reiner does not try to accomplish the whole of this at one session, but is satisfied by various minor manœuvres, to get the head of the femur near the acetabulum in a position of forced abduction. He then completes the operation in from eight to fourteen days. After-treatment consists in daily active and passive gymnastics, while at night the leg is again kept in the primary position of forced abduction which is obtained by means of a removable plaster of Paris splint.

2. **Permeability of the Vas Deferens After Resection.**—Vulliet has made experiments upon dogs, to determine the permeability of the vas deferens after it has been sutured after section or resection. He sutured the duct with very fine material without entering its lumen. In all the cases complete permeability could be microscopically demonstrated, and the author believes, therefore, that the method is entirely feasible in practice.

January 23, 1904.

1. Catgut Sterilization, By Salkindsohn.
2. Drainage of the Pericardium, By W. Mintz.

1. **Catgut Sterilization.** — Salkindsohn describes a modification of Block's method which has the advantage that the catgut does not become brittle after being preserved for some time. He places the commercial catgut upon glass rolls in a solution of one part of tincture of iodine and fifteen parts of spiritus vini (50°). It is kept in this solution for one week in a dark place. It is then sterile, it does not roll or stretch, does not tear or break, and is not brittle; yet it can easily be knotted. It is not absorbed too quickly in the wound, nor does it irritate the latter. It keeps in perfect condition for at least one year.

DEUTSCHE ZEITSCHRIFT FUER CHIRURGIE.

December, 1903.

1. Intraperitoneal Digital Compression of Pelvic Blood Vessels, By Madelung.
2. Ligature and Compression of the Common Iliac Artery, By Dreist.
3. Experiments on Cerebral Pressure, By Leonhard.
4. Hallux Valgus, By Rœpke.
5. Aneurysm of the Hepatic Artery, By Grunert.
6. Treatment of Hypospadias by Beck's Method, By Martina.

1. **Intraperitoneal Compression of Pelvic Blood Vessels.**—Madelung injured the external iliac artery while operating for an aneurysm of the vessel. He then made an incision as though for appendicectomy and had an assistant digitally compress the iliac artery while he proceeded to ligate the injured vessel and the epigastric artery.

2. **Ligature and Compression of the Common Iliac Artery.**—Dreist reports a case of ligature of the common iliac artery for a spurious aneurysm of the femoral artery, and has collected the literature of similar procedures in recent years. Fifty-nine ligatures of the artery in the preantiseptic days resulted in 46 deaths, while 10 deaths followed the procedure out of 18 cases in antiseptic days. Gangrene followed in but one case of temporary ligature or digital compression. Permanent ligature in preantiseptic days resulted in gangrene in 7 instances with 6 deaths, while in antiseptic times gangrene occurred 6 times with 2 deaths. Permanent ligature is always to be preferred to digital compression or to temporary ligature.

3. **Cerebral Pressure.**—Leonhard has attempted experimentally to settle the question whether the brain substance is compressible or not and whether the cerebrospinal fluid can or does leave the skull as the blood does. He removed the skull of doves and rabbits and after the skin wound had healed, pressed from above upon the brain. His conclusions lead him to believe that diminution of cranial space, of momentary duration or of an acute or chronic nature, evokes no pressure after its development, and can, therefore, cause no increase in cerebral pressure.

4. **Hallux Valgus.**—Rœpke describes this condition as an outward deviation of the great toe combined with internal rotation and increased abduction of the first metatarsal bone in the tarsometatarsal joint. The treatment in mild cases can be orthopædic. In severer cases, operative measures must be resorted to. An incision is made along the internal border of the foot, the bursa is removed, the metatarsophalangeal joint is opened, the head of the bone is exposed and chiseled away in the axis of its length. If there is a prominence at the middle of the foot, this, too, is removed and the great toe is then straightened. The wound is not closed, but is packed with gauze. In twenty-three cases thus treated, the result was good and the articular function was not destroyed.

PRESSE MEDICALE.

January 20, 1904.

1. Technics of Abdominal Hysterectomy for Suppurations of Annexa, By J. L. Faure.
2. Chats on Electricity; Difference in Potential; Electric Current, By M. Lermoyez.
3. Ovarian Castration for Cancer of Breast, By Melun.

1. **Abdominal Hysterectomy.**—Faure says an apparently trifling inflammation of the annexa may cause pain so great as to demand operation when a large, indolent lesion might be neglected. He denies forcibly that the technics of the operation should always be the same. There are many operations, the indications for which differ. To facilitate extraction of the annexa, they should be attacked from below; therefore the lower pole of the uteroannexial system should be reached at once by the easiest route, which will vary according to the lesions present.

3. **Ovarian Castration in Cancer of Breast.**—Melun, in view of the astonishment recently expressed at two reports of cases where great improvement had taken place in cancer of the breast and the adjacent glands, recalls that there are

many such cases on record, but that in only 30 per cent. has the improvement been apparently permanent.

January 23, 1904.

1. New Aspects of the Antituberculosis Struggle in Germany, By EDOUARD FUSTER.
2. A Hanging at Tunis, By C. NICOLLE, and BRUNSWIC-LE-BIHAN.

1. **German Antituberculosis Campaign.**—Fuster says the motto of the Dresden meeting may be summed up: "Track, isolate, heal, educate." The measures recommended are about the same as those detailed by Dr. Hermann Biggs in a recent issue of the *Journal*, as used in New York. Compulsory registration of cases of poor prognosis is the keynote. Diagnosis by tuberculin was advised, as bacilli in the sputum are a late symptom.

2. **Hanging at Tunis.**—Nicolle and Le Bihan apologize for describing an operation uninteresting to surgeons from the lack of hæmorrhage and the usually unfavorable prognosis. They were invited by the authorities to witness and criticize a Tunisian execution. The hanging was a slow strangulation, apparently without constriction of the carotids or jugulars, and the heart continued to beat over fifteen minutes.

SEMAINE MEDICALE.

January 13, 1904.

Cerebral Origin of Conjugate Deviation of the Eyes with Rotation of the Head in Hemiplegics, By L. BARD.

Ocular Deviation and Rotation of Head After Hemiplegia. — Bard states these phenomena to be due to active movements of muscular groups on the unaffected side automatically governed by the unilateral action of central perceptions, or simply from the reflex power of the sensorimotor centres. Sight predominates, but other senses take part, particularly hearing and those of locality and equilibrium. But slightly influenced by the seat of the lesion, it is affected by the gravity, extent, suddenness, and intensity of the shock, and the degree of coma. It disappears either on recovery of the affected hemisphere or extension of the lesion to the other.

LYON MEDICAL.

January 3, 1904.

Treatment of Renal Lithiasis, By M. VINAY.

Renal Lithiasis.—Vinay divides his treatment into that of the nephritic colic and that of the diathesis. For the colic, he advises a hot bath followed by a cold enema and diuretic infusions; morphine hypodermically if necessary; rest in bed and a milk diet subsequently. For the diathesis, the alkalies, benzoic acid and the benzoates, a mixed diet with plenty of green vegetables, fruit, fresh cheese. There must be exercise, but not too much. All excesses must be avoided. Cabinet work, gardening, and billiards are recommended. Both rectum and bladder should be emptied at regular intervals.

January 10, 1904.

Melanic Tumor in the Sheath of the Femoral Vessels, By CH. L. GAUTHIER.

The Knee in Coxalgia (*To be continued*), By LATARJET and DUROUX.

Melanotic Tumor.—Gauthier's case was that of a malignant sarcoma within the femoral sheath, as large as an orange, the removal of which necessitated wide dissection and tying of the femoral artery, besides the removal of infected glands. The patient recovered without œdema or gangrene, having only a slight anæsthesia along the distribution of the saphenous nerve, and a trifling limp. Section of the nerve was unavoidable. Relapse is expected, but the writer is glad he did not disarticulate at the hip, and so left the patient the use of the limb.

Gonalgia.—Latarjet and Duroux explain many of these cases, not through the old theory of sympathy, but by the way a coxalgic patient is liable to walk after an attack, throwing his weight in an unaccustomed manner on the head of the tibia. There are also definite tuberculous lesions on the osseous surfaces of the joint. There may be, too, a neuritis. In the first case, rest in bed often relieves. *(To be continued).*

MEDICAL RECORD.

February 20, 1904.

1. Heart Syphilis, By I. ADLER.
2. High-frequency Currents in the Treatment of Skin Diseases, By CHARLES W. ALLEN.
3. The Medicolegal Aspect of Accidents Caused by the Röntgen Rays, By CARL BECK.
4. Insomnia, By ELIOT GORTON.
5. Common Duct Stone Associated with Acute Septic Cholangeitis, By GEORGE EMERSON BREWER.
6. A Case of Chorioidal Inflammation, with Permanent Loss of Vision, Caused by Excessive Use of the Eyes During a Comparatively Short Period of Time, By D. B. ST. JOHN ROOSA.

1. **Heart Syphilis.**—Adler asserts that heart syphilis is a much more common affection than is generally supposed. It is necessary not only to bear in mind that syphilis may be the cause of a given heart lesion, but also that every syphilitic may develop heart disease. Pathological changes take place long before suspected, and must be considerably advanced before they give rise to subjective or clinically perceptible disturbances. One must not look for very pronounced physical signs until the trouble has made considerable progress. Slight arrhythmia, an occasional dropping of beats, roughened or diffused systolic sounds, accentuation or reduplication of the second aortic or pulmonary sounds are in syphilitics of grave significance and call for careful attention.

2. **High-frequency Currents.**—Allen has set himself the task of answering the following questions: (1) What are high-frequency currents? (2) How are they produced? (3) How are they applied? (4) How is their action accomplished? (5) Of what value are they in dermatotherapy? The practical utility of high-frequency currents may be stated as follows: Such currents are of decided advantage in the treatment of certain skin

affections. They should be employed in connection with other measures. They are curative of themselves in a limited class of cases. They aid in relieving pruritus in a large class of cases. As a whole, high-frequency currents are inferior to the x ray in skin work, but the two go well together.

4. **Insomnia.**—Gordon reviews the various methods of relieving insomnia under the three general heads of diet, hygiene, and drugs. Among general measures the warm bath and cold wet pack are of about equal efficiency. In either case it is of the utmost importance to keep the patient's head cool. Unless hydrotherapeutic measures are employed with the greatest regard for details the results obtained will be disappointing. The most serviceable of the hypnotic drugs is paraldehyde. The nastiness of the dose may be reduced by exhibiting the drug as follows: Paraldehyde, two parts; whiskey and orange syrup of each, one part. To be of any service two drachms of paraldehyde should be given at a dose.

5. **Common Duct Stone.**—Brewer reports three cases of stone impacted in the common duct associated with symptoms of grave sepsis. The only treatment for the condition is surgical intervention. The author asserts that such cases are not infrequently diagnosticated as cases of simple catarrhal jaundice associated with malarial fever.

MEDICAL NEWS.

February 20, 1904.

1. The Administrative Control of Tuberculosis, By Hermann M. Biggs.
2. House Infection of Tuberculosis, By Lawrence F. Flick.
3. Case of Tetany, By Joseph Barsky.
4. Two Cases of Severe X Ray Necrosis, Presenting Some Unusual Features, By Clarence Edward Skinner.
5. The Value of Vaginal Cæsarean Section; with Report of Two Cases, By M. Stamm.

2. **House Infection of Tuberculosis.**—Flick holds that the most striking thing about the communicability of tuberculosis is that it depends almost entirely upon the house. An enclosure of some kind is so necessary for the conveyance of the disease from one person to another that contagion is impracticable without it. The author's paper is an elaboration of this idea.

3. **Tetany.**—Barsky reports a case of tetany which ushered in an acute bronchitis. The author has seen another case in which tetany ushered in the symptoms of lobar pneumonia. It is, therefore, reasonable to suppose that tetany is not necessarily a complication, as some authorities have asserted, but that it may occur as an initial symptom of any of the acute febrile diseases.

5. **Vaginal Cæsarean Section.**—Stamm asserts that there are on record over sixty cases of vaginal Cæsarean section. The author believes that the method should take the place of ventral Cæsarean section in nearly every case where the soft parts form the obstacle to delivery or where a narrow pelvis can be excluded. Short abstracts are given of a number of cases reported in order to show the conditions which indicate this method of procedure. In the author's first case vaginal section was resorted to at the fourth month of pregnancy on account of a cancer of the cervix. He employed the method the second time for the relief of eclampsia at the eighth month of pregnancy.

AMERICAN MEDICINE.

February 20, 1904.

1. The Life Cycle of *Amœba Coli* in the Human Body: A Preliminary Note, By Charles F. Craig.
2. Medical Treatment of Diabetes, By W. H. Thomson.
3. The Retinal Symptoms of Vascular Degeneration, By L. A. W. Alleman.
4. Posterior Gastroenterostomy, by a Modified Maunsell's Method, with an Enteroenterostomy by the Hartley Method, By W. L. Wallace.
5. Röntgen Ray Treatment of Disease, By Clarence E. Coon.
6. Hourglass Contraction of the Uterus, By Charles F. Beeson.

1. **Amœba Coli.**—Craig has had excellent opportunities for studying *Amœba coli*, as he is an army surgeon at San Francisco. His paper deals principally with the mode of reproduction of amœbæ. For studying the organism he recommends a modification of Wright's method for the malarial parasite. The author believes that he has demonstrated that *Amœba coli* undergoes reproduction by sporulation, and that such a manner of reproduction best explains the persistence of amœbic infection. The author disagrees with the opinion that there are two forms of amœba, a pathogenic and a non-pathogenic variety. While it is true that amœbæ may at times be found in apparently healthy intestines, this does not prove the existence of a non-pathogenic variety.

2. **Diabetes.** — Thomson distinguishes between glycosuria and diabetes. His practice is to pronounce a glycosuria, that has lasted more than a year, diabetes. Time, and not the severity of the constitutional symptoms, should be the sole ground on which the diagnosis is to rest. The treatment recommended by the author can be summarized thus: (1) The free use of codliver oil. This drug, if taken in sufficient quantity and well borne, is capable of reducing the quantity of sugar and urea eliminated. (2) Iron stands next to codliver oil in importance. (3) Antiseptics. The author classes as antiseptics most of the drugs of the phenol group. Quinine and arsenic and some few other drugs are also classed among the antiseptics. Opium and the opium derivatives, while they will at times control the symptoms, are incapable of either favorably or unfavorably affecting the disease.

4. **Posterior Gastroenterostomy.**—Wallace attempts to answer the following question, "How can a posterior gastroenterostomy by suture, with an enteroenterostomy by Murphy button, be done best in the shortest time, with least danger of infection?" The author answers this question by reporting a new operation and the history of one case on which the operation was tried. The oper-

ation is said to require very little time and no special instruments.

6. **Hourglass Contraction of the Uterus.**—Beeson reports one case of hourglass contraction of the uterus. The diagnosis was made under full chloroform anæsthesia, and was therefore probably correct. The contraction ring was about five inches above the rim of the external os. The child was finally delivered by forceps and both mother and child did well. The author reviews the literature of the subject, and concludes that while there can no longer be any doubt of the existence of hourglass uterus, the explanation of its occurrence and of its mechanism is still in doubt.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

February 20, 1904.

1. The Early Signs of Pregnancy. A Contribution to Its Clinical Study, with One Pathological Specimen, By H. L. E. JOHNSON.
2. Neurasthenia and Its Treatment by Actinic Rays, By ALBERT E. STERNE.
3. Some Toxæmias in Relation to the Production of Nervous and Mental Diseases, By SAMUEL BELL.
4. The Ocular Complications of Bright's Disease, By LOUIS STRICKER.
5. The Development of Hard Tissue in the Pulp of Human Teeth, By DOUGLAS E. CAUSH.
6. Splenic Anæmia; Report and Demonstration of a Case, By M. J. LICHTY.
7. Squint, By ALBERT B. HALE.
8. A Clinical Note on Obscure Cases of Septic Fever, By LOUIS FAUGÈRES BISHOP.
9. The Red Cross Society of Japan, By N. SENN.

1. **A Sign of Pregnancy.**—Johnson announces a new sign of pregnancy which he describes as follows: "This sign is observed as early as the fourth week, or possibly earlier, and consists of an intermittent softening and hardening of the vaginal portion of the cervix uteri with, in many cases, a change of color, from a pale violet to the normal pink hue, or the reverse. These changes in consistence and color are rhythmic, more or less. The alternate softening and hardening is easily detected by digital touch, while changes in color may be seen through a speculum." He has observed it a very large number of times, and has found it invariably present in cases of pregnancy.

2. **Neurasthenia.**—Sterne describes an apparatus he has used for a number of years in the treatment of a large number of diseases by means of actinic rays. His remarks concern neurasthenia principally. During the past six years he has treated a large number of cases of neurasthenia, and his results have been almost uniformly favorable.

3. **Toxæmias.**—Bell considers in detail a large variety of forms of autointoxication, and attempts to show the influence they exert in the production of nervous and mental disorders. He asserts that if more stress were laid on the rôle played by autointoxication, and if mental and nervous diseases were treated more vigorously in their incipient stages, there would be fewer inmates in our asylums.

4. **The Eyeground in Bright's.**—Stricker reports eight cases and gives fourteen illustrations of the eyeground in Bright's disease. The ocular complications in kidney affections are discussed at some length. The author's conclusions, abbreviated, follow: (1) There are no ocular complications of Bright's disease from which, independently, a positive diagnosis can be made. (2) The prevalent idea that one must find the characteristic picture of Bright's disease, with hæmorrhages and areas of degeneration and white splashes in the region of the macula, is a mistaken one, since one may meet with any of the many manifestations of vascular or retinal inflammation due to the action of toxines. (3) Only a small percentage of cases of Bright's disease develops ocular complications. (4) All the ocular complications of the disease are the result of altered nutrition, or toxæmia; in other words, a chronic uræmia. (5) Diseases of the eye coming on in the course of Bright's disease are of the most serious prognostic import, and indicate an early dissolution of the patient. (6) In the acute form conditions are of a more hopeful character. (7) In the Bright's disease of pregnancy, with ocular involvement, a low urea quantity should be a positive sign for immediate interference, and should justify artificial abortion both to save the eyesight as well as the life of the mother.

BOSTON MEDICAL AND SURGICAL JOURNAL.

February 11, 1904.

1. Remarks Upon Cholecystectomy and Cholecystostomy, with Special Reference to Their Comparative Safety and Efficiency in the Treatment of Biliary Affections, By MAURICE H. RICHARDSON.
2. Cholecystostomy and Cholecystectomy. A Study of a Certain Series of Operations, By CHARLES L. SCUDDER.

1. **Cholecystectomy and Cholecystostomy.**—Richardson asserts that the practical arguments in deciding between extirpating and draining the gall bladder are four in number, and are based: (1) Upon the comparative dangers of the two methods; (2) upon the comparative efficacy of preventing the recurrence of gallstones; (3) upon the advantages of temporary drainage of the biliary passages; (4) upon the possible necessity and increased difficulty of draining those passages at some future time. The arguments based on the two first considerations are about as favorable to one operation as the other. The advantage of obtaining prolonged drainage cannot, in the author's estimation, be overestimated. He holds, therefore, that cholecystectomy should be considered an operation of last rather than of first resort; an operation for old, contracted, infected, useless gall bladders. The increased difficulty of secondary operation in cases in which the gall bladder has already been extirpated is another argument in favor of cholecystostomy.

2. **Cholecystectomy and Cholecystostomy.**—Scudder summarizes his preferences as follows: "Cholecystostomy should be done in those cases of gall bladder and biliary duct surgery in which quick drainage is needed for the deeper ducts and

in which the surgeon is not absolutely sure that the deeper ducts are entirely free. Cholecystectomy should be done in cases of acute cholecystitis, in cases of cholecystitis resulting in gangrene and empyema of the gall bladder, in small contracted (infected) gall bladders which are functionally useless and which will not be of service in facilitating drainage, and in all cases in which the surgeon is morally sure that the deeper ducts are free from obstruction."

LANCET.

February 6, 1904.

1. The Physiological Action and Antidotes of Snake Venoms, with a Practical Method of Treatment of Snake Bites, By L. Rogers.
2. Some Observations on Medical Examinations for Life Insurance, By Sir D. Duckworth.
3. Some Remarks Upon the Midwives Act in its Bearing Upon the Work of General Practitioners, By P. Rose.
4. The Surgical Treatment of Perigastric Adhesions, By E. P. Paton.
5. On Congenital Occlusion of the Œsophagus, By W. Thomas.
6. A Chart of Static Modalities, By F. H. Humphris.
7. Agglutination and Sedimentation in Human Glanders, By C. M. Heanley.
8. A Case of Acute Lymphatic Leucæmia, By H. Savory.
9. A Case of Ovarian "Fibroid" Tumor Removed by Posterior Colpotomy; Subsequent Pregnancy, By J. Phillips.

1. **Snake Poisoning.**—The following is a summary of Rogers's investigations of the physiological action and antidotes of snake venoms. The snake venoms have been divided into two classes: (1) The colubrine, acting mainly by paralyzing the respiratory centre in the medulla and the motor end plates of the phrenic nerves; and (2) the viperine, hitherto thought to act mainly on the blood, producing intravascular clotting or loss of coagulability and hæmorrhages. But, in reality, a still more important and constant action of the viperine class is the production of a paralysis of the central vasomotor centre in the medulla. The chief representatives of the colubrine class are the hydrophidæ or sea snakes, the cobras, and the kraits. They are all extremely poisonous; the cobra venom has an exceptionally powerful hæmolytic action, while that of the banded krait exhibits viperine as well as colubrine characters, in that it produces a marked fall of blood pressure. This is confirmed by the fact that Calmette's serum for protection against cobra venom also protects against all the other colubrine venoms, except that of the banded krait. Wherever possible, such serum as is available should be injected intravenously, so as to obtain the fullest and most rapid action possible. A more powerful antitoxine is needed; it may possibly be obtained by using in its preparation a mixture of the different purely colubrine venoms. Artificial respiration may also be of great value in keeping the patient alive. Viperine poisons. There is no essential difference in kind in the action of viperine poisons as a class on the coagulability of the blood, but only in the amount of the thrombosis producing element in the different venoms. The same is true as regards hæmorrhagic and hæmolytic action. The essential lethal factor of all the viperine venoms is the production of a paralysis of the central vasomotor centre, producing a primary circulatory failure, followed by a secondary respiratory failure, due to deficient supply of blood to the medulla. None of the viperine venoms ever produce any paralysis of the motor end plates of the phrenics or other nerves. Calmette's antivenine is useless against the viperine venoms. Adrenalin, or better still nicotine, was found to be an effectual antidote, if used before the vasomotor centre was completely paralyzed. They counteract the primary circulatory failure, by contracting the peripheral vessels. Lastly, the author describes a simple and practical method of destroying snake venom in the bitten part, consisting in the use of potassium permanganate, as first recommended by Blyth. A ligature is placed around the limb above the site of inoculation of the venom, a small incision made through the bite, and pure crystals of permanganate moistened with a little fluid are rubbed in, so as to neutralize as much as possible of the venom before it has had time to be absorbed into the circulation. The salt destroys *in vitro* nearly its own weight of every class of snake venom. The author's experiments on animals show that, if used early, thoroughly, and in sufficient quantity, it will protect against the lethal effects of snake venom.

4. **Perigastric Adhesions.**—Paton states that post mortem records show that evidences of an active ulcer of the stomach or scars of old ones are present in about five per cent. of all examinations. As adhesions are present in forty per cent. of such cases, these figures show that gastric adhesions are present in about two per cent. of all persons. Symptoms in connection with such adhesions arise in very few cases, however. Perigastric adhesions are caused by ulceration of the stomach and duodenum, gall stones in the gall bladder or bile ducts, traumatism, malignant disease, pancreatic disease, umbilical hernia, and possibly tubercle and syphilis. The adhesions are usually to the pancreas or liver. Adhesions to the anterior abdominal wall are very rare. Symptoms due to adhesion arise usually in cases where the attachment is to one of the more mobile organs, which drags on the adhesion. Liver or pancreas adhesions are usually close and broad—those to the colon or gall bladder may be long and cordlike. The stomach may be markedly changed or very little altered. The pylorus may be narrowed, or the stomach may be nearly divided into two parts. Other effects are dilatation by traction or interference with the mobility and power of contraction of the organ. The history of the case is usually a long one, and the symptoms finally complained of have not infrequently been preceded by those which are more characteristic of gastric ulcer or gallstone colic. Pain is the most common and characteristic symptom, and a marked feature is the way it is frequently confined to one locality. It is usually greatly influenced by the position of the patient, but very little by food. Violent exertion often brings on

the pain; it is sometimes relieved by firm pressure or bandaging. Local tenderness is usually present. Physical examination, as a rule, reveals very little, the gastric juice being normal, and there being no evidences of dilatation. In conclusion, the author gives summaries of forty-two cases of perigastric adhesions, collected from the literature. The treatment consists in verifying the diagnosis by an exploratory incision; if adhesions are found they should be carefully separated or divided if this is possible. If none are at first detected the stomach should be dragged in various directions, so as to make visible any bands. Any large raw surfaces should be covered with folds of peritonæum if possible. Promotion of visceral movement is the most efficient means of preventing adhesion of raw peritoneal surfaces—movement in bed, general massage, mild laxatives, etc. When the adhesions cannot be separated it may become necessary to perform pyloroplasty or gastrojejunostomy.

5. **Occlusion of the Œsophagus.**—Thomas reports a case of congenital occlusion of the œsophagus, the child being unable to take any food and dying on the fourth day. From a study of the literature there appear to be two forms of congenital occlusion of the œsophagus, one in which the upper and lower portions are united by a fibrous cord, and another in which the lower part opens into the trachea or one of the bronchi. The latter is the commoner condition. The balance of evidence is in favor of arrest of development. Only one case has ever been operated on —the patient lived fourteen days.

7. **Agglutination in Glanders.**—Heanley has investigated the serum reaction in two cases of glanders, and finds that, while clumping of glanders bacilli is caused by various sera, the sedimentation test, with a dilution of 505 and a time interval of at least four hours, gives positive specific results, no reaction being obtained with any serum but that of glanders.

BRITISH MEDICAL JOURNAL.

February 6, 1904.

1. Inaugural Address on the Progress of Surgery, By H. MARSH.
2. An Address on the Work and Purpose of the Royal Army Medical College, By SIR W. TAYLOR.
3. Aseptic Surgery in Theory and Practice. (Lettsomian Lectures—I), By C. B. LOCKWOOD.
4. Some Practical Points Associated with Appendicitis, By W. D. SPANTON.
5. Notes on an Ineffectual Treatment of Cancer; Being a Record of Three Cases Injected with Dr. Schmidt's Serum, By D'A. POWER.
6. Acute Septic Colitis Due to Milk Poisoning, By G. F. VINCENT.
7. Note on the Nature of the Parasitic Bodies Found in Tropical Splenomegaly, By W. B. LEISHMAN.

4. **Appendicitis.**—Spanton reports ten cases of appendicitis with one death. He states that pain may be mistakenly relied on as an essential symptom of the condition, whereas in several of his cases it was very slight. The locality of the pain is often misleading: in the worst cases it may be referred to the epigastrium or along the course of the colon. Epigastric pain is almost invariably associated with peritonitis, and is one of the most valuable indications of its presence and the need for operation in these cases. Tenderness on pressure is entirely distinct from referred pain, and is usually over the seat of the appendix. In women it is apt to be confused with ovarian tenderness—it is not uncommon for both ovary and appendix to be inflamed. The presence of a lump is often misleading, for such cases often recover without operation, while its absence indicates little, as the appendix may be gangrenous or hidden away down in the pelvis. Abdominal tension, especially with rigidity of the right abdominal muscles, almost always denotes the formation of pus or circumscribed peritonitis. In conjunction with constitutional symptoms, it is almost pathognomonic. Constipation is usual, but spurious diarrhœa is not uncommon. Temperature and pulse count for but little, except when a sudden rise gives indication of grave mischief.

It is far safer to operate too soon than to wait a minute too long. No one ought to be allowed to die unopened unless actually moribund.

5. **Serum Treatment of Cancer.**—Power reports three cases of cancer ineffectually treated with Schmidt's cancer serum. His conclusions are as follows: 1. In regard to the reaction. There is no doubt that a reaction takes place after the injection of Schmidt's serum. The temperature rises, and with it the pulse, but the respirations as a rule are not affected. In this it only corresponds to the action of other sera containing toxines; so that the reaction cannot be accurately termed specific. 2. A local effect upon the tumor was produced in each case, yet it could not be proved that the serum acted by selection upon malignant tissues alone. Any preexisting inflammation seemed to be intensified. 3. The treatment is certainly painful apart from the succession of hypodermic injections. Lastly, malignant disease progresses, even to a fatal issue, while the injections are being given.

6. **Septic Colitis.**—Vincent reports a case of acute septic colitis occurring in a man aged thirty-two years, and terminating fatally after about twenty days. At the autopsy the cæcum and ascending colon were found to be enormously distended and congested—i. e., in a state of acute septic infection. The patient had been freely drinking milk from a contaminated milk supply, which had been found to be the cause of a prevailing epidemic of sore throats.

7. **Leishman's Bodies.**—Leishman calls attention to the close resemblance of the parasitic bodies first described by him as occurring in tropical splenomegaly, to some recently found by Wright in a case of tropical ulcer (Delhi sore). Ross has frequently found in the pus of such sores large numbers of a flagellated organism—*Cercomonas hominis.* So that it is possible that Wright's parasites may prove to be altered cercomonads. Leishman originally thought the parasites found in tropical splenomegaly represented an involuted stage of some flagellated organism.

Letters to the Editor.

THE ADMINISTRATIVE CONTROL OF TUBERCULOSIS.

1829 Spruce Street, Philadelphia,
February 22, 1904.

To the Editor,

Sir: In a recent lecture,[1] Dr. Hermann M. Biggs makes some statistical statements which, like many other general assertions, probably overshoot the mark at a point higher than really intended, and for the reason that I have recently gone over much of the ground covered by this part of his address, I assume the liberty of taking exception to the same, in so far as it pertains to the cities of this country.

One of these statements is that "there has been a more rapid fall in the tuberculous death rate[2] in New York than in any other city in the world." This decrease has been 40 per cent., or an average annual reduction of 2.43 per cent., from 1886 to 1902—a period of sixteen years—and must admittedly be accepted as an enormous diminution; but investigation shows that the above figures are inferior to those which obtain in other cities. Boston, for example, gives a decrease of 50 per cent., or an annual average decrease of 3.12 per cent. for the same period. In the latter city, as in many others, there is an increase in the consumption rate from 1898 to 1902—a period of four years; but if we estimate its death rate from 1886 to 1898, the beginning of this rise, we get the greater fall of 42 per cent. in twelve years, or an average anual decrease of 3.50 per cent. It is seen, therefore, that the average annual diminution of consumption has been about one per cent. greater in Boston than in New York during the last sixteen years.

Now, Dr. Biggs attributes the fall in the death rate from consumption in New York city to the fact that this disease is under administrative control, i. e., that all consumptives are registered and disinfected.[3] If this is true, how does he account for a fall as great, or greater, in the mortality from this disease in localities like the District of Columbia, in which no administrative control of consumption exists whatever? Thus, in the latter instance, from 1879 to 1902—twenty-three years—there was a total fall of 38 per cent., or an average annual fall of 1.65 per cent. Exclude the rise in the death rate from 1898 to 1902, as was done in the case of Boston, and it will be found that, from 1884 to 1898—fourteen years—the total decrease was 43 per cent., and the annual average decrease was 3.06 per cent.; while from 1884 to 1895—eleven years—the total fall was 40 per cent., and the annual average 3.63 per cent.

It is thus seen that New York city is surpassed in the rapid fall of its consumption rate by Boston, also a registration and disinfection city, but both are outstripped in the average annual diminution of consumption by the District of Columbia, which neither registers nor disinfects its consumptive population.

The other statement is that "this (reduction) is not due to return of tuberculosis cases under other names, for in New York the statistics of other pulmonary diseases have not increased." If this is true of New York city in regard to pneumonia, it would almost be an exception to the general rule; for, on studying the statistics of this disease in the large cities of the country, I found only two which showed no increase in this respect; and these were the District of Columbia and Haverhill—both non-registration and non-disinfection cities. It is true that the pneumonia rate in New York city shows no very marked increase from 1886 to 1902, but it is nearly 30 per cent. higher in the last ten years preceding 1902 than it is in the ten years following 1870. Even if there were no increase of "other pulmonary diseases," this would not preclude the possibility of returning "tuberculosis cases under other names;" for it is interesting to observe in this connection that the death rate from heart diseases has swelled over 40 per cent. in New York city from 1870 to 1897[4]—the increase dating from the early eighties. Why should the decline of consumption and the increase of pneumonia and of heart diseases appear almost simultaneously? Without making any further criticism, or venturing any conclusion, I would say in closing that the question of exterminating pulmonary consumption is one of colossal proportions—unappreciated and underestimated at the present day, I believe—and that they who enter this work will do well seriously to consider and anticipate the difficulties and perplexities which are sure to confront them on every side.

Thomas J. Mays.

FLUORESCENCE IN THE BLOOD.

Milwaukee, *February* 19, 1904.

To the Editor,

Sir: In your issue of January 16th you mention, on page 124, that Dr. Morton proposes to utilize the solutions of quinine and other salts in the blood in his x ray and radium treatments. Since September, 1899, I have used the luminosity of quinine in my high potential high frequency treatments, giving the quinine some three hours before treatment. I was led to do so by a suggestion of Dr. W. D. Robinson, in an article on The Climatology of Nudity, in the *Philadelphia Medical Journal* of August 26, 1899. On page 400 of that issue Dr. Robinson says. "A possible action of quinine in malaria is interesting. Quinine in solution, as it must be in the blood, absorbs ultraviolet and violet waves of light and speedily emits them in colors. This is called fluorescence. Can quinine, carrying light, thus bring death to the malarial plasmodium and destruction to its toxines? May we not say carry electrocuting batteries, so named, from light's chemically destructive power, due to its diselectrifying qualities which extend to action on molecules and atoms?"

This letter is written, not to question any credit due to Dr. Morton, whose results when published will doubtless be of great value; most emphatically not to claim any credit for myself, but solely to call attention to the information packed into Dr. Robinson's article and the suggestiveness of his remarks, that others may reread it or read it for the first time. ALDEN B. FARNHAM.

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[1] Delivered before the Phipps Institute, on the Administrative Control of Tuberculosis, Philadelphia, February 5, 1904. Abstract published in *New York Medical Journal*, February 20, 1904.

[2] Presumably pulmonary tuberculosis.

[3] Boston is under the same control.

[4] I was unable to secure data on the subject extending further than 1897 in New York.

THERE IS A NEED FOR RECIPROCITY LIBRARY PRIVILEGES BETWEEN THE LEGAL AND MEDICAL PROFESSIONS.

NEW YORK, *February* 12, 1904.

To the Editor,

Sir: Modern life tends to make class units of more importance and likewise more dependent. While the lawyer has always had the doctor for his service the physician has only now begun to realize his own importance in the legal warp of our social fabric, and to appreciate the fact that he has rights and privileges at court beyond those which custom accords to laymen. It is such a peculiar state of mind which the successful lawyer has to possess, namely, the ability to rehabilitate the unrighteous cause of his client and make it appear a right one, enabling himself thereby to exert his best energies. The honest doctor's derelictions in legal matters are due to either ignorance or false pride. When he takes the witness stand he forgets that he is to be handled by persons skilled in ways of detecting what he doesn't know, while at the same time he is self conscious of the fact that, back of the petit jury he faces, is the jury of his peers in the medical profession who will sift his statements. While it will always remain impossible for a medical expert to appear to advantage when he has been persuaded to bias his judgment in favor of the side which employs him, increased knowledge of law must become of distinct advantage to the general medical profession. With this thought in mind, I desire to call the attention particularly of members of the executive committees of both the Academy of Medicine and of the Bar Association of New York, and of all the fair-minded members in both professions, to the unequal library privileges which exist at the present time between the two professions. Within a block of each other are situated what are probably the two finest technical libraries upon the subjects of law and of medicine in the United States, and yet separated by a Divean gulf. For while the lawyers have not only free use of the medical library, but may subpœna books, as it were, to appear at court and be detained there for weeks as " exhibits " or for " reference " during the course of some long drawn trial which presents medicolegal features, the legal library is most exclusive—in fact, may be said to be sectarian. Resident doctors are not permitted to enjoy the privileges of the library of the Bar Association; for even though one be properly introduced by a member, entrance to the library is denied unless the applicant comes from some out of town place.

While it is true that the academy's library is perforce made semipublic, in order to avoid certain tax requirements (perhaps a similarly efficient remedy for which may have been found by our legal brethren without sacrifice of high toned seclusion), it does seem as though it would be a gracious compliment to the medical profession living in New York city for them to let down the bars. FREDERIC GRIFFITH.

49 EAST SIXTY-FOURTH STREET.

AEROPHAGIA.

BROOKLYN, N. Y., *February* 22, 1904.

To the Editor,

Sir: I have read with great interest the article by Dr. Stern, entitled Clinical Value of Aerophagia. While it is worthy of much praise and worthy of all consideration, I cannot believe that this symptom is of sufficient value to warrant a class for itself.

The habit of voluntary and involuntary belching is well known to all medical men and laymen alike. This is due partly to gas and partly to air which has been swallowed. But that an amount of the latter is swallowed sufficient to cause such radical and grave manifestations as depicted in Dr. Stern's article, is, to say the least, hard to believe.

As far as the occurrence in neurasthenics is concerned, it is truly enough a frequent symptom, together with the *one thousand and one others* of greater or less importance.

Occurring in the robust, out-of-door, healthy individual, it must be ascertained if he or she eats slowly, masticating and salivating properly before swallowing.

In Case III, the trouble was at least partly due to ordinary *fast* eating; food remaining longer than normal in the stomach, after having entered in far too coarse a condition; physiological *post cœnam* congestion being greatly increased, fermentation, distention, irritation of the terminal nerve filaments, pain, etc., resulting; in short, an attack of acute indigestion, which has been followed by *acute dilatation* (see Thomson Acute dilatation of the stomach).

With regard to limitation of area, true, one may force air into the stomach to the extent of causing relaxation of the pylorus; but could air be simply swallowed to such an extent as would bring about this pervious condition of the valve?

The temperature theory is, perhaps, an open one, but I fancy air would have to be pretty cold to cause any damage, as it is well known that the difference in degree of liquid in the mouth and at the cardia is quite marked; it is, therefore, reasonable to infer that there is considerable warming effect exerted upon the air by the œsophagus.

The concomitant gastrointestinal disturbances of " mouth breathers " are hardly worthy of consideration.

The bicyclist had been subjected to unusually hard usage; result—weakened heart's action, circulation, nerve energy, and to my mind what I may perhaps be permitted to call a " temporary atonic " condition of the gastrointestinal tract. The fact of the flatus, etc., being odorless is due to the action of sodium carbonate so largely and constantly present in the small intestine.

In conclusion: People do swallow air, as has been so well pointed out by Einhorn and others;

also, there is no question but that this air keeps up the belching "habit;" but as for attributing anything like serious consequences to swallowed air *alone*, one must possess very great enthusiasm in that direction.

Surely in the cases herein reported these patients would have suffered greatly had they swallowed no air. H. W. LINCOLN.

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Proceedings of Societies.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

TWENTY-NINTH ANNUAL MEETING, HELD IN MEMPHIS, TENN., ON OCTOBER 7, 8, AND 9, 1903.

(Concluded from page 380.)

Extrauterine Pregnancy.—Dr. A. H. CORDIER, of Kansas City, Mo., discussed the pathology, diagnosis, and treatment of this condition. In ten years he had encountered fifty-four cases. Intraperitoneal was to extraperitoneal rupture in the proportion of three to one. The diagnosis of ectopic pregnancy prior to rupture was attended with great difficulty and was rarely made. The question of the treatment of these cases was so thoroughly settled as to admit of very little discussion. The operation of choice was a median suprapubic section, with removal of the misplaced structures. Vault drainage in ectopic gestation was an incomplete procedure, attended with much danger at the time of the operation, leaving the woman with a pathology that would in most instances continue to produce disagreeable or dangerous symptoms until it was completely removed.

Ectopic Gestation.—Dr. ANDERSON WATKINS, of Little Rock, Ark., reported a case with complications. The points of interest were the typical history, a long period of sterility succeeding a normal pregnancy, the absence of menstruation for four months, enlargement of the breasts, morning sickness, shedding of the decidua, and finally a feeling on the part of the patient as though she was pregnant.

The Causes of Occasional Failure of an Operation to Cure Gall Stone Disease.—Dr. WILLIAM J. MAYO, of Rochester, Minn., said that with a single exception, to which he referred later, all the results that were less perfect than were desirable had occurred in complicated cases, and it could be laid down as an axiom that delay in seeking surgical relief was the direct cause of the complication. It was the general experience that complicated cases usually had symptoms during a period sufficiently long to have made the diagnosis possible before the development of serious lesions, and that an operation at that time would have been safer and the cure more certain. He referred to the clinical fact that a small number of patients who had had a cholecystostomy performed would have a colic or two following operation, and sometimes accompanied by transient jaundice. He had seen this most frequently during the first month or two after the patient was discharged from the hospital.

The most common cause of subsequent symptoms was incomplete removal of stones. Stones in the cystic duct frequently escaped attention, and it was only after several such misfortunes that he began to exercise greater care in exploring this canal. The parts were deeply situated, and as these patients were often obese, it was not easy to locate such a calculus previous to the development of the Robson procedure. In most of the cases of stone impacted in the cystic duct cholecystectomy was indicated.

One source of failure of cholecystostomy to cure was secondary obstruction of the cystic duct, preventing free drainage of the gall bladder down through the passages. This might eventuate in a mucous fistula or in repeated attacks of colic, as the gall bladder secretions were periodically forced through the strictured canal.

In septic cases drainage was necessary for a long period of time, and if the fistula was allowed to close too quickly, severe symptoms might ensue. He had twice had to reopen and reestablish drainage in septic cholecystitis. Both cases were colon infections.

Stones were often overlooked in the common duct, as they might lie quiescent for years. The jaundice might be very slight and in some cases not noticeable. The gall bladder in the meantime might become obstructed at the cystic duct, so that this organ might be enlarged and cystic, with calculus at the neck, and nothing to call attention to the common duct stone. Chronic pancreatitis might exist at the time of operation, and to obtain a good result drainage must be long continued.

Cancer could also be said to be secondary to stone formation, and might take place after cholecystostomy, or, being present, might be mistaken for inflammatory disease. All thick-walled gall bladders should be looked upon as suspicious, and as they were functionally useless, cholecystectomy should be done rather than cholecystostomy, and in this way many early cancers would be found and cured.

Persistent biliary fistula usually meant obstruction of the common duct. Everyone understood the importance of not attaching the gall bladder to the skin. In the early days persistent biliary fistula was usually due to a mucocutaneous suture. This practice was now obsolete. The turning in of the margins of the incision of the gall bladder, and drawing a purse-string suture closely about the drainage tube in a similar manner to a Kader gastrostomy, enabled healing of the fistula to take place most promptly after removing the drain.

Secondary operations had been comparatively safe in his experience. The patient had become accustomed to the condition and the adhesions formed a protective barrier. Separation of the adhesions, particularly about the liver, resulted in considerable hæmorrhage. Rather prolonged gauze pressure usually checked the oozing, as the blood pressure in the liver was very low, and the operation to be completed. Most of the cases required a light gauze drain protected by gutta percha tissue at points of contact with the stomach or intestines, to prevent troublesome adhesion to the gauze. Deep drains should be anchored with catgut to prevent displacement by movements of the liver, as effected by the diaphragm. The catgut became absorbed before the time for withdrawal. The drains should not be removed too early, six to twelve days being the usual limit as to the time of withdrawal.

Gall Stones.—This topic was discussed by Dr. W. D. HAGGARD, of Nashville. The most valuable local sign was supersensitiveness under the tip of the ninth costal cartilage. The best way of eliciting this sign was described. A distinct tumor was not often felt, and was therefore not diagnostic of gall stones. In long standing cases of inflammation in and around the gall bladder an ill defined tumor was present, but the tenderness precluded its exact definition. Hydrops from a stone in the csytic duct showed the typically enlarged gall bladder, and empyema was also characterized by tumefaction. Stones in the gall bladder without inflammatory or other complications were never attended by enlargement, but empyema was characterized by tumefaction. Stones in the gall bladder without inflammatory or other complications were never attended by enlargement, and an enlarged gall bladder meant there was no stone in the common duct, as enunciated by Courvoisier. This was a most valuable differential sign. In biliary obstruction manifested by chronic jaundice an enlarged gall bladder meant that the obstruction was not due to a stone. Jaundice following attacks of biliary colic was not necessarily due to calculous obstruction, but was usually caused by an inflammatory turgescence of the bile tract that offered a certain resistance to the outflow of bile. The author reported a case which illustrated this point.

The complications of gall stones were next considered, and among other things the reader stated that, aside from the difficulty of discriminating between gall stones and certain stomach, appendix, or kidney lesions, it should be remembered that they might coexist with any one of them. He narrated a case of coincident biliary and renal calculi in which the diagnosis at first was very much involved.

The Prophylaxis of Tetanus.—Dr. S. C. STANTON, of Chicago, contributed a statistical paper on this subject. Prophylaxis was considered by him under five heads: 1. The enforcement of existing laws regarding the sale of toy pistols and other dangerous toys. 2. The enactment of laws by Congress, State legislatures, and municipalities prohibiting the manufacture and sale of toy pistols, blank cartridges, dynamite canes and caps, cannon crackers, etc. 3. The open treatment of all wounds, however insignificant, in which from the nature or surroundings there was any risk of tetanus. 4. The immediate use of tetanus antitoxine in all cases of Fourth of July wounds, wounds received in barnyards, gardens, or other places where the tetanus bacillus was likely to be present or tetanus infection to occur. 5. The injection of tetanus antitoxine as soon as tetanic symptoms became manifest.

The Indications and Technics of Prostatectomy.—Dr. G. FRANK LYDSTON, of Chicago, pointed out that the senile prostate was an atrophied prostate. Catheter life lasted about five years, although Reginald Harrison had put it at four years. In referring to the pathology of prostatic hypertrophy, he expressed the belief that the tumor was purely adenomatous at the outset. Several specimens of prostates which had been removed by him were exhibited. He had no hesitation in saying that early operations on the prostate in otherwise healthy subjects were no more dangerous than interval operations for appendicular disease. The perineal operation should be performed whenever practicable, but he was aware that there were cases which could not be dealt with successfully by this route; therefore, it might become necessary to do a combined perineal and suprapubic operation.

The Surgery of Pulmonary Gangrene.—Dr. L. L. MCARTHUR, of Chicago, after reporting three cases representing three varieties of gangrene, presented the following conclusions: 1. Since by medical treatment eighty per cent. of the patients die, and of those operated upon about twenty-nine per cent., our efforts should be surgical. 2. While it is anatomically possible to separate the pleura from the chest wall, it is tedious, difficult, and often futile (due to puncture), and therefore not much valuable time should be lost in such efforts. 3. A circular suture combined with gauze pressure packing for forty-eight hours is the best means of inducing adhesions. 4. The x ray might give valuable aid in localization. 5. Great care should be used in the selection of cases for operation, but when the trouble is localized and single, the most desperate cases should be given a chance, as the patients frequently recover with drainage.

The Present Status of Stomach Surgery.—Dr. A. J. OCHSNER, of Chicago, said that in the diagnosis of surgical diseases of the stomach great difficulty was occasionally found in eliminating cases of gastric disturbance due to general neurasthenia, because the latter condition was frequently the result of gastric disease, which could be relieved by surgical means. Among the conditions which simulated stomach disease, gall stones undoubtedly stood first in point of frequency, and not infrequently the adhesions accompanying the presence of gall stones resulted in a distortion of the pylorus, which virtually caused an obstruction. One condition which the surgeon encountered occasionally was locomotor ataxia, with marked pain in the region of the stomach. This condition was easily detected during a careful examination, but it had occasionally been overlooked. Of all the operations employed in stomach surgery, gastroenterostomy was the most commonly indicated, because it supplied drainage of the organ, and as the want of this drainage was the cause of most of the surgical diseases of the stomach, its accomplishment must necessarily be of the greatest importance. Pyloroplasty was still under observation. Mikulicz, Finney, and a few other surgeons had spoken well of the operation in selected cases of cicatricial constriction of the pylorus. The author's own experience had not been satisfactory with this operation. The method introduced by Finney was undoubtedly the best. The results of pylorectomy would probably be more and more satisfactory, because these patients were likely to come to the surgeon before the carcinoma had advanced to the hopeless condition usually encountered at the present time. The results of Mikulicz, Kocher, Czerny, and a few others were even at the present time sufficiently satisfactory to warrant the operation. Gastrectomy was indicated in only a very small number of unusual cases. Gastrostomy was indicated in all cases of obstruction of the œsophagus due to carcinoma in which starvation was imminent. The patient received a great amount of comfort from this operation. As to gastroduplication, this operation would hardly again receive any prominence, because the same end could be obtained so much more certainly, safely, and easily by gastroenterostomy. As to elevating the stomach in gastroptosis, this operation was on trial. It had not obtained a permanent position, although a few surgeons had spoken well of it. The writer's own observations and a study of the literature of the subject had forced upon him the opinion that in cases in which severe pathological conditions of the stomach existed, which could not be relieved medically in a reasonable period of time, and which could neither be traced satisfactorily to a neurosis not secondary to gastric disease, nor to other conditions, it would seem proper to attempt relief by the use of surgical treatment early in the course of the disease.

The Treatment of Tuberculous Joints.—Dr. David C. Peyton, of Jeffersonville, Ind., said the surgical treatment of tuberculous joints presented for consideration the following operative procedures, according to the state of advancement of the joint involvement: Arthrotomy, arthrectomy, excision or resection, and amputation. By the early and free opening of the affected joint, thus insuring free drainage, and thoroughly irrigating it with a hot normal saline solution, the writer had obtained very satisfactory results. The irrigation should be repeated daily for a week or ten days, or even longer, according to the degree of involvement. Even where the process had proceeded to suppuration or beginning necrosis, one might expect most marked benefit from this plan of treatment, and it was especially to be commended in all patients under eighteen years of age, for by the more radical operations the surgeon might destroy the epiphyses, with consequent arrest of development or growth. However, in the advanced state of the disease, whether in the adult or the child, the more radical operations were not only advisable, but imperatively demanded, to save usefulness of limb and sometimes life. Where necrosis with fistulæ had formed, their removal by arthrectomy or excision was insisted upon. It was especially in the smaller joints that the most satisfactory results were obtained by arthrotomy and arthrectomy.

The X Ray in Fractures.—Dr. Duncan Eve, of Nashville, said that at present the x rays were of more assistance in the investigation of the pathology of fractures than in their treatment, and the more precise our knowledge of the pathology, the more satisfactory the treatment. The exact diagnosis of fractures of certain bones without an x ray examination was always open to doubt. In order to secure the best results from the Röntgen rays, not only must the apparatus be good, but the man who used it must have had experience.

Officers.—The following officers were elected for the ensuing year: President, Dr. Hugh T. Patrick, of Chicago; vice-presidents, Dr. Bransford Lewis, of St. Louis, and Dr. George W. Cale, of Springfield, Mo.; secretary, Dr. Henry Enos Tuley, of Louisville; treasurer, Dr. Thomas Hunt Stucky, of Louisville.

The time and place for holding the next annual meeting were left to the president, secretary, and treasurer to decide.

Book Notices.

Introduction to the Study of Malarial Diseases. By Dr. Reinhold Ruge, of the Imperial German Navy. Translated by P. Edgar, M. B., C. M., Edin., and M. Eden Paul, M. D., Brux., M. R. C. S., L. R. C. P. London: Rebman, Limited, 1903. Pp. 138.

Perhaps on no topic of medicine has more been written than on malaria. Its literature is enormous and almost impossible for an individual to master. Yet there is a great art in presenting in a condensed and concise form the salient facts connected with plasmodial infection. This the author of the present volume has done most effectually. The translation from the German is excellent, free from idioms and yet presenting the force of statement of the original. This book of Ruge's and the relatively recent one of Craig's make valuable additions to our literature, and deserve a place in every medical library.

Una Palabra Sobre La Raquiococainización. Tesis Presentada y Sostenida Ante la Junta Directiva de la Facultad de Medicina y Farmacia. Por Mario J. Wunderlich, Exinterno del Hospital General, etc., etc. En el Acto de su Investidura de Medico y Cirujano. Guatemala, American Central: Tipografía Sánchez & De Guise, 1903. Pp. 73.

To the ordinary facts, already familiar to us in the development of spinal anæsthesia, the author of this brochure has nothing to add. He introduces his work with an historical consideration of anæsthesia, discoursing on the compression of nerves, the substances employed, and their physiological and biological effect, and anæsthesia by inhalation of gaseous and volatile substances, and local anæsthesia with cocaine. The remainder of the work is exclusively devoted to spinal anæsthesia. In the first chapter, general considerations of this method are thoroughly gone over. Chapter II covers the anatomical data bearing on anæsthesia of special organs.

The technics of spinal injections and the succeeding chapter take in the incidents of the operation, shock, failure of the fluid to flow, aspiration of blood instead of spinal fluid, and insufficient anæsthesia.

The extent of anæsthesia is the topic of the succeeding chapter, the ill effects and the remedies to offset them are discussed in the closing pages. At the conclusion of the work, the author has appended a list of operations, conclusions very favorably disposed towards this method, and an extensive bibliography.

Syphilis in Dentistry. By L. BLAKE BALDWIN, M. D., Chicago, Ill. Professor of Dermatology and Venereal Diseases, Post-Graduate Medical School; Professor Clinical Dermatology, Medical Department, University of Illinois (College of P. and S.); etc., and EZRA READ LARNED, M. D., Chicago, Ill., American Association for the Advancement of Science; American Medical Association; etc. Chicago: E. H. Colgrove. 1903.

This commendable little volume was written to instruct dentists in the recognition of syphilis and the prevention of its transmission from patient to patient by means of their instruments, etc. It briefly describes the ordinary manifestations of the disease with especial reference to the oral lesions, many of which are illustrated by means of colored plates.

Elementary Bacteriology. By M. L. DHINGRA, M. D., C. M. Edin.; Diplomate in State Medicine, University of Cambridge; Member of the Sanitary Institute, etc. With Colored Frontispiece and Illustrations in the Text. London, New York, and Bombay: Longmans, Green, & Co. 1903. Pp. xiv-145. (Price, $1.12 net).

As the title implies, this is a very elementary book. The author states in his preface that the material has been arranged to meet the ordinary requirements of Indian students and practitioners. The subject is much condensed and only fundamental principles are stated. The first part is devoted to the morphology and general biology of bacteria, and also contains chapters on fermentation and putrefaction, together with several data on the history and theory of spontaneous generation. This is by far the best part of the book. The second part describes in the briefest possible manner the more common forms of pathogenic bacteria. A short chapter on immunity is given, and this is followed by two appendices devoted to the principles of bacteriological technics, and snake venom and antivenomous serum, respectively. The technical part of the book is so curtailed as to make it impossible as a guide for the beginner. All in all, the book is serviceable only as a brief presentation of the subject to those not familiar with this branch of medicine.

A Treatise on Orthopædic Surgery. By ROYAL WHITMAN, M. D., Instructor in Orthopædic Surgery in the College of Physicians and Surgeons of Columbia University, New York; Associate Surgeon to the Hospital for Ruptured and Crippled, etc. Second edition, revised and enlarged; 507 engravings. Philadelphia and New York: Lea Brothers & Co. 1903. Pp. xii-848.

The appearance of a new edition two years after the first issue, indicates the esteem in which this work is held. The large material at the command of the author has been well studied, the observations carefully arranged and the conclusions clearly stated. Many of the topics have been rewritten and new ones have been added, necessitating the addition of two hundred pages and sixty illustrations. In its present form the work is greatly improved; it is, indeed, one of the most satisfactory treatises on the subject known to the reviewer.

Intracranial Tumors Among the Insane. A Study of Twenty-five Intracranial Tumors Found in Sixteen Hundred and Forty-two Autopsies in Cases of Mental Disease. By I. W. BLACKBURN, M. D., Pathologist to the Government Hospital for the Insane, Washington, D. C. Illustrated by Thirty Plates and Sixty-five Microscopical Drawings. Washington: Government Printing Office, 1903. Pp. 94.

Of the twenty-nine tumors found, seventeen belonged to the class of spindle celled sarcomata commonly described as endothelial in origin and usually arising from the dura mater. There were six gliomata, including one gliosarcoma, one sarcoma of the small round celled type, two adenomata of the hypophysis, one tumor whose character could not be determined, which occupied the pituitary fossa, but did not affect the gland, and a case showing hyperostoses of the frontal bone. There were also cases of tuberculous growths. In neither of the cases of adenoma of the hypophysis were there any symptoms of acromegaly.

Full accounts of the autopsies are given and also a detailed description of the microscopical appearance of the growths. There are thirty plates and sixty-five microscopical drawings, all of which are fully indexed.

Nervous and Mental Diseases. By ARCHIBALD CHURCH, M. D., Professor of Nervous and Mental Diseases and Head of Neurological Department, Northwestern University Medical School; and FREDERICK PETERSON, M. D., New York State Commissioner in Lunacy, etc. Fourth Edition, Thoroughly Revised and Enlarged. With 338 Illustrations. Philadelphia, New York, London: W. S. Saunders & Company, 1903. Pp. 922. Cloth, $5.00 net; sheep or half morocco, $6.00 net.

A work which has gone through three editions should need no word of commendation. It should speak for itself. And this is true of this very excellent book, which treats of neurology in an exhaustive, thorough, and scientific fashion and of psychiatry in such a style, at least, that it becomes passably intelligible to the student and general practitioner. There has been added to the neurological part a section on infrequent disorder known as intermittent limping and a section to the more important disease, herpes zoster. There has also been some elaboration in symtomatology and a number of new cuts have been added.

The part devoted to insanity, which is written by Dr. Peterson, remains practically the same as in previous editions. There has, however, been made to it a most valuable addition by Dr. Adolph Meyer, director of the New York Pathological Institute. It consists of a section devoted to a critical review and analysis of the theories of Kraepelin, Wernicke, and Zilhen, the leaders of German psychiatric thought. This chapter may be beyond the grasp of the student and general practitioner, but for one interested in psychic disease it offers very instructive reading. Perhaps in some future edition the authors may see fit to rewrite the part devoted to insanity, so as to utilize more fully the work of the German psychiatrists.

The book remains a model in the character of the typography and illustrations.

The Neurological Practice of Medicine. A Cursory Course of Selected Lectures in Neurology, Neuriatry, Psychology, and Psychiatry; Applicable to General and Special Practice. With 177 Illustrations. Designed for Students and General Practitioners of Medicine and Surgery. By Charles H. Hughes, M. D., President of the Faculty and Professor of Neurology, Psychiatry, and Electrotherapy, Barnes Medical College, etc. St. Louis: Hughes & Co., 1903. Pp. lv-417.

One needs merely to note the presence of the word "cursory" in the title and the keynote to this book is found. It is indeed so cursory as to defy review. Those who have followed the author's personal teaching will doubtless be able to extract valuable thoughts from it, but as a textbook it does not seem to us to answer the purpose.

BOOKS, PAMPHLETS, ETC., RECEIVED.

A Manual of Medicine. Edited by W. H. Allchin, M. D., Lond., F. R. C. P., F. R. S., Ed. Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital; Examiner in Medicine, Naval Medical Service, etc. Vol. v. New York: The Macmillan Company. London: Macmillan & Co., Ltd. 1904. (All rights reserved.) Pp. 687. [Price, $2.00].

Clinical Studies in Vice and Insanity. By George R. Wilson, M. D., Medical Superintendent, Mavisbank Asylum. New York: The Macmillan Company. Edinburgh: William F. Clay. 1899. (All rights reserved.) Pp. xi-234.

A Handbook on the Prevention of Tuberculosis. The First Annual Report of the Committee on the Prevention of Tuberculosis of the Charity Organization Society of the City of New York. New York: Published by the Charity Organization Society. 1903. Pp. viii-388.

Die Chirurgischen Untersuchungsarten. Einfuhrende Vorlesungen über allegemeine chirurgische Diagnostik. Von Dr. Otto Manz, Privatdozent der Chirurgie. Mit 20 Figuren im Text. I. Teil. Verlag Von Gustav Fischer in Jena. 1904. Pp. vi-322.

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Official News.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 20, 1904:

Butler, C. St. J., Assistant Surgeon. Ordered to the *Constellation*, with additional duty at the naval training station, Newport, R. I.

McClanahan, R. K., Assistant Surgeon. Ordered to the naval hospital, New York, N. Y., for treatment.

Neilson, J. L., Assistant Surgeon. Detached from the naval station, Cavite, P. I., and ordered to the naval station, Guam, L. I.

Williams, R. B., Passed Assistant Surgeon. Commissioned passed assistant surgeon with rank of lieutenant, from November 17, 1903.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending February 20, 1904:

Dean, Elmer A., Captain and Assistant Surgeon. Granted ten days' leave of absence, to take effect upon his being relieved from duty at Fort Strong, Mass.

Heizmann, Charles L., Colonel and Assistant Surgeon General. Granted seven days' leave of absence.

McAndrew, P. H., First Lieutenant and Assistant Surgeon. Relieved from temporary duty at Fort Des Moines, Iowa, and will proceed to Jefferson Barracks, Mo.

Purviance, William E., First Lieutenant and Assistant Surgeon. Will assume temporary charge of C. S. O., Department of the Lake, Chicago, Ill., on account of the illness of Colonel Philip F. Harvey, Chief Surgeon.

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending February 18, 1904:

Bierman, C. H., Pharmacist. Granted leave of absence for twelve days from February 8th.

Hanrath, F. R., Pharmacist. Upon being relieved by Pharmacist E. Rogers, to proceed to St. Louis, Mo., and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist M. Walerius. February 12, 1904.

Herty, F. J., Pharmacist. Upon being relieved by Pharmacist B. E. Holsendorf to proceed to Boston, Mass., and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist L. C. Spangler. February 12, 1904.

Holsendorf, B. E., Pharmacist. Relieved from duty at Havana, Cuba, and directed to proceed to San Juan, P. R., and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist F. J. Herty. February 12, 1904.

Korn, W. A., Assistant Surgeon. Granted eighteen days' leave of absence from February 19th.

Mason, M. R., Pharmacist. Upon being relieved by Pharmacist C. Slough, to proceed to San Francisco Quarantine, and report to medical officer in command for duty and assignment to quarters. February 12, 1904.

Rogers, E., Pharmacist. Upon being relieved by Pharmacist C. H. Woods, to proceed to Cleveland, Ohio, and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist F. R. Hanrath. February 12, 1904.

Slough, C., Pharmacist. Relieved from duty at San Francisco quarantine, and directed to proceed to San Francisco, Cal., and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist M. R. Mason. February 12, 1904.

Southard, F. A., Pharmacist. Granted leave of absence for one day, on account of sickness. February 10, 1904.

Spangler, L. C., Pharmacist. Upon being relieved by Pharmacist F. J. Herty, to proceed to Tampa Bay Quarantine and report to medical officer in command for duty and assignment to quarters. February 12, 1904.

Stoner, J. B., Surgeon. To proceed to Cape Charles Quarantine Station and assume temporary charge. February 17, 1904.

Stier, C., Pharmacist. Relieved from duty at Tampa Bay Quarantine, and assigned to duty at Key West, Fla. February 12, 1904.

Walerius, M., Pharmacist. Upon being relieved by Pharmacist F. R. Hanrath, to proceed to Chicago, Ill., and report to medical officer in command for duty and assignment to quarters. February 12, 1904.

Warren, B. S., Assistant Surgeon. Bureau letter, granting Assistant Surgeon Warren leave of absence for seven days from February 12th, amended to read seven days from February 15th.

Woods, C. H., Pharmacist. Relieved from duty at Chicago, Ill., and directed to proceed to Cincinnati, O., and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist E. Rogers. February 12, 1904.

Board Convened.

Board convened to meet at Washington, D. C., April 4, 1904, for the examination of candidates for appointment as assistant surgeon. Detail for the board—Surgeon D. A. Carmichael, chairman. Surgeon G. M. Guiteras. Passed Assistant Surgeon J. F. Anderson, recorder.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending February 19, 1904:

Place.	Date.	Cases.	Deaths.
Smallpox—United States.			
California—San Francisco	Jan. 31-Feb. 7	4	
Dist. of Columbia—Washington	Feb. 6-13	5	
Florida—Jacksonville	Feb. 6-13	2	
Illinois—Cairo	Jan. 1-21	13	
Illinois—Danville	Feb. 6-13	1	
Louisiana—New Orleans	Feb. 6-13	4 1 imported.	
Michigan—Detroit	Feb. 6-13	4	
Michigan—At 82 places	Jan. 30-Feb. 6	Present.	
Missouri—St. Louis	Jan. 30-Feb. 6	20	
New Hampshire—Manchester	Feb. 6-13	8	
New Jersey—Camden	Feb. 6-13	1	
New Jersey—Trenton	Feb. 6-13	3	
New York—Elmira	Feb. 6-13 Imported from Cohockton.	1	
Ohio—Cincinnati	Feb. 5-12	9	
Ohio—Dayton	Feb. 6-13	18	
Ohio—Warren	Feb. 6-13	1	
Pennsylvania—Allentown	Feb. 6-13	5	
Pennsylvania—Butler	Feb. 6-13	1	
Pennsylvania—Johnstown	Feb. 6-13	1	1
Pennsylvania—Philadelphia	Feb. 6-13	58	16
Pennsylvania—Pittsburgh	Feb. 6-13	10	2
South Carolina—Charleston	Jan. 30-Feb. 13	16	1
Tennessee—Memphis	Feb. 6-13	42	
Tennessee—Nashville	Feb. 6-13	8	
Washington—Tacoma	Feb. 1-8	1	
Wisconsin—Milwaukee	Feb. 6-13	6	
Smallpox—Foreign.			
Austria—Prague	Jan. 16-23	7	
Belgium—Antwerp	Jan. 10-17	3	1
Brazil—Pernambuco	Dec. 16-31		28
Brazil—Rio de Janeiro	Jan. 10-17	39	28
Canada—Vancouver	Jan. 1-31	7	
China—Hongkong	Dec. 26-Jan. 2	1	
France—Paris	Jan. 22-30	34	3
Great Britain—Edinburgh	Jan. 22-30	9	
Great Britain—Glasgow	Jan. 29-Feb. 5	46	
Great Britain—Leeds	Jan. 22-30	1	
Great Britain—Leith	Jan. 16-23	1	
Great Britain—Manchester	Jan. 23-30	1	1
Great Britain—Nottingham	Jan. 16-30	23	
Great Britain—South Shields	Jan. 16-23	2	
Great Britain—Sunderland	Jan. 23-30	1	
India—Bombay	Jan. 12-19		1
India—Karachi	Jan. 10-17	3	
Italy—Palermo	Jan. 9-16	1	
Malta	Jan. 9-16	2	
Mexico—City of Mexico	Jan. 10-31	9	3
Netherlands—Amsterdam	Jan. 16-30	9	1
Russia—Moscow	Jan. 9-16	4	1
Russia—St. Petersburg	Jan. 16-23	4	4
Russia—Warsaw	Jan. 8-16		10
Siberia—Vladivostock	Jan. 11	Epidemic.	
Spain—Barcelona	Jan. 31		16
Spain—Madrid	Jan. 20	Epidemic.	
Spain—Santander	Jan. 25-Feb. 1	8	1
Turkey—Constantinople	Jan. 17-31		9
Cholera—Foreign.			
Turkey in Asia—Syria and Mesopotamia	Jan. 11	11	4
Plague—United States.			
California—San Francisco	Feb. 7	1	
Plague—Foreign.			
Brazil—Pernambuco	Dec. 16-31		3
Egypt—Alexandria	Jan. 21	1	
India—Bombay	Jan. 12-19		189
India—Karachi	Jan. 10-17	8	9
India—Madras	Jan. 9-15		1
Russia—Cronstadt	Jan. 20		1 Laboratory infection.
South Africa—Cape Colony	Jan. 2-9	1	1

Births, Marriages, and Deaths.

Born.

Sparrenberger.—In Passaic, New Jersey, on Monday, February 15th, to Dr. Frederick H. Sparrenberger and Mrs. Sparrenberger, a son.

Married.

Alderman—Hearn.—In New Orleans, Louisiana, on Wednesday, February 10th, Dr. Edwin Alderman and Miss Bessie Hearn.

Easton—Lloyd.—In Philadelphia, Pennsylvania, on Wednesday, February 10th, Dr. William Hastings Easton and Miss Helen Lloyd.

Edwards—Gerig.—In Evansville, Indiana, on Wednesday, February 10th, Dr. H. W. Edwards, of Henderson, Ky., and Miss Rosalee Gerig.

Hawley—Miller.—In Muskegon, Michigan, on Thursday, February 11th, Dr. Joseph Hawley, of Chicago, and Miss Daisy Miller.

MacDonald—Cox.—In New York, N. Y., on Wednesday, February 10th, Dr. Arthur K. MacDonald, of Princeton, N. J., and Miss Marjorie Cox.

McIntyre—Curtin.—In Georgetown, D. C., on Thursday, February 11th, Dr. Andrew J. McIntyre and Miss Josie Curtin.

Ranney—Baker.—In Winchester, Virginia, on Sunday, February 7th, Dr. John E. Ranney and Miss Lelia Baker.

Sullivan—McParlin.—In Baltimore, Maryland, on Tuesday, February 16th, Dr. Michael J. Sullivan, of Englewood, N. J., and Miss Elizabeth Clare McParlin.

Died.

Anderson.—In Kearney, New Jersey, on Monday, February 15th, Dr. Edward L. Anderson, in the sixty-first year of his age.

Box.—In Oswego, N. Y., on Thursday, February 11th, Dr. Frank W. Box, in the thirty-seventh year of his age.

Buchanan.—In Philadelphia, Pennsylvania, on Saturday, February 13th, Dr. William F. Buchanan, in the sixty-seventh year of his age.

Bumstead.—In South Framingham, Massachusetts, on Monday, February 15th, Dr. Zereno E. D. Bumstead, in the eighty-second year of his age.

Burg.—In Philadelphia, Pennsylvania, on Tuesday, February 16th, Dr. Horace W. Burg.

Carr.—In Beloit, Wisconsin, on Monday, February 8th, Dr. Bernard J. Carr, in the thirty-sixth year of his age.

Cooke.—In Gaithersburg, Maryland, on Monday, February 15th, Dr. John Cooke, in the eighty-first year of his age.

Curran.—In Los Angeles, California, on Sunday, February 7th, Dr. R. E. Curran, in the sixtieth year of his age.

Dearborn.—In New York, N. Y., on Tuesday, February 16th, Dr. Henry Martin Dearborn, in the fifty-ninth year of his age.

De Schweinitz.—In Washington, D. C., on Monday, February 15th, Dr. Emil Alexander de Schweinitz, in the thirty-ninth year of his age.

Dodd.—In Mount Auburn, Ohio, on Sunday, February 7th, Dr. Charles W. Dodd, in the forty-fifth year of his age.

Drake.—In Kansas City, Kansas, on Saturday, February 13th, Dr. William M. Drake.

Ludlow.—In Easton, Pennsylvania, on Wednesday, February 10th, Dr. Jacob Rapelye Ludlow, in the eightieth year of his age.

McCosh.—In St. Louis, Missouri, on Saturday, February 13th, Dr. George E. McCosh, in the sixty-third year of his age.

Moore.—In Columbus, Ohio, on Saturday, February 6th, Dr. Edgar Howard Moore, in the twenty-ninth year of his age.

Newton.—In Phœnix, Arizona, on Tuesday, February 2nd, Dr. C. W. Newton, of Toledo, Ohio, in the thirty-seventh year of his age.

Raefle.—In New York, N. Y., on Saturday, February 13th, Dr. Maximilian G. Raefle, in the sixty-sixth year of his age.

Runge.—In St. Louis, Missouri, on Wednesday, February 10th, Dr. Edward C. Runge, in the fifty-first year of his age.

New York Medical Journal
AND
Philadelphia Medical Journal.
CONSOLIDATED.

A Weekly Review of Medicine

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Original Communications.

THE NEW BIOLOGIC TEST FOR HUMAN BLOOD, WITH A REPORT OF ITS EMPLOYMENT IN A RECENT MURDER CASE.

By A. ROBIN, M. D.,

WILMINGTON, DEL.,

BACTERIOLOGIST TO THE WATER DEPARTMENT, WILMINGTON, DEL.; PROFESSOR OF PATHOLOGY AND BACTERIOLOGY, DEPARTMENT OF MEDICINE, TEMPLE COLLEGE; PATHOLOGIST TO THE SAMARITAN HOSPITAL, PHILADELPHIA.

REVIEW OF THE LITERATURE.

With the recent revelations concerning the factors underlying the production of artificial immunity there came to light facts which not only have a direct and important bearing on the subject of immunity, but are of considerable practical value. Chief among these is the fact that the injection of foreign elements into an animal brings about the production of substances which are in some way antagonistic to those injected (antibodies). In other words, the animal organism generates in self-defense bodies which, in one way or another, antagonize or neutralize the poisonous principles to the action of which it has been subjected. Just as in the organic world at large many animal and vegetable secretions serve the purpose of repelling or annihilating the enemy, so in the cellular world certain cells secrete substances for a similar purpose. What these substances are or may be, is determined by the biological and chemical nature of the offending principle. In one case it may be lysins which destroy the enemy by solution or disintegration; in another, agglutinins which agglutinate the usually motile enemy; in still another, precipitins which precipitate the poisonous bodies out of solution, thus rendering them harmless. In every case the means are admirably adapted to the end, and in every case the action is specific, i. e., a given poison will stimulate the cells to the production of an antibody best suited for neutralization of this particular poison. It is evident that only by thus adapting itself to the ever changing environment, could the organism survive throughout the various processes of organic evolution; and it is also evident that this particular mode of adaptation enables various organs in the same body to become differentiated and specialized without being molested by the poisonous secretions of each other (isolysins, isoagglutinins, isoprecipitins). These phenomena underlie the ever present struggle for existence and are no doubt of constant occurrence in Nature; but they may also be reproduced artificially, and it is with this artificial production of the phenomena of immunity that we are mostly concerned.

Numerous experiments have demonstrated that if cells or fluids from an animal are injected into an animal of a different species, the blood of the latter will in time contain substances which will be in some way antagonistic to the kind of cells or fluids employed for injection. Dungern (1) obtained a serum which could paralyze the motion of the cilia of ciliated epithelium; Metchnikoff (2), Moxter (3), London (4), and others, a serum paralyzing spermatozooids (spermatoxine); Bordet (5), Fisch (6), and Schütze, one destroying milk globules and precipitating milk (lactotoxine); Lindemann, one destroying renal epithelium (renotoxine); Nedrigayloff and Schwartz, one inimical to yeast cells. In a similar manner serums have been obtained possessing the property of agglutinating and destroying red blood corpuscles (hæmoagglutinins and hæmolysins) in the same manner as the typhoid bacilli, for instance, are agglutinated by the serum of persons suffering from typhoid infection or of animals immunized against typhoid bacilli. In the course of these investigations it was discovered that substances other than cellular elements, when injected into animals, brought about the elaboration of substances capable of precipitating bodies homologous to those used for injection. Thus, Bordet has shown that if rabbits are injected successively with cow's milk they yield a serum which, when added to milk, causes the formation of granules which are at first fine, but which rapidly increase in size forming thick flocculi. Recently, Schlossmann and Moro (9) have established by means of this test the fact that the albumin of human milk differs from that of the cow and that the former is identical with the albumin of blood serum. Myers (10) obtained a serum which precipitated egg albumen and peptone homologous to that used for injection. Leclanch and Valée (11) injected albuminous urine into rabbits and obtained a serum which precipitated albumin from albuminous urine, even when present only in traces. Their results were confirmed by Mertens (12) and Zuelzer (13). Farnum (14) injected rabbits with semen from various animals and obtained a serum which precipitated homologous semen. He believes that this method may be used for identification of seminal spots. Kowavsky (15) obtained a serum which could precipitate vegetable albumin homologous to that used for injection. Miessner and Herbst (16) have conducted an extensive series of experiments by which they have established the fact that the serum reaction furnishes valuable means for the identification of meats from different animals. Gröning (17) injected into rabbits the juice of horse meat and obtained a serum which gave a precipitate with a solution of horse meat, even if the latter was contained in minute traces. The reaction was not obtained with either heated or cooked meat. All these facts led Valée (18) to formulate the following law: " If animal A is inoculated repeatedly with an albuminoid material derived from an animal of a different species B, the serum of the animal A acquires the property of precipitating *in vitro* albuminoid solutions derived from the species B." To this general biological law may be added the following rule: The further the species are removed from each other on the scale of biological evolution the more specific the reaction, and *vice versa*.

The practical application of this interesting biochemical phenomenon found its best expression and most substantial demonstration in the identification of blood. Bordet and Tchistovitch (19) were the first to make the observation that if a rabbit was treated with blood or serum from an animal belonging to a different species, the blood serum of the rabbit acquired the property of producing a precipitate in solutions of the blood or serum homologous with that used for injection. By a series of exhaustive experiments they established conclusively the specificity of the reaction. Uhlenhut (20), working in the Greifswald Hygienic Institute, applied the discovery made by the preceding investigators to the medicolegal detection of blood. He injected into the peritoneal cavity of rabbits, at intervals of six to eight days, 10 c. c. of defibrinated ox blood. After the fifth injection he bled the rabbit and found that its blood serum possessed the property of causing a precipitate when added to solutions of ox blood. He then prepared solutions of blood (1 : 100) from the following animals: Ox, horse, ass, hog, goat, dog, cat, deer, hare, guinea pig, rat, mouse, rabbit, hen, goose, turkey, pigeon, and man. Two c. c. of each of these solutions were put into tubes 6 mm. in diameter, an equal quantity of salt solution (1.6 per cent.) was added, together with 6 to 8 drops of the serum of the rabbit treated with ox blood. A precipitate occurred only in the solution of ox blood, all the other solutions remaining clear. By treating the rabbit with human blood, the same specific reaction took place with solutions of human blood and no other. The age of the blood stain seemed to have no influence, since the reaction was obtained with blood dried on boards for four weeks. The reaction, according to the author (21), depends on the formation in the blood of the treated animal of specific coagulins similar to those formed after the injection of labferment and egg albumen. In a later contribution to the subject, Uhlenhut (22) reports the results of his experiments, which prove that blood in a state of decomposition, menstrual blood, and urine containing blood give the specific reaction; also, that the reaction is not interfered with by heating the blood for one hour at 60° C. or by preservatives, such as carbolic acid (5 per cent. solution). In a still later contribution (23) he reports a series of experiments in which he detected the presence of human blood in specimens submitted by the city medical officers, without his knowing whether any of the specimens were those of human blood. His diagnosis was correct in every case. He was also able to determine that some of the specimens were those of horse blood, others of pig blood, and again others of the blood of different animals, by testing the unknown specimens with the respective antiserums. He found that, in some instances, the blood of closely related species reacted to the same antiserum. For instance, pig blood antiserum reacted feebly with boar's blood, and horse blood antiserum gave a faint reaction with ass blood. The production of active antiserum requires great care, and the author cautions that the serum should invariably be carefully tested before it is used for medicolegal purposes. He also urges that the production of these antiserums for legal purposes should be restricted to well regulated and authorized institutions, so that serious error may be avoided. He insists (24) on the necessity of determining in every instance whether the antiserum is active, by the use of old specimens of blood. He warns against the use of milky, opalescent, thick serums, which are occasionally obtained, believing that it is the employment of such serums that is accountable for the doubtful results obtained in the examination of blood of closely related species. He preserved the antiserum for months by the addition of chloroform, carbolic acid, and corrosive sublimate. Formalin is not useful for the purpose, on account of its action on albumin. Dieudonné (25) injected rabbits with human blood serum, albuminous urine, and pleural exudate. About 10 c. c. were injected every two to three days. The blood serum obtained from this rabbit produced a specific reaction with human blood when six drops of the antiserum were added to a normal salt solution (1 : 100) of the blood. Rabbit's serum, the serum of guinea pigs, pigeons, and geese failed to respond to the reaction. The serum of a rabbit treated with albuminous urine reacted with albuminous urine, but not with human blood. The serum of a rabbit treated with a pleural exudate gave a reaction with pleuritic exudate, but not with rabbit's serum. Human antiserum reacted with albuminous urine and pleural exudate, but the precipitate was not so marked as when human blood was used. In no case was the reaction obtained with non-homologous blood. Wassermann and Schütze (26) employed for injections serum rather than defibrinated blood. They injected the serum subcutaneously at intervals of two to three days, making in all 5 to 6 injections. At the expiration of six days after the last injection the rabbit was bled by opening the jugular vein. The blood was received in a narrow cylinder and placed on ice. The clot was detached from the walls of the vessel and the clear serum collected on the following day. The test was performed in the following manner: The material for investigation, either fluid or dried blood, was dissolved in 1.6 per cent. solution of sodium chloride, filtered until clear, and 4 to 5 c. c. put into small tubes. To each of these one half of a c. c. of the antiserum was added. If the reaction was positive a clouding appeared within two or three minutes, the cloudiness becoming gradually transformed into a distinct precipitate. If the reaction was negative the solution remained clear. Human antiserum reacted with human blood and no other, except that of apes. The specific reaction occurred within twenty minutes, and was equally distinct when blood dried for three months was used. They conclude that if a reaction occurs within one hour and the admixture of ape's blood can be excluded, the suspected blood which reacts with human antiserum is positively human. In a later contribution to this subject (27) these authors emphasize the fact that precipitation is specific for the species, but not for the source of albumin. It occurs with serum, milk, bone, or other substances from any animal of a given species. They also propose the following standard for antiserum: A normal serum is one which in the amount of 1 c. c. will produce a distinctly flocculent cloudiness after one hour, and later a precipitate, when added to 5 c. c. of a 0.85 per cent. sodium chloride solution containing 0.1 gramme of dried blood homologous to that used for immunization. The amount of precipitating substance in 1 c. c. of normal antiserum is a precipitating unit. For immunization, the blood serum of geese, or of any animal as far removed as possible from the species for whole blood an antiserum is prepared, should be employed. Schirokich (28) instituted the following experiments: A rabbit was injected subcutaneously with blood serum obtained from the cord or placenta. The amount injected each time and the intervals between the injections varied according to the facility of obtaining blood. These were made in the following order:: March 20th, 7 c. c.; 24th, 7 c. c.; 28th, 9 c. c.; April 18th, 5 c. c.; 21st, 4 c. c.; May 5th, 5 c. c., and 13th, 6 c. c., altogether 43 c. c. Six days after the last injection the rabbit was bled through the left jugular and 25 c. c. of blood collected, furnishing 15 c. c. of serum. On the following day blood spots were dissolved in 1.6 per cent. of sodium chloride solution from the following sources:

Blood of.	Collected on	Age of Blood Spot.
1. A new born child.	Filter paper.	2 weeks.
2. Adult.	Plain paper.	1½ weeks.
3. "	Gauze.	2 years.
4. Horse.	Plain paper.	5 days.
5. Ram.	Plain paper.	5 days.
6. Bull.	Plain paper.	5 days.
7. Adult cadaver (death due to CO poisoning.)	Rag.	1 year.
8. Goat.	Wood.	2½ years.
9. Camel.	Rag.	2 years.
10. Guinea Pig.	Filter paper.	2 years.
11. Cat.	Filter paper.	1 year.
12. Rabbit.	Rag.	1 year.
13. Hog.	Rag.	2½ years.

Of each of these solutions 4 c. c. were poured into small test tubes, and 2 to 3 drops of the rabbit's serum added to each. In solutions 1, 2, 3, and 7 a marked opalescence appeared within two minutes, turning into a flocculent precipitate within fifteen minutes and into a marked sediment within one hour. The other solutions remained perfectly clear within that time. However, after four to five hours these also became cloudy and a sediment appeared in all.

This last observation, however, as verified by myself, does not invalidate the reaction, which does not appear in non-homologous so promptly as it does in homologous blood. It only goes to show that the blood of any animal may contain substances which enter into combination with the specific precipitins, but these substances occur in quantities too minute to be detected by the specific serum within a short time. A precisely similar phenomenon is observed in the case of the Widal reaction. Motile typhoid bacilli may be agglutinated by blood from healthy individuals, but not in the same degree, dilution, and time, as is the blood of persons suffering from typhoid infection. Broadly speaking, these facts only prove the community, as well as specialization, of organized life.

Nedrigailoff (29) obtained a specific serum for human blood by injecting subcutaneously or intraperitoneally into rabbits serum from placental blood or ascitic fluid. He injected 3 to 5 c. c. at a time, at intervals of two to three days. The more serum the rabbit received, the more hæmoprecipitins developed in its blood. He comes to the conclusions that by means of serotoxine it is possible to distinguish human blood from that of other animals and birds; that it is possible to detect the minutest trace of homologous blood; and that the albumin of the blood and that of albuminous urine are identical. The latter fact has already been established by Mertens (30), who found that human antiserum reacted with albuminous urine and *vice versa*. Ziemcke (31) experimented with two serums—A and B—furnished him by Wassermann and Schütze, A having been obtained after prolonged treatment of a rabbit. The blood to be tested was dissolved in 0.75 per cent. of salt solution or 0.1 per cent. of soda solution and diluted until the color was a faint pink. The antiserum was then added in the proportion of 1 : 10. The specimens of blood tested comprised fresh fluid blood, foul decomposed blood, dried blood two years old, blood on cloth dating back as far as 1878, blood mixed with earth, blood on instruments, blood washed out of clothes where it had been for eighteen years, blood from a cellar wall, blood stains on wood and on glass, blood from a man poisoned with CO, blood on paper, ten months old, and blood on linen which had been exposed to the open air for several months. In only one instance was the result negative when serum A was used, and that was with a blood stain on a shirt, the stain having been made in 1883, and this failure may be explained by the fact that the solution was absolutely colorless, evidently no blood having been extracted. With serum B he had seven failures, evidently because it was not strong enough. The reaction, when marked, appeared at once. Sometimes there was only a gradual appearance of cloudiness. No blood other than human gave the specific reaction. Experiments conducted by the same author some time later (32) showed not only that was it possible to distinguish, by means of this test, human from other mammalian blood, but that the animal from which the blood was derived could be definitely determined by the proper antiserum. He employed for immunization blood obtained from corpses of persons who had died from internal hæmorrhages, and obtained perfectly satisfactory results, even if the subjects had been dead for three to four days. The fluid blood was placed on ice until the serum separated out, and, to the latter, chloroform was added. In no instance did infection follow the use of this serum. He believes, however, that subcutaneous injections are safer than intraperitoneal, as they lessen the danger from infection. At the end of the immunization period the blood was obtained from the animal by tying the carotid in two places, introducing a sterile glass cannula into the blood vessel between the ligatures, and then severing the carotid below the upper ligature. The blood was received in a sterile vessel, defibrinated, put in a sterile test tube, and placed on ice until the serum separated out, when it was pipetted off into sterile tubes. In making the test, the author dissolved the blood to be tested in normal salt solution or 0.1 per cent. solution of soda. The solutions were poured into small test tubes, of a capacity of 2 to 3 c. c. and 5 m. m. in diameter. The tubes were partly filled so as to leave room for the antiserum. If the reaction was positive the mixture became cloudy in a few minutes. He concludes that a flaky precipitate denotes a typical reaction, while a slight cloudiness without the production of a precipitate is not specific. He has also observed that the admixture of non-homologous blood does not interfere with the specific reaction, nor does the age of the bloodstain alter the results. In the case of very old stains he extracted the blood by means of a concentrated solution of potassium cyanide which was subsequently neutralized with tartaric acid in substance. Various methods of preserving the antiserum were tried. Upon the addition of chloroform the antiserum lost, after a time, in the intensity of its action. He then made use of the fact, established by Nolf, that the active principle of the serum is in combination with serum globulin. The latter was precipitated with magnesium sulphate and filtered. This precipitate, when dissolved in physiological salt solution, gave the specific reaction, even after it had been kept for a long time, but the reaction was much weaker than that obtained with fresh serum. He therefore concludes that we have at present no satisfactory method of preserving the antiserum. It is, perhaps, well to add in this connection that Schirokich (28) succeeded in preserving the antiserum for one month by drying it on filter paper. Stocker (33) found that active antiserum could be produced by injecting animals with paraglobulin obtained from blood by precipitation with magnesium sulphate to the point of saturation, at 40° C.; also that the paraglobulin obtained in a similar manner from the antiserum could be used to carry out the test. The paraglobulin can be preserved by drying it and then placing it in chloroform water. According to the observations of this author the specific reaction is best obtained at a temperature of 40 to 42° C. These observations were confirmed by Corin (34). At a meeting of the Biological Society, of Paris, January 3, 1902, Arthus and Vausteenberghe reported the results of their experiments, in which they employed globulin instead of the blood or serum for immunization. They used dogs which had been treated for twenty-five days, receiving injections every fifth day. Gauzner (35) conducted his experiments on dogs, which animals he considers preferable to the smaller animals. Dogs weighing 15 to 20 kilos. were treated with placental, sheep's, calf's and horses's blood serum; also with blood serum obtained from dead bodies at coroner's autopsies. Of the latter 7 to 15 c. c. were injected every two days without any serious results other than a loss in weight and appetite, and diarrhœa. At the point of injection ulcers appeared. At the expiration of five days after the sixth injection, 300 c. c. of blood were drawn from the femoral artery, furnishing 150 c. c. of very active serum. In some of the experiments the antiserum obtained was so active that homologous blood could be detected in one drop of a dilution of one part of blood to 300 parts of water. Regarding the method of injection, he advises against both the subcutaneous and intraperitoneal routes. His preference is for intramuscular injections, the dorsal muscles being most convenient. He also advises that the serum should be as far as possible free from the formative elements of the blood, as otherwise the antiserum will be weak. He experimented on fresh blood, as well as blood dried on rags, earth, instruments, coins, wood, etc., and in all instances obtained a marked reaction with homologous blood, even if only 1 milligramme of dried blood was present. He found that antiserum which reacted with human blood precipitated also ascitic fluid, albuminous urine, and nasal secretions, but did not react with human milk (?). He preserved the antiserum by drying it in thin films on Petri dishes. Minovici (36) found that fresh defibrinated blood was better than blood that had been kept on ice. Blood obtained from dead bodies or pleural and other exudates, did not give satisfactory results. He insists on the absolute necessity of employing careful antisepsis in carrying out the injections into the peritoneal cavity. If care is taken, death from infection almost never occurs. After several injections have been made, he procures a small amount of blood from the ear, tests it, and if found active, chloroforms the animal, brings the heart into a sterile vessel, opens it and allows it to pump all the blood into the vessel. In this way about 50 c. c. of serum may be obtained from a rabbit. He observed that blood spots reacted with antiserum in proportion to their freshness, a fresh blood spot giving a more decided reaction, but he has obtained a distinct reaction with blood six years old. De Nobele (37) found that rabbits treated with human serum furnished an antiserum which reacted with human blood, milk, pus, saliva, nasal secretions, and albuminous urine. No reaction whatever was obtained with the blood of dog, cat, guinea pig, rabbit, sheep, cow, and hog. The specific reaction was obtained with putrid blood, as well as with blood which had been dry for several years. Blood heated to 125° C. no longer gave the reaction, but a temperature of 75° to 100° C. had no effect, except that it rendered the blood less soluble. The antiserum dried in a vacuum preserved its specific properties for six months. In this connection it is interesting to note the observation of Valée (18), that the serum used for injecting the animals may be heated to 55° C. without destroying its antiserum-producing properties. In fact, he advises that the serum be heated to that temperature before injection, so that its toxic properties may be destroyed. Nuttall and Dinkelspiel (38) injected intraperitoneally into rabbits bloodserum obtained from a horse, dog, ox, sheep, and man. The resulting rabbit's serum was found to react in every instance with the homologous blood. They conclude, from their exhaustive experiments, that the hæmoprecipitins are specific, although a slight reaction may be obtained with blood from allied animals. The reaction occurs equally well with mixed blood. These authors (39) tested 36 kinds of blood, including the blood of man, 4 species of monkeys, the Rufans rat-kangaroo, the capybora, the polecat, suricate, squirrel, guinea pig, tame and wild rabbit, white rat, black rat, horse, ox, sheep, white-tailed gnu, gazelle, deer, dog, cat, pig, bat, pigeon, chicken, pheasant, swan, duck, chaffinch, crossbill, rook, swallow, corncrake, frog, newt, and snake. The serum of rabbits treated with dog serum gave a specific reaction with dog's blood alone. Sheep's blood antiserum produced a marked precipitate with sheep's blood and a less marked reaction with the blood of the gazelle and axis deer, and a very slight cloudiness with the blood of the ox, squirrel, and swan. Ox blood antiserum reacted with ox blood, and to a lesser degree with the blood of the gazelle and axis deer, and produced a slight clouding with the blood of the sheep, gnu, squirrel, and swan. Horse's blood antiserum produced precipitation only with the blood of that animal and no other. The serum of rabbits treated with human blood serum and pleuritic exudates produced a marked precipitation only in human blood, and only a slight but distinct reaction in the blood of the four species of monkeys. A very faint clouding appeared in the blood of the horse, ox, and sheep, whereas all other solutions of the various bloods remained perfectly clear. Positive results were obtained with diluted human serum, pleuritic exudates, both fresh and putrid, dried blood and serum, blood which had undergone putrefaction for two months, blood from wounds, collected on filter paper, serum from blisters, and nasal and lacrymal secretions. A specific reaction was also obtained with blood dried and kept under different conditions, as well as with antiserum dried on filter paper for forty-two days. The authors' conclusions are: "1. The investigations we have made confirm and extend the observations of others with regard to the formation of specific precipitins in the blood serum of animals treated with various sera. 2. These precipitins are specific, although they may produce a slight reaction with the sera of allied animals. 3. The substances in serum which bring about the formation of a precipitin, as also the precipitin itself, are remarkably stable bodies. 4. The new test can be successfully applied to a blood which has been mixed with that of several other animals. 5. We have in this test the most delicate means hitherto discovered of detecting and differentiating bloods, and consequently we may hope that it will be put to forensic use." In a later contribution to this subject Nuttal (39-40) published the results of his further investigations on the specificity of the serum reaction. He has examined over 500 different kinds of blood, and the results previously obtained have been fully confirmed. None of the bloods, other than human, gave the specific reaction with human blood antiserum, except the blood of monkeys.

Grünbaum (41) confirmed the generally accepted view that human blood antiserum reacts with the blood of monkeys. He has obtained the specific reaction with the blood of the gorilla, orang, and chimpanzee. The blood of the orang gives a more gelatinous precipitate as compared with the granular precipitate obtained with the other bloods. The different grades of precipitation given by the bloods of various monkeys were carefully studied by Nuttall (42), who tested 46 bloods of apes and monkeys. He found that the blood of *Simiadæ* gives a precipitum equal in quantity to that of human blood; the blood of *Cercopithecidæ* gives less precipitum; whilst the least is given by the bloods of *Hapaldæ* and *Cebidæ*.

Inasmuch as the precipitin obtained with the blood of monkeys is generally less in quantity than that obtained with human blood, Layton (43) suggests that, by diluting the blood to be tested 500 or more times, human blood can be differentiated from that of monkeys. In other words, if the dilution is very high and the reaction positive, monkey blood can be excluded. This author is of the opinion that "the test is specific, invariable, and therefore applicable to forensic use."

Strube (44) insists on the absolute necessity of a careful and accurate method of preparing and testing the antiserum before any conclusions either scientific or forensic can be reached. For medicolegal purposes the methods must be absolutely free from criticism as human life is involved. He found that unless high dilutions were employed and the test controlled, reactions might be obtained with almost any blood. He has been able to obtain in a very short time an exceedingly active serum by making the injections of the foreign blood intravenously. On an average, six injections of 1 c. c. of defibrinated blood were made in the course of eight days. The antiserum obtained produced a marked reaction with blood diluted 1 : 1,000. The antiserum was found most active when obtained about eight days after the last injection. This serum could be preserved for three months unchanged. The animal itself provides serum active for about a month, when the activity of the serum begins to decrease rapidly. He further cautions that the solutions used in the test should be free from bacterial contamination, as otherwise cloudiness may be due to bacterial growth. With no blood, other than the homologous, did he obtain a specific reaction in a dilution greater than 1 : 100.

At the May meeting (1902) of the Paris Medicolegal Society, Ogier and Herscher endorsed this method of the medicolegal detection of blood and proposed the following uniform method: 10

c. c. of human serum should be injected subcutaneously into rabbits every two days until six injections are made. At the expiration of five to six days after the last injection the animal is bled and the blood collected in test tubes. After coagulation, the serum is collected and centrifugalized. The suspected blood stain is dissolved out by means of distilled water, diluted until a faint color is perceived, and poured into small tubes, 4 to 5 mm. in diameter and 10 to 12 cms. long. From 2 to 3 c. c. of the solution are put in each tube. In identical manner, solutions are prepared from 5 to 6 of the domestic animals. To each tube about 10 drops of the antiserum are added, the contents mixed, the tubes stoppered and placed in a water bath at 37° to 40° C. In ten minutes the tube containing human blood will show precipitation, which becomes complete in thirty minutes. The other tubes may show a slight precipitate in several hours.

Results entirely in accord with those quoted on previous pages were obtained by Patek and Bennet (45), Whitney (46), Wood (47), Lisle (48), Linossier (49), Frenkel (50).

In view of the favorable results obtained by so many eminent authorities and their emphatic statements as to the positive value of this test for forensic purposes, the recent assertion of Austin (51) does not carry with it much weight. This author asserts that the serum test is not so fully applicable as has been represented, and that only under the most limited conditions can it be employed; that effusions and exudates are of little value for immunization, and that placental blood can only be used when strictly fresh; also, that a much longer time and more repeated injections are necessary than had been supposed from the first reports of the earlier investigators; and even, queries the author, if all the restrictions that surround the test have been strictly observed can we say with any degree of certainty that this is human blood?

The most important contribution to the subject has been recently made by Graham-Smith and Sanger (52). These authors experimented on the test under diverse conditions, gaining the conviction that "with sufficient material and due precaution to exclude the various sources of error, there are but few conditions met with in forensic practice under which human could not be readily differentiated from other bloods." As this work is of great importance from a forensic standpoint a full review of the paper will be given here.

For the production of antiserum intravenous injections of foreign blood serum were employed. The latter were injected in doses of 3 to 5 c. c. at intervals of two, three, and four days until 18 c. c. were used. Fourteen days after the last injection the animal was bled, the blood collected under strict aseptic conditions in large Petri dishes which were tilted after the formation of the clot, and the clear serum drawn up into small tubes about 0.5 cms. in diameter and 10 cms. in length, with the ends drawn out into small capillaries. When full, the ends were sealed and the tubes stored in an upright position at room temperature and in the light. When using, a few drops of the antiserum were expelled from the tubes and the ends resealed. The methods of applying the test were both qualitative and quantitative. The qualitative method consisted in placing the blood-stained pieces for some hours in small quantities (1 to 2 c. c.) of distilled water, and afterward adding equal volumes of 1.2 per cent. sodium chloride solution. The foaming on shaking served as an indication that blood entered into solution. About 0.5 c. c. of the blood solution were placed in small test tubes of about 1 c. c. capacity, contained in a rack provided with a black background, and 1 to 2 drops of antiserum were added to each tube. Control observations were invariably made. The quantitative method was that devised by Nuttall, which consists in the employment of an accurately graduated pipette and an accurate dilution of the blood solution to be tested in the proportion of 1 : 21. Half a c. c. of this dilution is placed in a small test tube and 0.1 c. c. of antiserum added. The tube is inverted several times, so as to mix the contents, and allowed to stand for twenty-four hours, at the end of which time the supernatant fluid is carefully drawn off and the precipitum drawn up into a capillary tube. One end of the latter is sealed and it is allowed to stand for seventy-two hours for the precipitum to settle. By means of an instrument devised by Nuttall for that purpose, the volume occupied by the precipitum is then estimated. The experimental error in this method was found by the authors to be about 10 per cent. By means of these methods the authors determined the influence of various conditions on the accuracy of the test. Thus, the amount of sodium chloride was found to have no perceptible influence, nor had the temperature any. The relation of human blood antiserum to other body fluids was found to be as follows:

	Quantity of Precipitum. Per Cent.
Fresh human serum (two days)	100
Old human serum (eight months)	93.8
Placental serum (eight months)	54.5
Pleuritic exudate (two weeks)	30.3
Hydrocele fluid (nine months)	16.7
Ovarian cyst fluid (nine months)	6.1
Amniotic fluid (nine months)	3.0

As was to be expected from observations of others, the age of the bloodstain had no influence on the test. Excellent results were obtained with bloodstains which had been on metal for thirty years. Nor did the material on which the blood was deposited make any difference in the results, except when, in the case of organic substances, the resulting solution was either too acid or too alkaline. Putrefaction and the presence of various specific bacteria had no very marked influence on the test. Some of the bacteria reduced the quantity of the precipitum, while others raised it, but in either case the changes were very slight. The experiments on the effect of earth and lime salts brought out the following facts: 1. That an intimate mixture of lime with blood completely destroys the latter; 2. that a clouding occurs in the solution of earth on the addition of antiserum; 3. that that is due principally to the presence of lime salts; 4. that the lime can be got rid of and the solution rendered clear, and not liable to clouding, by the passage of CO_2 and subsequent filtration; 5. that the passage of CO_2 in no way interferes with the reaction; 6. that the quantity of lime present in ordinary earth does not materially affect blood mixed with it.

Acids and alkalies in concentration completely destroy the blood; in weak dilutions they cause objectionable precipitates and reduce the quantity of precipitum, although they do not interfere with the specific reaction. At any rate the presence of acid or alkali in the solution, as shown by litmus paper, calls for neutralization before the test is applied. The effect of different antiseptics was found to be variable. Chloroform produces objectionable clouding, when present in large quantities. It, however, as well as other volatile antiseptics, may be removed by placing the reagent in the incubator for half an hour before applying the test. Corrosive sublimate and ferrous or copper sulphate destroy the serum and, except when present in very minute quantities, render the carrying out of the test impossible. Silver nitrate does not interfere, when present in dilution of not less than 1:10,000. Formalin does not interfere with the test when present in dilutions of 1:100, the same being the case with thymol. Lysol and lysoform are objectionable in any dilution. In strengths above those mentioned, formalin, corrosive sublimate, the sulphates of copper and iron, and nitrate of silver completely destroy the specific reaction. Leather, except the polished yellow kind, does not interfere with the test, provided the excessive acidity of the solution is neutralized. The yellow leather, for some unexplainable reason, rendered the carrying out of the test impossible under any circumstances. Bootblacking and polish do not interfere with the test after the acidity is neutralized. Tannin, on the other hand, produces a marked clouding, even in dilutions of 1:1,000, and thus interferes with the test. Wall paper, other kinds of paper, stones, flint, slate, coal, cork, string, straw, rubber, linoleum, as well as silver and copper coins, were found not to interfere with the test.

(To be concluded.)

POSTDIPHTHERITIC PARALYSIS OF ACCOMMODATION, WITH REPORT OF A CASE.

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Case.—A. L., a little girl, aged nine years, was brought to me by her father, complaining of dimness of vision. For the last three days the child said, "My eyes are getting weaker and weaker and I cannot read my books." The child had no headaches and suffered from no other symptoms attributable to an error of refraction, but was pale and delicate; evidently in a convalescing stage of some acute disease. Her voice had a nasal intonation and speech was rather slow. The child had a general anæmic appearance. Following my examination I found nothing abnormal in the outer aspect of the eyes. Both corneæ were clear from any opacities, and sensitive. The pupils were normal in size, round, situated in the centre, but reacted rather sluggishly to light. The external muscles of the eye performed their function harmoniously; there was no deviation during fixation for any object. The refractive media were clear; the fundus reflex a luminous red. No change of any organic nature could be noticed, with the aid of the ophthalmoscope, in either retinal ground or optic disk. Vision for distance on Snellen's card at 6 metres was normal—*i.e.*, $^6/_6$, near vision was almost impossible, but with the aid of a lens + 4. sph., the child could read fairly well the small print at about 12 cms. I questioned the father on the previous history. The family history was good, and I was informed that the child was sick in bed for five weeks with diphtheria, and that the child is now in the third week of convalescence. The family doctor used the antitoxine serum, but he was called in on the third day of the disease. There were all evidences of a postdiphtheritic paresis of accommodation, which was responsible for the inability of the child to read. This was accompanied by paralysis of the soft palate; the uvula was relaxed and insensitive to the touch; there was complete pharyngeal anæsthesia, and the reflexes were absent. I diagnosticated the case as a postdiphtheritic paresis of accommodation accompanied by pharyngeal paralysis, and I informed the father to that effect, and told him that the child need not be refracted at present. I ordered the little girl not to exert her eyes; not to do any close work; to spend a few weeks in the country, and prescribed a tonic to build up her general condition. I used iron, quinine, and strychnine. I told the father that under good hygienic surroundings the child would probably completely recover within three or four months. The child returned to my office two months later perfectly well, without any impairment of vision or speech. She began to improve about six weeks after her first visit to me. Improvement was slow and gradual and at her return to my office she could read perfectly well at near distance. The pharynx was again sensitive and the reflexes active.

Paresis of accommodation as a sequela to diphtheria is not uncommon and occurs in about 10 per cent. of all cases of diphtheria. According to some authorities the percentage is still higher. As a rule it sets in during the stage of convalescence, from three to four weeks after all symptoms characteristic of the disease have subsided. This form of paralysis is more common than the other forms of ocular palsies, and is next in frequency to paralysis of the pharyngeal vault and soft palate. Occurring, as diphtheria does, in young children, most of whom cannot read, this condition may be, and frequently is, present without the parents having any knowledge of its existence, the patient himself being too young to complain, and often unaware of the abnormal after effect of his previous disease. Postdiphtheritic paresis of accommodation is rather slow in its development; the patient first feels that near vision becomes somewhat hard, next somewhat blurred, and finally impossible. Especially is this the case where the sphincter pupillæ is not affected and there is no dilatation of the pupil. In cases where the sphincters are paralyzed, and the pupils consequently dilated, indistinct vision for near objects is more sudden, as the diffusion circle is greater, the base of the cone of light being much wider.

Postdiphtheritic paresis of accommodation is never a complete paralysis and is always bilateral, affecting both eyes simultaneously. There are a few cases on record of unilateral paresis of accommodation, but these are of questionable authenticity. The degree of paralysis is variable. This variability is characteristic of the disease, but the degree of the paralysis is by no means an index of the virulence and intensity of the disease causing it. Some very mild cases of diphtheria may be followed by a severe general paralysis, and often the paralysis is the diagnostic factor in determining the specific nature of a previous almost unnoticeable pharyngitis. I recollect, in particular, a case of a young girl who came to the children's department of the Mount Sinai Hospital, suffering from a complete pharyngeal paralysis, and who gave a history of a slight sore throat three weeks previously, which was not treated at all. The child recovered under a tonic treatment. No bacteriological examination was made, but all evidences pointed to a probability that the child had a mild attack of diphtheria and that she was suffering from pharyngeal paralysis as a sequela of that disease. The case was diagnosticated as postdiphtheritic paralysis of the pharynx.

Paresis of accommodation as a sequela to an inflammatory condition of the pharynx is always of specific origin, and is caused by the poison produced by the Klebs-Löffler bacillus. It never follows a simple angina. Cases diagnosticated as an ordinary pharyngitis and followed by paralysis would, under careful bacteriological examination, have shown the presence of the Klebs-Löffler organism. The frequency of postdiphtheritic paralysis of accommodation is variously estimated by different clinicians. But it is almost impossible to give correct data, as a great many cases are not brought to the notice of the profession, the patient usually being too young to complain, and often unaware of its existence. The various statistics run from 9 to 14 per cent. According to the report of the American Pædiatric Society, out of 3,384 cases, paralysis followed in 9.7 per cent., all of which were treated by the antidiphtheritic serum.

The pathological anatomy of postdiphtheritic paralysis is still in obscurity. There seems to be a general tendency to the belief that it is a peripheral neuritis, as there is a great susceptibility of the nervous system to the diphtheritic toxine. It may, perhaps, be due to a local disturbance of the circulation, and nerve force is restored as soon as the circulation readjusts itself. The facts that postdiphtheritic paralysis recovers so speedily and that there is an ambulatory paralysis makes the theory of circulatory disturbances more rational than the theory of an organic peripheral neuritis.

The effect of paralysis of accommodation depends upon the refractive condition of the patient. Thus, in emmetropic cases, distinct vision for near objects is impossible, while distant vision is normal, since the emmetropic eye requires no effort of accommodation for distant vision. In hypermetropic cases the effect is still more marked, so that even distant vision is somewhat less distinct, for the hypermetrope can see clearly only with the aid of his ciliary muscles; the myope, on the other hand, will suffer no inconvenience. Paralysis of accommodation is due to paralysis of part of the oculomotor nerve innervating the ciliary muscles, and may either exist alone, or be a symptom of a complete paralysis of the third nerve. As a rule, in paralysis following diphtheria it exists alone and is rarely accompanied by paralysis of the sphincter pupillæ, in which case we have a dilatation of the pupil. In the case I have the privilege to report the sphincter pupillæ was not affected, as the pupils were normal in size, although they reacted sluggishly to light. Paralysis affecting associated movement—that is, conjugate paralysis, which depends upon a lesion in the associated centres, is perhaps never a sequela to diphtheria.

Of interest in paralysis of accommodation is a condition known as "micropsia," in which objects appear smaller than normal. This phenomenon is explained by Fuchs in the following manner (Fuchs's *Ophthalmology,* p. 730): "We estimate the size of an object from the size of its image upon the retina, taken in connection with the distance at which we judge the object to be situated. An object of a certain size, seen at a certain distance, gives us a retinal image of a certain size. If the object is approximated to one-half the distance its retinal image becomes twice as great. If this were not the case, and the retinal image remained of the same size, when the object was approximated we should infer that the object itself had been reduced to one-half its former size. It is this mistake we fall into in a case of paralysis of accommodation, since in this condition the act of accommodation for any given distance of the object costs us a greater effort than under other circumstances, we estimate the accommodation at too high a figure, and hence believe the object to be nearer than it really is; but, as the retinal image is not larger, we think that the object itself has diminished in size."

The diagnosis is comparatively speaking easy—the history of an antecedent diphtheria with distant vision clear and normal, and vision for near objects indistinct; add to this a clear medium of refraction and an opthalmoscopic examination negative, and the diagnosis is certain. The older writers before Donders diagnosticated such cases as amblyopia. The prognosis in most cases is favorable. Unless some complication of extreme debility is present, the cases recover in from two to three months with a complete restoration of vision. The treatment is hygienic and dietetic. It is doubtful whether the treatment of the previous condition can in any way affect the frequency of this sequela. The report of the Pædiatric Society shows 9.7 per cent., even though the antitoxine was employed. It is highly possible, however, that a proper treatment during the stage of convalescence would greatly influence the frequency of the paresis, for, as a rule, and especially in practice among the poor, the child is left to the mercy of ignorant parents as soon as the membrane has fallen off and the temperature has fallen to normal. It is just this period which should be utilized for the reestablishment of the circulation and the building up of the general condition, to restore the lost vitality and strength of the child. Proper care during this period would most probably lessen the frequency of postdiphtheritic palsies. Glasses should not be prescribed, except in high degrees of hyperopia. Fresh air, good food, absolute rest, physical and mental, and a tonic of iron, quinine, and strychnine are all that is required.

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THROMBOSIS OF THE JUGULAR VEINS IN PULMONARY TUBERCULOSIS: WITH REPORT OF A CASE.

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In 1879, Lasègue (1) observed a case of pulmonary tuberculosis complicated by the formation of a thrombus in the external jugular, subclavian, and humeral veins. In his article he states that careful search of the literature failed to reveal a similar observation. His report evidently stimulated observation and study, since I have been able to collect seven cases of phthisis presenting this unusual complication, which have been reported since his case. He failed, however, to note the cases reported by G. M. Humphrey, in 1859, and by Sesary, in 1867, which make, in all, nine cases that I have been able to discover after a diligent search of the literature.

After presenting a short *résumé* of each of the reported cases, I desire to add another to the meagre literature, which will be followed by a short discussion of the probable causes of thrombosis in pulmonary tuberculosis, which is far more common in the late stages of the disease than we are aware, and not so rare in the early stages as we possibly assume.

CASE I.—Humphrey (2) reported (1859) a case of a man, aged forty-five years, and in the advanced stages of phthisis pulmonalis who developed some days before death œdema of the right arm. The superficial veins of the arm and shoulder were distended. Autopsy revealed thrombosis of the internal jugular, subclavian, and axiliary veins.

CASE II.—Sesary (3) reported (1867) a case of thrombosis of the internal jugular in a tuberculous subject, but so far I have been unable to secure the original article.

CASE III.—Lasègue (4) observed (1879) a case of pulmonary tuberculosis complicated by thrombosis of the external jugular, subclavian, and humeral veins. Ten days after the appearance of the thrombus it was completely softened and all symptoms of phlebitis had disappeared. No external cause was discoverable.

CASE IV.—Lemoine (5) reported (1880) a case of thrombosis of the internal jugular vein and lateral sinus in a tuberculous patient. The other veins of the neck were normal. Death resulted.

CASE V.—Robert (6) recorded (1880) the occurrence of thrombosis of the left innominate vein and internal jugular occurring in a patient in the latter stages of "lung disease." Death occurred four months after the appearance of the complication. The thrombus was believed to be due to an enlarged lymph node pressing upon, and adherent to, the left innominate vein.

CASE VI.—W. W. Smith (7) observed (1880) the case of a woman, forty-two years old, with a chronic cough, who, eight months preceding death, experienced a transient attack of dropsy of the left arm. Six months later the feet began to swell, and one month before death she had a great swelling of the right arm up to two inches below the shoulder. Lividity, with enlargement of the superficial veins of the right side of the neck and œdema over the right side of chest, appeared. Autopsy revealed a thrombus firmly occluding the right innominate vein and extending into the superior vena cava, subclavian, and jugular veins. The innominate vein was firmly adherent to the pleura and diseased apex.

CASE VII.—Clodomiro (8) reported the occurrence of thrombosis of the left jugulars, the subclavian, axillary, deep brachial, and cephalic veins complicating a phthisis with cavity in left apex. Death took place two weeks following the appearance of the clot. Adhesions were found between the pleura and left innominate vein which were believed to have produced the thrombus by inducing stasis.

CASE VIII.—Lejard (9) recorded (1882) a case of "CaseousPneumonia" with cavity formation (evidently pulmonary tuberculosis), which was complicated by a thrombus forming in the external jugular and its anastomosis with the anterior jugular, and in the deep veins of the forearm. The patient died two days after the development of the thrombus. The complication was believed to be marantic and due to exhaustion and cachexia.

CASE IX.—Picot (10) observed (1884) a case of phthisis which was complicated by a thrombosis of the jugular, axillary, and brachiocephalic veins. He believed that this complication was produced by pressure exerted by a hypertrophied lymph node.

It appears from study of these cases that four of them—Smith's, Robert's, Clodomiro's, and Picot's—were due to erosion of the veins from external pressure; in two of these the erosion was due to adhesions; in the other two to tuberculous lymph glands. The thrombi in the remaining cases were evidently due to a phlebitis from internal causes.

The following personal observation is an example of venous thrombosis complicating phthisis from internal causes only:

CASE.—*Last Stages of Chronic Pulmonary Tuberculosis; Left Internal Jugular Thrombosis; Extension of Thrombus Through the Subclavian Down the Axillary into the Basilic Veins; Two weeks later a like Thrombosis Appeared on the Right Side and Extended to the Veins of the Arm; Death from Cerebral Sinus Thrombosis from Extension of Thrombus in Right Internal Jugular Vein; No Autopsy.* Mrs. A., white, aged twenty-seven years, married, and the mother of a healthy child seven years of age. Five years ago she lost a child from some meningeal difficulty. Her husband is living and healthy. She suffered the usual diseases of childhood, but was remarkably healthy and strong until shortly after her second child was born, five years ago, when she suffered from what was supposed to be an attack of malarial fever. She was a very peculiar person and concealed the fact that she had a cough at that time. The patient was sent from Bayonne, New Jersey, to Cleveland, with the idea of relieving her from the malarial poison from which she was supposed to be suffering. She came under my care soon afterwards. At that time she was bed-fast and greatly emaciated. A blood examination failed to reveal the presence of malarial parasites, but careful examination of the lungs disclosed a slight consolidation of the left base. Shortly after this, Dr. F. Y. Allen examined the sputum and discovered a large number of tubercle bacilli. From that time up to the time of her death she had been constantly under my care.

There were no unusual manifestations in the progress of the disease until the 22d of last August, when I was hurriedly called to see her and found her suffering from a severe pain in the left side of the neck. Examination disclosed a fulness of the supraclavicular space and also a tender and slightly reddened tumor at the lower portion of the internal jugular. I could compare it to nothing else than a case of thrombosis of the internal jugular vein which I observed and reported some time ago (11). The pain was in the neck and upper left thorax and extended down the arm. The veins of the left side of the neck were enlarged. Three days later the hand became the seat of a peculiar puffy swelling. It did not pit on pressure, but felt like an elastic cushion. This swelling in the hand became very great, and the forearm, and up to the middle of the arm, was also much enlarged. The tumefaction reached its height at the end of a week, at which time the thrombus could be felt in the axillary vein; indeed, little knotty protuberances opposite the valves of the veins could be demonstrated. The superficial veins of that side of the upper chest were enlarged and the lower face slightly swollen. The thrombus had extended to the external jugular and could now be traced upward over two inches in both veins, while below the veins were distended by the clot into a hard, tender cord, which disappeared behind the clavicle. The thrombus had evidently formed in the lower portion of the internal jugular, had passed downward and extended into the subclavian, completely filling it, and certainly filling to distention the axillary and part of the basilic veins, where it could be felt as a round, hard, tender cord with little knotty elevations at the side of each valve. At the time of its occurrence her lower limbs were dropsical and the abdomen was also markedly distended. The dropsical condition of the abdomen appeared before the limbs became œdematous. This ascites was sudden in development and was preceded by some faintness and vomiting. This occurred when I was away on my vacation and while she was under the care of Dr. C. S. Walker. Viewing this ascites in the light of the after events causes me to suspect strongly that she may have had a thrombosis of some part of the portal circuit.

In about two weeks the swelling of the hand began to recede, but the veins were plainly felt and seemed to be still full of the thrombus. The tenderness at the root of the neck had nearly disappeared and the swelling at that point was practically gone, when she was suddenly seized with a pain on the right side of the neck and a similar tumor developed, which was also red and tender. The location was that of the right jugular vein just as it disappears behind the clavicle. The supraclavicular space was swollen full, and the superficial veins in the upper portion of the chest seemed to be enlarged. It was nearly three days before any swelling began in the hand, and then it began rather abruptly, and soon reached the degree seen in the other hand. The swelling of each hand was so great that the hands appeared like round balls with the conically swollen fingers projecting from the convexities. The swelling rapidly extended to the forearms. When this had taken place the thrombus could be felt filling the axillary vein as it emerged from the axillary space; later it extended until it filled nearly all the basilic veins. The heart showed no change beyond the effects of her phthisis, but some albumin was present in her urine and undoubtedly she had waxy kidneys. The left hand remained swollen until her death took place, on September 19th. Without any particular warning she became unconscious and we had evidently to deal with a thrombus of some of the large venous sinuses of the brain. Examination revealed an upward extension of the thrombus in the internal jugular, with considerable œdema of that side of the face and neck. No autopsy was allowed.

In this connection I desire to thank Dr. Minnette Petrie for aid and care of this patient, who spent her last days in the doctor's private hospital.

DISCUSSION.—The causes of venous thrombosis are: (1) presence of microorganisms or irritating compounds in the blood; (2) alterations in the vessel wall; (3) changes in the normal constituents of the blood; (4) alterations in the movement of, and loss of normal pressure in, the blood stream.

I am not aware that any study has been given to the bacteriology of the thrombi of pulmonary tuberculosis. Harris and Longcope, in Welch's Laboratory, studied forty-four thrombi, mostly venous and peripheral, and of the so-called marantic type, and found bacteria in thirty-four instances. Welch (12) quotes this as supporting the bacterial origin of venous coagula. It must be remembered, however, that in the death agony, bacteria, which have been before held in abeyance by the little understood and almost mysterious protective proteids of the body, riot and multiply throughout the organism, especially within the blood vessels, and it is not only probable, but quite certain, that such thrombi as Harris and Longcope examined became infected after their formation and may be but examples of terminal infection. However, in lack of specific data, but with our general knowledge of the process of blood infection and coagulation of the blood within the vessels, we can but believe that a close relation exists between the two processes.

Loeb (13) states that the bacillus of tuberculosis has no effect in coagulation of the blood *in vitro*, but that the *Staphylococcus pyogenes aureus* has "a specific influence in causing coagulation of the blood." Indeed, the more we contemplate the facts, the more is it impressed upon us that intravenous clotting of the blood usually demands the cooperation of several conditions, but that infection is one of the principal factors no one can doubt. That it is not an absolute essential is shown by the occurrence of azoic coagulation between the ligatures of the vein when the vein is not full. This is evidently due to the proliferation of the cells of the intima. If, however, the vein is normally full of blood, no coagulation takes place.

Changes in the vessel wall may be produced by irritating compounds or bacteria in the blood; by invasion of its walls from the outside by new growths, or by mocroorganisms; by erosion due to external pressure, or to new growths in the vessel wall itself.

In the later stages of pulmonary tuberculosis we have marked alterations of the blood. It is possible that the agglutinating property of tuberculous blood may cause clumping of the tubercule bacilli, and thus favor development of fibrin ferments. The alteration of the speed and pressure must be considerable, but in the vessel walls themselves I believe lie the principal, if not all, the causes needful to produce venous thrombosis. Of course, it is possible that the general septic condition of the blood in late phthisis is sufficient to cause a true fermentation thrombosis, but that will not explain thrombosis occurring early in the disease, as pointed out by Hirtz (14). Although the thrombi appearing late in phthisis has been looked upon as marantic, I am constrained to hold, with H. Brun (15), who has studied the pathology of this complication, that it is not due either to an altered chemical composition of the blood, or to a slowed current, but to changes in the intima of the vein, caused by lodgment of the specific bacilli or other microorganisms within its structures. The half empty veins of the exhausted and cachectic tuberculous may lead to proliferation of the cells of the intima.

That slowing of the current alone is not a great factor in the production of thrombosis is proved by its never being observed in a limb to which a tourniquet has been applied as a means of limiting pulmonary hæmorrhage. Indeed, I believe that slowing of the blood current as a cause of the so-called marantic thrombus has been overstated. It is now the coming belief that the invasion of the intima by microorganisms is a logical and more scientific explanation of their occurrence.

Certain anatomical conditions may not only favor thrombosis but determine the location.

In phthisis the sitting posture with dependent limbs probably accounts for the frequent occurrence of femoral thrombosis.

The rather frequent beginning of thrombosis in the lower end of the jugulars in various diseases, especially of the heart and lungs, may be accounted for by the presence of valves in that situation, as suggested by Peter (16), in 1873. Welch (17), in discussing the frequency of these thrombi arising at the lower end of the jugulars, says: "I am inclined to lay emphasis upon the readiness with which an eddying or whirling motion of the blood may be set up in heart disease in the lower ends of the jugulars and the adjacent parts of the innominate and subclavian veins. Von Recklinghausen has brought forward strong evidence that this whirling movement (Wirbelbewegung) of the blood is of great importance in determining the localization of thrombi. The valves, the bulbous enlargement at the lower end of the internal jugular, the attachment of the veins to fasciæ, and the coming together here at oblique and right angles of currents of blood with different pressures and velocities, seem well calculated to cause in these veins whirling or vortical motion of the blood current. . . ."

To this I would add that in the distressing cough of the late stages of phthisis we have a potent agent to slow the current in the jugulars, to pouch out the bulb, to strain and distend its weakened and ill nourished intima. Then, again, the sudden aspiration of its contents alternating with the distention is certainly conducive to a vortical motion of the blood.

In light of the several conditions enumerated as those most favorable to venous thrombosis, it is remarkable that it is not more commonly observed as a complication of pulmonary tuberculosis.

In the late stages of phthisis we have very grave changes in the blood: It is lacking in the normal nutritive constituents; it contains some bacteria and the toxines of many more, and when the disease has overwhelmed the normal resistance of the body, it teems with the more or less virulent microorganisms of a mixed infection.

Alterations of the venous wall late in phthisis are to be expected. The poverty of the blood, the continued elevation of the temperature, must result in a lowered nutrition and a consequent diminution of its normal power of resistance, and it becomes a prey and a feeding ground for microorganisms.

Further, the presence of foreign matter in the blood stream tends to the development of fibrin ferments which, as in all septic conditions, favor coagulation.

Lastly, when the forces of life are expended, the degenerated heart muscle with all its tumultuous struggles, cannot force the blood stream on; stasis develops, microorganisms attach themselves to the venous walls and flourish on the ruin, phlebitis occurs, thrombi form, and death comes.

612 PROSPECT STREET.

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The County Medical Society's Detective Work.—It is said that a well known advertising abortionist was trapped on February 12th by an ingenious plot on the part of the county medical society, which required the services of a woman supposedly in trouble, represented by a young married woman, a female detective playing the part of the sister desirous of saving the family name, and two male detectives who hid under a bed till the doctor and his assisting nurse had damned themselves out of their own mouths in a conversation intended to reassure the supposed patient. The physician and nurse were arrested.

IMPRESSIONS OF THE TUBERCULOSIS EXPOSITION AT BALTIMORE.

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The programme stated that this exposition, which has now gone into history, was "an objective presentation to the people of Maryland of the history, distribution, varieties, causes, cost, prevention, and cure of tuberculosis." But one could not have realized how "meaty" this statement was had he not gone to Baltimore to enjoy the presentation. In this paper, as is implied in the title, only impressions are noted; no detailed account is essayed.

There was a logical order to this exposition. It began with statistics taken largely (but not altogether) from the literature of the subject. The unenviable prominence of tuberculosis among causes of death, its relations to other diseases, to race, age, sex, occupation, heredity, marriage, food and drink, dwellings, wages, insurance, economic considerations; these and many other data were set forth, generally by means of charts, in preference to exposition by dry figures. For instance, the causes of death in tuberculosis were demonstrated by means of a circle, about 150° of which represented asthenia, 10° hæmorrhage, 3½° pneumonia, 3½° kidney complications, and 3° peritonitis. It was noted that all races are exceedingly chary about reporting cases for registration. Naegeli's now famous demonstration, that tuberculosis exists in greater or less degree in practically all of us, was graphically presented.

There was this table representing Baltimore "street car spuistics."

248 car rides;
3,156 passengers;
994 separate deposits of sputa;
4 sputa per car.
41 crowded cars;
125 counted deposits;
3 sputa per crowded car.
49 wet cars;
52 crowded sputa on wet cars;
1 sputum per car.
90 cars crowded or wet;
177 counted sputa;
2 sputa per crowded and wet car.
158 cars neither crowded nor wet;
817 separate deposits;
5.17 per car.
30 times spitting witnesses.
2 conductors seen to spit on car.
5 motormen seen to spit on car.
Pools are counted as one deposit. Motormen are depositors of pools.

Factory, tenement, and sweat shop exhibits from a number of cities came next. New York city easily led this gruesome procession; and it seemed to have a banner so large as to obscure all the rest.

The exhibit of State and municipal prophylaxis was a most refreshing one; as was also the demonstration of the work done by organized charities and by volunteer associations in various parts of the country. An enormous amount of work was thus shown to have been accomplished, both in this country and in Canada. The Charity Organization Society of New York made a particularly forceful showing.

In exhibits of sanatoria the State of New York, the West, our Army and Navy, Canada (especially Muskoka), England, and the Continent of Europe, were all represented. There were pictures of sanatoria situated in wooded groves, upon hillsides, upon plains, with snow-capped mountains in the distance, upon Alpine crests, so snow surrounded that it was not easy to distinguish the building. There appeared small structures so imbedded in snow that they looked like Eskimo huts; and tidy cottages comfortably ensconced among greenwood trees. Buildings of stone and wood, of part wood and part canvas, shacks and simple tents were shown. The German sanatoria seemed, of all, the most elaborate and the most expensive. In them are embodied the idea of having most of the plant comprised in one huge building, in contradistinction to the American cottage plan. The Weickler Sanatorium, at Goerbersdorf, is most picturesquely situated in the midst of a densely wooded region; the Dettweiler institution, with its auxiliary pavilions, looked like an Arabian Night's palace; and the Brehmer Sanatorium appeared a piece of architecture magnificently conceived and much more costly, I understand, than any sanatorium which we, with our vastly preponderating resources over those of Germany, can boast of.

A very valuable feature of the exposition was the demonstration of what can be done in the way of home treatment, the plan which must after all be applied in most cases of the disease. If the race, indeed, is even to "down" tuberculosis, the result must be brought about by sanitation in the individual home, the unit of our civilization. It was shown how the roof garden, the fire escape in the tenement, and the veranda in the country house could be utilized in fresh air treatment. The sun bath system of Dr. Millet was shown. All sorts of sputum receptacles, outdoor beds and cots, protected chairs, with rests for warming pans for the feet, variously devised outdoor coverings, food preparations, and methods of keeping milk pure, were exhibited. Neatest of all, a room was arranged by nurses to be the type of such as consumptives should occupy.

Certain of the data posted should be quoted:

> The essentials in the home treatment of consumption in small towns, country places, and suburbs of large cities, are:
> 1. The confidence of the patient.
> 2. The masterful management on the part of the doctor.
> 3. Persistence—Benefit is usually a matter of months, complete arrest a matter of years, absolute cure a matter of many years.
> 4. Sunshine by day; fresh air by night.
> 5. Rest while there is fever.
> 6. Bread stuffs, and milk, meat, and eggs.

Again:

> How should we combat bad sanitary conditions in homes?
> 1. By an educational health campaign in the homes, carried out by the board of health and a staff of trained visitors.
> 2. By a compulsory notification of cases in all cities.
> 3. By enlarging the powers of health boards, so as to deal efficiently with the question of disinfection of the houses occupied by tuberculous patients.
> 4. By attention to housing of the poor, proper control of tenements, and the regulation by law of the number of persons in each house.
> 5. By placing upon the landlord the responsibility of providing, under the control of the board of health, a clean, wholesome house for a new tenant.
> 6. By the wholesale condemnation of unsanitary streets and blocks and the rebuilding of them by the municipality.

Both of these lists were prepared by Dr. Osler.

A very interesting part of the exposition were the "mural decorations" (as a hospitable colleague called them). They were handsome charts of dull red cloth, upon which were imprinted very pregnant and suggestive legends. I quote them at length:

> Truckner Husten, Todes Trumpeter.—German Proverb.
> La Phthisie se prend sur le zinc.—Hayem.
>
> A death roll of tuberculosis:
> Maria Constantinova Bashkirtseff.
> Zanier Bichât.
> Henry Cuyler Bunner.
> Frederic Francais Chapin.
> Stephen Crane.
> John Godman.
> John Paul Jones.
> John Keats.
> Réné Théophile Hyacinthe Laennec.
> Sidney Lanier.
> Jules Bastien Le-Page.
> Ethelbert Nevin.
> Henry Purcell.
> Elizabeth Félix Rachel.
> Friedrich Shiller.
> John Sterling.
> Laurence Stern.
> Robert Louis Stevenson.
> Henry Timrod.
> Carl Maria von Weber.
> Artemus Ward.
> Henry Kirke White.
>
> Jederman hat amende ein bischen tuberculose.
> L'alcoölisme fait le lit de la tubercuose.—Landouzy.
>
> Death has not only particular stars in heaven, but malevolent places on earth, which single out our infirmities, and strike at our weaker parts.—Sir Thomas Browne.
>
> The consumptive himself is almost harmless, and only becomes harmful through bad habits.—Cornet.
>
> If thou, Lord, wilt be extreme to mark what is done amiss, O Lord,
> Who may abide it.
> For there is mercy with thee; therefore shalt thou be feared.
>
> A prudent man forseeth the evil and hideth himself; but the simple pass on and are punished.
>
> Il est dans le pouvoir de l'homme de faire disparaître du monde toutes les maladies parasitaires.—Pasteur.
>
> To wilful men
> The injuries that they themselves procure
> Must be their schoolmaster.
> —Shakespeare.
>
> Whilst meagre phthisis gives a silent blow:
> Her stroaks are sure, but her advances slow.
> No loud alarms nor fierce assaults are shown.
> She starves the fortress first, then takes the town.
> —Garth.
>
> We must care for the consumptive in the right place, in the right way, and in the right time until he is cured; instead of, as now, in the wrong place, in the wrong way, at the wrong time until he is dead.—Pryor.

There was a sentence from Hippocrates in the original. Remembering that I could once make such translations I began to reproduce this. But a sense of the melancholy brevity of human existence having come upon me I appealed to a Baltimore colleague, who rendered it thus: "The disease which proved most dangerous and produced the greatest number of deaths was consumption." There was also one from Sophocles, which my friend said, meant: "The gods always play with loaded dice." This did not seem quite correct, for I recalled that, although the gods were not a particularly straight-laced lot, they generally played fair. So a learned divine whom I had just met was appealed to, who assured us that the correct rendering was: "The gods always throw the cubes impartially."

The history of tuberculosis was exhaustively set forth. And the cases containing books, plates and portraits were most delectable pasture for literary browsing. This section was arranged, I believe, by the committee on books and portraits, Dr. Osler, Dr. D. R. Lyman, Dr. L. V. Hamman, and Dr. H. B. Jacobs.

Upon the walls were portraits of intellectual men—those who either are or have been of the University Faculty—Elliot, Schouler, Brooks, Sylvester, Newcomb, Williams, Gilman, Remsen, Adams, Rowland, and Gildersleeve. It appears to me that as one progresses southward in this country the dignity portrayed in the faces painted is tempered more and more with a kindliness and urbanity of demeanor.

Over the platform of McCoy Hall, where the lectures were held, a huge representation of the seal of the university was placed, and above this was the motto, "Veritas vos liberabit." I was greatly impressed with the largeness of the audiences, the great majority among whom, I believe, were of the laity. For instance, on Friday evening, when Dr. Adami spoke, not only were all the nine hundred seats taken, but also all the valuable standing room was occupied. And there were just such audiences earlier in the week when Dr. Flick, Dr. Ravenel, Dr. Salmon, Dr. Knopf, and others spoke. There were certainly much larger audiences than are likely to attend a medical discourse in our cosmopolitan city of three millions odd people, most of whom sadly need lecturing upon the subject of this exposition.

This tuberculosis presentation was certainly most successful. And its aftermath should surely be fruitful. It were well if like educational enterprises could be arranged for in other communities.

PRELIMINARY REPORT OF BILATERAL EXCISION OF THE SUPERIOR AND MIDDLE CERVICAL SYMPATHETIC GANGLIA IN FIVE CASES OF EPILEPSY.*

By S. D. HOPKINS, M. D.,

DENVER, COLORADO,

NEUROLOGIST TO THE DENVER COUNTY HOSPITAL AND MERCY SANITARIUM.

One of the patients whose cases are reported in this paper has gone a sufficient length of time since the operation without a convulsion to justify us in considering the patient cured. The four remaining patients, except Case II, have had the bromide and antipyrine treatment for years without any beneficial effect.

CASE I.—H. McH., aged twenty-six years; occupation, carpenter. Family history, negative. Previous History: Always enjoyed good health during his childhood. Denies alcoholism or syphilis. Present Illness: Began in 1892. After being exposed to severe cold all day, he returned home in the evening and, while in a warm room, had his first convulsion. He suddenly fell to the floor, became unconscious, foamed at the mouth, bit his tongue, and first passed through a tonic, and later a clonic, muscular spasm, lasting about five minutes. After recovering consciousness he suffered from a severe headache and was drowsy.

The second attack occurred the same night while in bed, and the third convulsion five days later. After this, he enjoyed good health for one year and a half, when he had several severe attacks. Since this time the intervals between the convulsions have become shorter and they are usually preceded for an hour or two by absentmindedness. The attacks are similar in every respect to the one described, except that they are more severe, and after them he sleeps for six or eight hours.

In September, 1895, he suffered from one to two convulsions every day, and following the last attack he developed maniacal symptoms, which continued for a number of days.

During the past year the intervals between the seizures vary from a day to a month; he has a number of attacks in succession, followed by marked disturbance in memory. On the 10th of June, 1901, the patient had fifty convulsions in twenty-four hours, without regaining consciousness between any of the seizures. After this condition of status epilepticus he was very forgetful, particularly as to recent events. After a convulsion in the early part of July, 1901, he suffered from an attack of epileptic mania. On July 17, 1901, he had two attacks.

The superior and middle cervical ganglia were removed on July 18, 1901. The following day he had seven very severe attacks, and every day afterward, up to August 1, 1901, he had an attack of *grand mal*, but each succeeding fit was less in severity and the last one that occurred was described by the patient as simply "feeling nervous." This patient has been free from epilepsy for a period of two years and one month.

The symptoms produced by irritation of the cervical sympathetic are dilatation of the pupils and palpebral fissure, protrusion of the eyeballs, increase of the cardiac and respiratory action, also sweating of the face. The latter symptom only occurred in two of the cases reported.

After resection of the ganglia the pupils in three of the cases remained contracted and reacted sluggishly to light. In the remaining two cases the right pupil was slightly dilated while the other was markedly contracted, but both reacted sluggishly to light.

The following symptoms were found in every case operated on: Congestion of conjunctivæ and face, ptosis, increased flow of nasal mucus, and a decrease in the pulse and respiratory movements; the former decreasing from 5 to 35 beats when the ganglia was divided. The voice became husky, and the patient complained of pain along the ramus of the lower jaw. Dr. Leonard Freeman, who operated in these cases, found that the cervical glands were markedly enlarged in the first two cases. In the remaining three they were about normal in size.

The symptoms resulting from the operation and continuing permanently, are ptosis, contraction of the pupils with paresis; tension of the eyeball is minus and the eyeball recedes. This last symptom is seen most prominently in Case I. Emaciation of the facial muscles has not been observed in any of these cases.

CASE II.—Has had the bromide treatment for one week. W. R., aged twenty years, clerk, born in England; has been in Colorado nineteen years. Family history, negative, except that one sister had chorea. No cancer or tuberculosis in the family. Previous history: Had the usual diseases of childhood. At twelve years of age, had an attack of diphtheria and of typhoid fever, after which his health was excellent.

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* Read before the Rocky Mountain Inter-State Medical Association, Salt Lake City, Utah.

Present illness began September 4, 1902. Had an attack of unconsciousness which lasted for two or three minutes, and was accompanied by muscular twitching, foaming at the mouth, and biting his tongue. The following week the attacks occurred every day. The attacks have become more numerous, and for the past two weeks he has had from two to three fits during the day and at night while asleep.

On November 22, 1902, the superior and middle cervical ganglia were removed.

The following day he had one slight attack of epilepsy. Had a convulsion each succeeding day until December 2, 1902, but the convulsions were all light in character. An interval of one month elapsed without an attack. January 3 and 4, 1903, one slight attack. January 11, 1903, slight attack. January 27, 1903, slight attack. On April 9, 1903, the last convulsion occurred, giving the patient a period of six months in which he has been free from epilepsy.

Case III.—K. B., committed to the Denver County Hospital, June 26, 1901, aged thirty-three years. Occupation, editor. Family history, negative, except that two sisters had epilepsy. Previous history: He always enjoyed good health until his present trouble. In 1890, he first suffered from a *grand mal* attack of epilepsy. The convulsions always occurred at night for the first six months; later they came on during the day as well as at night. The attacks became more frequent and, as a result, his mind became so impaired that he was incarcerated in an asylum in Elgin, Ill., two years previously to his commitment to the asylum in this city. Since being confined in the Denver County Hospital the epileptic attacks have occurred during the night while asleep. He had from one to six fits a night and these took place four or five nights in a week. This patient has had epileptic dementia for the past five years.

The ganglia were removed on December 13, 1902. Since the operation he has not had any more than three slight attacks at any one time, and the intervals between the convulsions have been from ten days to two months.

The function of the cervical sympathetic is to control the muscular action of the cerebral blood vessels; to transmit impulse from the stomach, intestines, and lungs, and to innervate the dilator muscles of the pupils and also the unstriated muscles of the lids.

The most probable theory of epilepsy is that there is some circulatory disturbance in the brain. The cervical sympathetic ganglia contain the vasoconstrictor nerves and the excision of these structures prevents vascular spasm; therefore the lumen of the blood vessels is permanently dilated, which increases the nutritive supply to the cerebral nerve cells and, as a result of this increased blood supply, toxic substances are also more readily removed from the brain tissue.

The removal of these nerves is on the same principle as the use of amyl nitrite during an epileptic seizure, converting cerebral anæmia into hyperæmia by dilating the cerebral blood vessels. The excision of these ganglia also prevents the transmission of impulse from the viscera and is necessarily of value in reflex epilepsy.

Case IV.—W. C., age thirty-four years, ranchman, admitted to the County Hospital, January, 1903. Family history, negative, except that one brother suffered from epilepsy. Present illness: Began in the latter part of August, 1900, when he was thrown from a broncho, striking on his head, which rendered him unconscious for a short time. Four days later, while driving, he suddenly became unconscious for a few minutes. From this time on, these attacks of unconsciousness have become more frequent, and at the present time he has from one to five attacks daily. The majority of attacks from which he suffers are *petit mal* in character, although he occasionally has a *grand mal* convulsion.

The superior and middle cervical ganglia were removed on February 4, 1903. Since the operation he has had three attacks of *grand mal*, and the minor seizures are less in number and severity. At no time since the operation has he had more than three attacks in any one day, and the longest interval between the attacks has been one week.

After a careful survey of the literature to date, Winter[1] has collected 213 cases of sympathetic resection for relief of epilepsy, of which 7 patients died from various causes. These deaths were nearly all remotely or indirectly connected with the operation. Of the 213 cases, he reports 91 as having been too recently or too inexactly reported. Utilizing, thus, 122 cases for serious study, he finds that Alexander and Jonnesco have each furnished 4 cases that have been under observation for at last three years, and the patients have remained free from attacks. These he describes as cured, i. e., 6.6 per cent.

Of cases observed for from one to two years, he accepts 17 patients as apparently cured (vorlaufiggeheilt), i. e., 13.9 per cent. The first case reported in this paper is included in this classification, which makes the percentage 14.6 per cent.

Twenty-three patients could only be considered as improved (attacks less frequent and severe), i. e., 18.9 per cent. Seven patients died, i. e., 5.7 per cent., though not one death was directly attributed to the operation. Sixty-seven patients, i. e., 54.9 per cent., seemed but little, if at all, influenced by the operation.

Case V.—J. M., age twenty-five years, female, born in Illinois. In Colorado eighteen years. Family history, negative.

Present illness: She always enjoyed good health until the first convulsion made its appearance, at twelve years of age. It was *grand mal* in character. The second attack occurred six months later. The convulsions became more frequent, occurring during the night and day, and on an average, three or four a week. About two years ago she noticed that her memory was poor. On April 1, 1903, she had several attacks, after which she suffered from epileptic mania for about one week.

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[1] *American Medicine*, page 808, 1902.

Examination, negative, except that she is mentally dull.

On April 30, 1903, the sympathetic ganglia were removed on both sides. After the operation the convulsions continued up to July 9, 1903, when they ceased.

Winter[2] presents the results of the bromide treatment, as afforded by the two great institutions at Bielefeld and Bethel. Of 8,000 patients treated at Bielefeld the percentages stand: Cured, 1.72 per cent.; improved, 3.35 per cent. At Bethel the results are better, i. e., cured, 7.7 per cent.; improved, 22 per cent. Even here, however, at Bethel, patients who have gone but one year without a seizure are counted as cured; were the limit placed at three years, one may readily understand that the percentages would be far less favorable. As Winter reminds us, "the results of operation on the sympathetic are much more brilliant than these."

In the cases reported it is seen that the severity and number of attacks are lessened, and if the operation will only accomplish this result one is justified in using it in the treatment of this disease.

It is probable that in some of the cases operated on the sympathetic nerves were not found, which necessarily would lower the percentage of cures.

Dr. John B. Deaver,[3] says: "In recurring attacks of epilepsy, sympathectomy should be resorted to. The results warrant the operation."

A Professional Strike in Germany.—Information is forthcoming to the effect that the doctors of Berlin are in arms against those patients who refuse to pay for professional attention. The following manifesto is said to have been issued recently: "Being obliged to look out for our own interests, we, the undersigned physicians, have unanimously decided, first, that from January 1, 1904, we will reveal to each other the names of all those persons who do not pay for medical services according to their means; and, second, that, unless the law compels us, we will refuse to attend such persons, even if they promise us pay. Our long experience with patients forces us to take this action, for in no other way can we obtain our rights."

New City Laboratory for Louisville, Ky.—It is said that when Dr. Allen, of the health department of Louisville, took charge of the laboratory work some six years ago, he found the office equipment to consist solely of three battered chairs and a lounge. On February 5th a complete outfit of proper apparatus was installed in three handsome rooms in the City Hall, and Dr. Allen is contemplating further improvements.

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[2] *American Medicine,* page 808, 1902.

[3] *Annals of Surgery,* page 211, August, 1903.

TERTIARY SYPHILIS OF THE NOSE AND PHARYNX.*

By W. SCOTT RENNER, M. D.,

BUFFALO, N. Y.

(*Continued from page 391.*)

FIBROID DEGENERATION OF THE NASAL MUCOUS MEMBRANE.

John N. Mackenzie (9), of Baltimore, was the first to call attention to this condition of the nasal mucous membrane as a tertiary lesion of syphilis, in an article published in the *Journal of Laryngology and Rhinology* in the April number of 1889. He found the condition in both the congenital and the acquired disease. This fibroid change generally attacks the turbinated bodies, although it occasionally affects the sæptum and other parts of the interior of the nose. The turbinated bodies are, according to Mackenzie, very much enlarged, and appear as dense, hard, whitish-yellow or red sessile masses, or are converted into distinctly pedunculated growths, which not only resemble but are actually fibroids of this region. These fibroid masses, he says, obstruct the passage of air and often alter in a marked degree the anatomical relations of the parts. They are sometimes attacked by ulceration, or they may be bound as the result of ulceration to neighboring parts by firm bands of cicatricial tissue. Under the microscope the turbinated tissue is found to have changed into dense fibrous tissue. This occurs less frequently in the pharynx than in the nose. These tumors do not respond to antisyphilitic treatment. They were recognized as a syphilitic lesion in the larynx before Mackenzie pointed them out as occurring in the nose and pharynx.

SYPHILOMA.

I shall next speak of a rare form of tumor occurring in the nose and nasopharynx to which the name syphiloma has been given by the late Professor Kuhn (10), of Strassburg, and his assistants, Mannasse and Frank. Syphiloma is a name which was first applied to a gumma by Wagner (11), in an article which appeared in the *Archiv für Heilkunde* in 1863. Virchow in two publications (12, 13) which appeared at about that time objected to the use of this name and substituted for it syphilitic granuloma. Both of these names are now used to describe this rare syphilitic tumor. These names, however, are also used to describe a gumma, especially in Germany, which will of course cause much confusion.

These tumors are found most frequently upon the cartilaginous portion of the nasal sæptum, but they may occur upon the lower turbinated, upon the floor of the nasal fossæ, or in the nasopharynx. These tumors may, according to Kuhn, occur in either the acquired or hereditary form of the disease. Of his three cases, two were in the acquired disease, the third in a case of hereditary syphilis. According to Mannasse (14) their surfaces are smooth, but Kuttner (15), of Berlin, in an article written in 1898, states that they are also uneven. The color of their surface varies from a grayish-white to a grayish-red, according to Frank (16). Mannasse describes them as varying from gray to red in color. Krieke's case (17) was grayish-yellow and Kuttner describes them as varying in color from a reddish-gray to a bright red. These authors describe these tumors as being of soft consistency, except one case of Krieke's, which was accidentally very hard and disappeared very slowly under antisyphilitic treatment. In two of Kuttner's cases the surface of the tumor was covered with an adherent purulent and fibrinous exudation. These tumors have but little tendency to bleed, but they are accompanied by an abundant secretion which is without odor. The sæptum narium was perforated in many cases. The tumors are usually single but may be multiple. They are pedunculated or sessile. While gummata are imbedded in infiltrated mucous membrane, syphilomata are not surrounded by any swelling whatever, but stand out sharply from the surrounding tissue, according to Mannasse. According to Kuhn, Mannasse, and Kuttner, while the gumma is an inflammatory deposit in the mucous membrane and does not reach far above its surface and soon breaks down in the centre, to be followed by ulceration, the syphiloma simply has its origin from a small circumscribed part of the mucous membrane and develops into a tumor of considerable size, which shows no tendency whatever to break down. Kuttner says that a syphiloma undergoes degeneration but that disintegration commencing in the centre of the tumor never occurs. Kuhn, Mannasse, Frank, Krieke, and Kuttner, who have been already mentioned, along with Ripault (18), of Dijon, France, and C. T. Theisen (19), of Albany, N. Y., have described cases of this sort. Theisen has recently published three such cases. Professor M. Schmidt (20), of Frankfort-am-Main has been mentioned as publishing such a case. He, however, calls his case a gumma and describes it in these words in the second edition of his valuable work: "Gummata may also occur quite isolated in the nose, and sometimes attain, there, a very large size. Kuhn has described three cases which, on account of their size, caused their being mistaken for sarcomata. Krieke saw in two patients similar tumors in the nasopharynx. I had under observation an ulcerating gumma in a lady of rather high social position, who consulted me for hoarseness. She had some redness of the left vocal cord. I consider this suspicious when the lungs are healthy. An inquiry into the previous history was in her case impossible. I found, however, on the median line of the lower turbinated a sharply defined tumor the size of a bean, which was ulcerated on the tip. She had been unsuccessfully treated for her hoarseness for a long time. When on potassium iodide for three weeks she was relieved of all her troubles. She told me later of her own accord that her first husband was syphilitic."

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* Accepted as a candidate thesis for the American Laryngological Association, June, 1903.

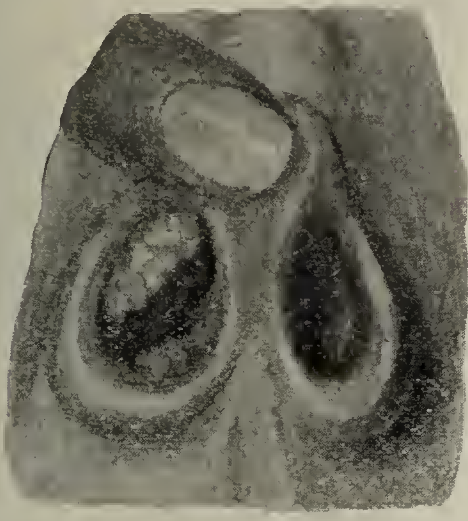

FIG. 6.—Copy of Fig. 1, Tafel XXXIII, Gerber's *Atlas*. It represents a simple granuloma on a syphilitic base.

Anton Lieven (21), bath physician in Aachen, a man who is in a position to see many unusually serious cases of this disease (for Aachen is celebrated for its baths for syphilis), and who has written extensively on syphilis of the nose, mouth, and throat, says: "Extremely large gummatous neoplasms have received the name syphilitic tumors (Schmidt, Frank, Kuhn). The last author will establish direct histological differences between these and gummata of the mucous membrane, which extend themselves out upon the surface and reach but a little above the surrounding tissues. I think it better to call the latter gummatous infiltration; the tumors, gummata, here, as they are called on all other parts of the body." Dr. Ph. Schech (22), of Munich, in Heymann's *Handbuch*, says: "There is already a rather abundant literature dealing with syphilitic tumors or granulation growths, yet there is no unity concerning the meaning of the expression. Some assign the name to extremely large gummata, while others use it to describe neoplasms on a syphilitic base."

I quote these passages simply as the opinions of others regarding these cases. I have no intention of offering any opinion regarding them, for I have never recognized cases of this sort. One naturally doubts their being very frequent, for none have been reported that I know of from the larger clinics of either Europe or this country.

The form of tumor, according to these authors, with which these are most likely to be confounded are tuberculomata of the nasal cavity. Both occur most frequently upon the cartilaginous part of the sæptum. Tuberculomata were found by Chiari (23) to occur 18 out of 21 times in this location, in an analysis made by him. They likewise occur in the other positions in the nose in which syphilomata were found.

The syphilitic tumor has been found to have a tendency to return after extirpation, which is also found to be the case with the tuberculous tumor, but not as universally so.

Tuberculous and syphilitic tumors are found, according to the authors who describe these cases of syphilomata, to be almost identical in their histological structure; and in these very cases examination of the lungs will not be of any assistance, for in the cases of tuberculoma analyzed by Chiari he found general or pulmonary tuberculosis in only four cases, and in three of these it had already developed before the tumors were discovered.

The tuberculomata have a greater tendency to break down and usually have superficial ulcerations upon their surfaces. Histologically the diagnosis is generally easily reached. Goerke (24) asserts that the finding of tubercle bacilli in these tumors is a positive diagnostic sign. The syphiloma is made up microscopically of round cells, with spindle cells in small quantities between them. There is also a formation of connective tissue. The walls of the blood vessels are thickened. There are never real tubercles with cheesy centres, and very rarely tubercle bacilli are found as in the tuberculoma. When these tumors are suspected of being syphilitic, the diagnosis is confirmed by antisyphilitic treatment, under which they disappear. They are also distinguished from malignant tumors by their structure and by a course of antisyphilitic treatment.

ATROPHIC RHINITIS.

Another result, besides the formation of gummata, granulomata, and fibromata of the nasal mucous membrane, is said to be a syphilitic atrophy of it. According to Philip Schlech (25), of Munich, there remains in all severe cases of tertiary syphilis after it heals up a more or less marked atrophy of the mucous membrane. This is often, according to Michelson, a very rapidly accomplished process. The picture in cases where there has been no gummatous destruction of the sæptum and turbinated bodies is the same as that seen in ordinary atrophic rhinitis or ozæna. Such atrophy generally attacks, first the lower turbinated bone and next in order the middle turbinated. Some German authors, such as Schech, Gerber, and Lang, regard this form the direct product of syphilis; while Jarasz and Moldenhauer consider that it is simply a complication, not a part, of the syphilitic process. Just here a very important question arises, and that is whether the genuine atrophy or ozæna which so often begins before or at puberty, has not some ætiological relation to hereditary syphilis. E. Frankel, Schaffer, Schroeder, Ruault, and Golding-Bird are mentioned by Gerber (26) as believing that it is probably so, and he states, further, that Stoerk was the first to state that it is a late manifestation of syphilis. Gerber also believes that it is among others, and he asserts that he has found that in 43.3 per cent. of the cases of genuine atrophy the outer nose has a characteristic syphilitic deformity; most of these cases have a characteristic snub nose (Fig. 7). Between this form and the saddle-nose all grades of variation are to be found in the atrophic rhinitis of puberty, and these deformities occur without any destruction of the interior of the nose. Another deformity of the nose met with in ozæna is that in which it looks as if pressed in from the sides, the "Kneifer Nase" (Fig. 8). Gerber affirms that this form of nose is also met with in acquired syphilis.

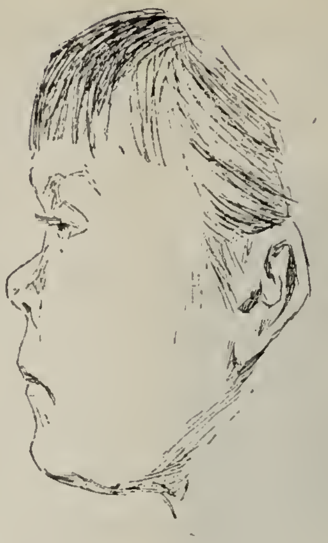

FIG. 7.

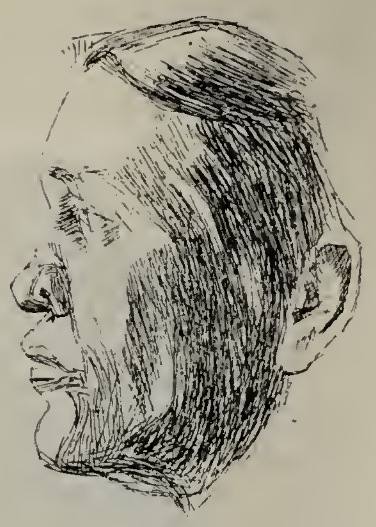

FIG. 8.

FIG. 7.—Copy of Fig. 3 from the same source as the last two figures. It represents the snub nose of genuine atrophic rhinitis.

FIG. 8.—Copy of Fig. 4 from the same source as the last three figures. It represents the so-called "Kneifer Nase" of atrophic rhinitis.

(To be continued.)

◆

Brisk Anti-Cigarette Campaign in Chicago.—Dr. Reynolds, of the Chicago health board, having ventured to defend the use of the cigarette as tending to diminish the habit of spitting in public, has become the special target for attack on the part of anti-cigarette crusaders. Investigation appears to have disclosed the fact that chewing is much more common among messenger boys than cigarette smoking, and is a less cleanly habit, if not indeed more injurious.

Our Subscribers' Discussions.

A SERIES OF PRIZE ESSAYS.

[*Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:*

XXVIII.—What do you rely on in the diagnosis of smallpox in the papular stage? (Under adjudication.)

XXIX.—How do you treat nocturnal incontinence of urine? (Under adjudication.)

XXX.—What are your achievements in improvising surgical instruments and appliances? (Answers due not later than April 2nd.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of $25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) *that the answers be short, if practicable, no one answer to contain more than six hundred words.*

Only subscribers to the New York Medical Journal and Philadelphia Medical Journal *(including regular and volunteer officers of the Medical corps of the United States Army, Navy, and Marine Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.*]

The prize of $25 for the best essay submitted in answer to question XXVII has been awarded to Dr. Richard Lightburn Sutton, Assistant Surgeon, United States Navy, whose article appears below.

PRIZE QUESTION NO. XXVII.

THE TREATMENT OF PARAPHIMOSIS.

By RICHARD LIGHTBURN SUTTON,

ASSISTANT SURGEON, UNITED STATES NAVY,

BALTIMORE, MD.

In dealing with this condition I prefer to make the following clinical classification:

1. Simple constriction with resulting engorgement, occurring most frequently in children.
2. Constriction with ulceration, usually associated with gonorrhœal infection.
3. Cases in which, from ignorance, neglect, or inability to procure surgical assistance, there is sloughing or beginning gangrene of the affected parts.

With the first named, relief is commonly not very difficult to obtain. The patient is placed in the dorsal recumbent position, his fears quieted, and an icebag, wrapped in a towel, is applied to the penis for one hour, or less if the cold is too intense. Meanwhile the surgeon has provided himself with petrolatum, a small square of lint or gauze, a flat or round elastic ligature, about two feet in length (a half inch strip from a Martin's bandage answers admirably), and a grooved director. In emergencies an ordinary hairpin can be substituted for the latter. The cold application is removed, and that portion of the penis lying anterior to the constricting band is thoroughly coated with the lubricant.

Reduction is now attempted, carefully, because of the exquisite pain to which it often gives rise.

The operator, standing over or in front of the patient, locks his index fingers above and behind the corona and the middle fingers below and beneath it, while, with his thumbs, the glans is gradually compressed and partially relieved of the engorged blood, until it is small enough to be pushed back, together with the swollen ring of mucous membrane separating the cervix from the encircling band, through the constricting collar.

If this method is not successful after one or two trials it should be abandoned, and an attempt made so to decrease the size of the swollen mass, by compression, that its return through the narrow orifice will be facilitated. The glans is covered with a strip of moist lint, and the elastic bandage tightly applied, by a series of overlapping circular turns from before backward, until the coronal groove is reached. The strangulating band having thus been exposed, the tip of a grooved director, or the rounded extremity of a hairpin is carefully introduced beneath it, and the compressing ligature quickly removed. The head of the organ, shriveled and decreased in bulk, may now be slipped back without further difficulty. In case the pain is too great I find it better to cocainize the entire organ by the use of Schleich's solution, injected at intervals around the circumference of the penis, at the base.

This will fulfil all of the requirements of a general anæsthetic without the danger incurred by the administration of the latter. In extremely nervous or timid individuals, however, it will be found difficult to dispense with general narcosis, and under these circumstances ether should be used. When both manipulation and compression prove unavailing, then instrumental interference must be resorted to, and the constriction divided. So far as I have seen, prolonged strapping with adhesive plaster has not proved satisfactory, while multiple punctures for the relief of the œdema furnish excellent ports of entry for various cocci, with very little compensatory benefit.

In the second class of cases, occurring with chancroidal or other infection, the trouble is almost invariably of several days' duration, and the above method can seldom be effectively employed.

I prefer to render the parts insensible at once, and, after a thorough scrubbing with soap and water, together with a half hour's exposure to a cold stream of mercury bichloride solution (1-4,000), to seal the ulcerated areas with a double coating of collodion, and then incise the band.

Care must be observed by the surgeon and his assistant to protect their hands from infection, and all instruments and dressings must of course be sterile.

The glans, in these cases, projects upward at almost a right angle. An assistant, with his fingers encircling the pendulous portion, draws the integument back from the constriction while the operator presses the anterior portion of the penis downward, thus exposing a furrow, the first one behind the groove of the corona glandis, the floor of which divides the integument from the mucous membrane and constitutes the stricture. This is carefully divided from without inward, the knife being held like a pen. Oftentimes it is necessary to cut through the collar in two or three places before the deformity can be remedied. After reduction the incisions, although short and on the preputial fringe, are exposed to infection and each had best be drawn together with a single stitch of silk and closed with collodion. The ulcerated areas are treated with equal parts of powdered calomel and iodoform.

Lead water and laudanum dressings, as hot as can be borne, are applied for the first thirty-six hours, and the patient remains in bed for two days. The bowels are opened freely by the use of calomel and magnesium sulphate.

I always advise that a circumcision be performed as soon as practicable. With care, cleanliness, and antisepsis good results are obtained.

The third variety of cases, associated as they are with necrosis, must be treated energetically. The patient is at once put to bed, the parts anæsthetized, cleansed, and the constriction relieved. All dead tissue is carefully clipped away with a pair of curved scissors, the foreskin divided in the dorsal line back to the corona so as to relieve pressure, the bleeding vessels secured with fine silk, and hot, moist, antiseptic dressings (mercury bichloride 1-8,000, or formalin 1-5,000) applied. A brisk cathartic (calomel five grains) is given, followed by a large dose of magnesium sulphate. A nutritious, semisolid diet, and strychnine sulphate in one thirtieth grain doses every three hours, should be given from the first. These steps are usually sufficient to ameliorate, if not completely to relieve the symptoms. In rare instances it will be found necessary to amputate. Owing to the decreased power of resistance and impaired nutrition of the parts, circumcision had best be postponed for a few days, when a Kocher's operation should be done.

Dr. Z. Edwards Lewis, of New Rochelle, N. Y., writes:

It is vital to keep in mind, in considering this question, that there can be no paraphimosis without an antecedent phimosis. Practically, the first principle of treatment of paraphimosis is prevention, by discovering and curing the phimosis, and so rendering the occurrence of paraphimosis impossible.

Every newborn male should be examined by the accoucheur as to the condition of the prepuce; and the examination should extend to a full retraction, and a thorough inspection of the whole glans and of the sulcus of the cervix. The attempt at this procedure will at once inform him as to the existence of phimosis. If a phimosed prepuce has an orifice large enough to allow free discharge of the urine, there is no pressing haste as to operation; but the parents should be informed of the necessity of radical measures, and that these should not be needlessly delayed. When the phimosis has been cured by circumcision, or by the operation described below, the dander of paraphimosis—even its possibility—has been removed. This is the treatment by prevention.

If the accoucheur finds no phimosis, but a prepuce more or less adherent to the glans penis, as is so often the case, he should effect complete liberation. This can generally be done with comparative facility by sweeping a silver probe around the glans from frænum to frænum. To make sure that the liberation has been complete, the prepuce should be fully retracted and the whole glans surface inspected. The cervix should be washed clean of smegma, if any there be, and the prepuce replaced. If, as sometimes occurs, the adhesion has been so firm that the probe has torn the mucous covering of the glans, a thin hood of absorbent cotton wet with an antiseptic solution should be interposed between glans and prepuce, and this obturator should be renewed daily until repair is complete. If it is necessary to intrust the renewal of this dressing to the nurse, he should be directed on no account to leave the prepuce retracted longer than is needful for the dressing, and that an inflammatory paraphimosis may result in strangulation and death of the glans.

If at any time paraphimosis has actually occurred, but the degree of constriction is moderate (the criteria for which are the condition and color of the glans penis), an attempt at reduction should be made by compression of the glans with the thumb while traction is made on the prepuce by the fore and middle fingers placed on either side of the organ so as not to interfere with the blood return. An acute paraphimosis may often be thus reduced, and all nurses should be instructed in the manipulation; but if this procedure fails, or is judged inapplicable, the operation spoken of above as an election for the cure of phimosis must be at once performed as follows:

Preferably, a grooved director is passed longitudinally under the constricted prepuce, upon the dorsum of the penis, and with a sharp pointed curved bistoury in the grooves an incision is made from within outwards. This incision, originally in the line of the penis, is made transverse by lateral traction, so that its ends become its middle; it must be of sufficient length to provide an ample preputial orifice. It should be sewed in exact apposition of the edges with frequent interrupted stitches, the first needle being entered at one extremity of the original cut and carried at once to the other extremity, thus securing the change from a longitudinal to a transverse wound. In most instances, healing by adhesion may be looked for.

When lethal strangulation is so near, or the constriction has been so long continued, or the swelling is so great, or there are other reasons why the use of the grooved director seems inadvisable, the constriction should be cautiously cut down upon in the median line with a sharp knife till the strangulation is entirely relieved and the result already indicated has been secured. Then, if not distinctly contraindicated, the sewing should be carried out as already directed.

Paraphimosis should be reduced at the earliest possible moment and eventually be made impossible of reproduction.

Dr. John Gilbert, of York, Pa., writes:

Not only will circumcision directly prevent paraphimosis by removing that part of the tissue which is the seat of difficulty (suitable ground on which bacteria feed and develop), but indirectly, by preventing the mild satyriasis that leads to the indulgence in promiscuous sexual intercourse, the consequent contraction of gonorrhœa and other venereal diseases which are the principal causes of this disorder.

Such operation, however, will avail little if incompletely done, and the method taught by Horwitz seems to answer the purpose admirably. He uses the clamp method and upon the removal of the redundant tissue an incision about ⅜ of an inch in length is made in the dorsal median line and the triangular edges are trimmed off, thereby allowing spreading of the tissue and loosening of the prepuce; after which the skin is sutured by the mucous membrane. The operation has been done absolutely painlessly upon numerous occasions by the writer. He first applies by means of a camel's hair brush a 10 per cent. solution of cocaine, which is allowed to remain; a few seconds after which it is thoroughly dried and followed by a much weaker solution injected into the parts. By this method many of the patients failed to recognize even the first prick of the needle, which of course was entered at the mucous membrane.

If gonorrhœa, balanitis, chancroids, or kindred affections are established, and a long foreskin is present, absolute cleanliness must be observed. The head of the penis should be allowed to soak in a mild antiseptic solution for at least ten minutes thrice daily, the solution being as hot as can be comfortably borne; after which the organ should be thoroughly dried and dressed with a combination of boric acid and some drying powder, and a very thin strip of absorbent cotton or gauze laid between the foreskin and head and neck of the penis, reaching for some distance below the corona, but not protruding from the forward end of the former.

A gonorrhœa bag should be worn, the cotton of which should be changed frequently, and in no case should the free drainage of the urethra be obstructed by cotton or other material, but the penis should hang within the bag, the pus thus being allowed to drip into the cotton below.

Should paraphimosis occur in spite of these precautions, a very thin blunt probe is inserted behind the collar and well back behind the corona and gently moved to the right and left to the rhaphé, thus separating adhesions that may have formed. This neglected and adhesions existing, the reduction is almost impossible. (By collar is meant the ring of swollen tissue which prevents the ready return of the head).

The application of a 4 per cent. solution of cocaine or $^1/_{5000}$ solution of adrenalin may so contract arterioles and thus diminish size of organ, as to render the reduction more easy. Owing to the often intense congestion, it is believed that the application of ice for this purpose is not without danger. Much œdema may be relieved by multiple punctures.

The patient is now asked to lie flat upon his back, when the surgeon, with his right hand well oiled, grasps the penis with the left, protected upon the palm or surface by a layer or two of clean, dry gauze to prevent slipping, and makes a movement as if to lift the patient by his penis; at the same time manipulating the glans with his right hand.

If this manœuvre is unsuccessful, thin strips of gauze may be wrapped around the glans from before backward, including collar, thus reducing the size of the organ, thereby allowing the foreskin to slip in front of the impediment.

Should this be of no avail and the patient be averse to the loss of the foreskin, one or more curved needles threaded with heavy silk may be run along a grooved director, transfixing the foreskin, thus facilitating direct traction upon the constriction. This may be combined with any of the foregoing methods.

As a last resort, the condition having persisted for twenty-four hours and especially if the difficulty is complicated by a chanchroidal condition or much discoloration maintains, it will be necessary to divide the foreskin. This is best done by slipping a narrow curved pointed bistoury along a grooved director, transfixing the foreskin at the middle dorsal line well back behind the seat of obstruction, and cutting from within outwards, completely dividing the foreskin. Bleeding is usually arrested by hot water, and the local application of lead water and laudanum serves to combat pain and inflammation—cocaine, or other local anæsthetic, is sufficient for such an operation. Sometimes the cutting is done from without, inwards.

A set circumcision must not be done until the disappearance of the infecting principle, otherwise widespread infection of the part is inevitable.

Therapeutical Notes.

Tapeworm.—*Revue française de médecine et de chirurgie*, for January 25th, gives the prescriptions furnished recently to *Presse médicale* by Dr. C. Query. The day before using these it is not necessary for the patient to fast, but the quantity of food taken should be moderate in amount:

℞ Pumpkin seeds..........40 grammes (10 drachms);
Fresh extract of pomegranate bark.......10 grammes ($^{1}/_{3}$ ounce).

M. Make a paste and divide into 20 boluses. Take 5 every half hour, fasting.

The taste of these boluses may be masked with oil of mint or lemon, or the mixture may be dispensed in capsules. Half an hour after the last 5 boluses have been swallowed, this purgative should follow:

℞ Compound tincture of jalap } of each....25 grammes
Syrup of buckthorn } ($^{5}/_{6}$ ounce).

M. One dose.

The foregoing doses are for an adult; they produce a painless passage of the entire worm, and cause no nausea.

Tuberculosis.—*Progrès médical*, for January 23rd, gives several formulæ. Gautier prescribes:

℞ Sodium cacodylate.........$6^{2}/_{5}$ grammes (96 grains);
Carbolated alcohol, 10 per cent...........10 drops;
Distilled water..........100 grammes ($3^{1}/_{3}$ ounces).

M. One gramme hypodermically.

Lafay and Lévy-Bing offer:

℞ Calcium cacodylate................5 to 16 grammes (75-240 grains);
Carbolated alcohol.......................10 drops;
Distilled water..........100 grammes ($3^{1}/_{3}$ ounces).

M. One gramme.

Or:

℞ Magnesium cacodylate......5 grammes (75 grains);
Carbolated alcohol.......................10 drops;
Distilled water..........100 grammes ($3^{1}/_{3}$ ounces).

M. One gramme.

If there is an anæmic or a leucæmic cachexia:

℞ Iron cacodylate.............3 grammes (45 grains);
Distilled water..........100 grammes ($3^{1}/_{3}$ ounces).

M. One gramme.

If a syphilitic cachexia complicates the case, Grasset advises:

℞ Mercury biniodide } of each.........15 milligrammes
Sodium iodide } ($^{9}/_{40}$ grain);
Sodium cacodylate.....50 milligrammes (¾ grain);
Distilled water................1 gramme (15 drops).

M. One hypodermic dose.

Or:

℞ Mercury biniodide....10 centigrammes (1½ grains);
Potassium iodide......20 centigrammes (3 grains);
Sodium cacodylate...50 centigrammes (7½ grains);
Distilled water, enough to make........10 grammes ($^{1}/_{3}$ ounce).

M. Dose, one gramme.

Erosions of Cervix.—According to *Journal de médecine interne*, for January 15th, Lutaud prescribes for simple erosion with slight inflammation and hypertrophy:

℞ Tincture of iodine.........20 grammes ($^{2}/_{3}$ ounce);
Morphine hydrochloride......1 gramme (15 grains).

M. Apply to cervix with a small brush, every two days, tamponing meanwhile with cotton.

When the cervix is much hypertrophied, ignipuncture is indicated; it is not painful, and should be followed by a cold injection and tamponing with iodoform gauze.

Small ulcers may be touched with a stick of silver nitrate. If large or chronic and coexisting with endometritis and leucorrhœa, use:

℞ Iodoform...............40 grammes (10 drachms);
Salicylic acid } of each............10 grammes
Bismuth subnitrate } ($^{1}/_{3}$ ounce);
Camphor ....5 grammes (75 grains).

M. Use with insufflator; tampon afterwards. Camphor masks the odor of the iodoform.

If the ulcerations are complicated with a flow suspected to be gonorrhœal in its nature, wash the surface with hot water and use:

℞ Fuchsine...................10 grammes ($^{1}/_{3}$ ounce);
Water } of each.........50 grammes ($1^{2}/_{3}$ ounces).
Alcohol }

M. Paint ulcers with a cotton cone soaked in foregoing.

Tampon subsequently with cotton or iodoform gauze, leaving in place 24 hours. Whenever discharge is fœtid, inject potassium permanganate 1 to 5000, regardless of the fact that this soils the linen.

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NEW YORK, SATURDAY, MARCH 5, 1904.

OUR SUBSCRIBERS' DISCUSSIONS.

The attention of our subscribers is drawn to the fact that we have opened Discussion No. XXX, viz.: What are your achievements in improvising surgical instruments and apparatus? Answers will be received until April 2nd.

THE OPTOMETRY BILL.

It is worthy of note that the best known opticians in the State are taking vigorous steps to oppose the passage of the unnecessary and even vicious optometry measure, now in the State legislature. The manufacturers of fine and precise optical apparatus do not feel that they need to encroach upon the domain of medicine either to gain dignity or to make money. Applied science can hardly go further than in the making of lenses and other optical appliances, and legitimate opticians may safely rest upon their remarkable accomplishments without endeavoring to achieve a factitious reputation by posing as ophthalmic experts upon no other basis than a few weeks' study of the elementary principles of optics. The eye is not a mere lens or a mere combination of lenses; it is an amazing physiological or pathological complex, the key to which is afforded to no self-sufficient or ignorant "refractionist," even if he was, what he never is, an acknowledged expert in his proper sphere. The depths of the optician's art, when explored, will lead the properly grounded optician further and further away from the singular idea that he has aught to do with ophthalmology. There now remain but a few days for medical men throughout the State to unite in declaring themselves opposed to this or any similar measure fully to impress the State legislature with the sentiment against the bill.

ENDOGENOUS INFECTION.

Perhaps the whole of our real knowledge in regard to endogenous or autoinfection may be summed up in the statements that it exists, that it causes derangements of various organs suddenly and unexpectedly, and that here and there in the world a few investigators are trying to solve its mysteries. The predisposing causes are evidently of great importance, because it is produced in only a small minority of the cases in which the actuating cause, i. e., a general infection, is present; but as very little is known of them, and as prophylaxis is necessarily dependent on a competent knowledge of both the actuating and predisposing causes, it is well that any contribution to our knowledge with regard to this subject should be noted. Attention was first called to the subject by the occurrence of metastatic ophthalmia in the course of certain diseases. Since that time clinical observations have accumulated until now it may perhaps be correctly stated that there is no general infection in which ocular complications have not taken place and few or no derangements of that organ which have not been ascribed to endogenous infection. That is, not only the very malignant metastatic ophthalmia and less severe inflammations of various tissues within the eye, such as iritis, chorioiditis, optic neuritis, and retrobulbar neuritis, but also functional troubles, such as paralysis of the accommodation, more or less loss of vision without organic changes, affections of the extrinsic muscles of the eyeball and of Tenon's capsule, have each and all been at some time reasonably attributed to this obscure cause. Part of the lesions named are very mild and always end in recovery; part are very severe and always cause loss of sight; while part are of intermediate severity and produce a greater or less functional loss. Hence it is noteworthy that the mildest as well as the most severe inflammations of the eye can be excited by each of all the general and local infections without reference to their severity. The source of the infection has not always been clearly defined, so much so that one observer has suggested that inflammation of the uvea and of the retina can be caused by the transmission of microbes from any part of the body, such as the intestinal canal or the urinary organs, even when the eye appears to be normal and the general health seems to be good. Even if this is going a little too far, it must not be forgotten that the cause of idiopathic iritis, as well as of a few other diseases, is still unknown. In the *Archives of Ophthalmology*, for September, a couple of Russian scientists have published an elaborate series of experiments on rabbits and cats which prove that it is possible for *Bacilli pyocyanei* and streptococci circulating in the blood to be induced to enter the eye if that organ is injured or irritated; that they enter the aqueous from the ciliary vessels, the vitreous from the retinal and chorioidal vessels; that when thus caused to enter they do not usually excite any clinical symptoms; that phagocytosis is always set up whenever they enter, whether clinical symptoms are caused or not; that a severe general infection may enable them to enter both the aqueous and vitreous of uninjured eyes, and that only in exceptional circumstances, not yet perfectly understood, would the bacteria thus introduced excite a severe inflammation. These results, together with the fact that other organs than the eye also suffer from endogenous infection, show that the results obtained by other investigators regarding the influence of various nerves, such as the sympathetic, pneumogastric, renal, sciatic, and auriculotemporal, over the lodgment of bacteria in the organs supplied by them, are evidently valuable. The conclusions drawn by these experimenters are that all local and general processes which weaken the tissues, such as previous sickness, all local lesions, such as traumatisms, or eye strain from uncorrected errors of refraction, all physiological and pathological conditions which produce hyperæmia of an organ, and everything which impairs the functions of the nerves of an organ, favor the occurrence of endogenous infection when there is a local focus somewhere in the body. This is not enough to form a basis for practical work. The best that can be said of these and the other investigations which have been made in the domain of endogenous infection is that they indicate the existence of a large, dark field in the realm of medicine into which they throw a few uncertainly illuminating rays that simply reveal the need of extensive exploration in search of knowledge of practical value.

CALABAR SWELLINGS.

In certain parts of Africa there prevail forms of localized œdema known as Calabar swellings. Among the regions in which the affection is observed is a small area surrounding a Baptist missionary station at Yakusu, near Stanley Falls, on the Upper Congo. It is as it occurs in that region that it has been studied by so capable an observer as Sir Patrick Manson (*Journal of Tropical Medicine*, November 16th). Every white man who has remained in the settlement more than a few months has been attacked, but thus far, curiously enough, only one woman.

In an illustrative case related, the patient, after a rather restless night, awoke early in the morning with dull and deep seated pain in the extensor aspect of the left forearm. Soon he noticed a swelling, somewhat indurated and œdematous, extending along the course of the muscles to the wrist. The pain subsided soon, but the swelling rather more slowly. There was distinct loss of power in the part affected, but with the subsidence of the swelling, in from twenty-four to thirty-six hours, the strength of the limb was restored. This first attack occurred in June, 1900, and since then the patient has had six or seven similar ones, all affecting the left forearm and with exactly the same symptoms. Three of the attacks have come on after malarial fever, and the patient thinks that a low state of health predisposes to them.

Sir Patrick suspects the agency of a filaria in producing this disease, especially *Filaria loa*, which is common among the natives, but he has not yet been able to detect the parasite in any of the victims that he has seen. He says: "The loa is a connective tissue parasite, and therefore her embryos must in the first instance be discharged into the connective tissue, where they may act as a mild irritant and produce a transient œdema. From the connective tissue they must find their way along the lymphatics into the general circulation, where their life may be a limited one as regards time. Should, then, an examination of the blood be made soon after the appearance of a Calabar swelling, the embryo might be discovered. This, I confess, is pure conjecture."

THE EFFECTS OF REMOVAL OF THE OVARIES.

Much continues to be heard from both professional and lay sources as to the baneful effects of this procedure. It has seemed to us that there should be no excuse for the present diversity of opinion among the profession, but we could excuse the laity for clinging to the notions instilled into them by uninformed or ill-informed physicians of twenty years ago. A careful study of recent authoritative gynæcological literature, however, shows abundant reason for the lack of professional unanimity, for authors themselves differ widely. It is in the hope of aiding ultimate unanimity that we venture to outline our opinions after careful observation of many cases and a study of the literature of the subject.

There seems little doubt that the ovary performs a dual function—first, the maturation and periodical discharge of ova for race procreation; second, the elaboration of an ill understood but plainly manifest internal secretion which in some manner, probably through the sympathetic nervous system, presides over the metabolism and nutrition of the uterus. The first of these functions is fairly open to study. Even a macroscopic examination of an ovary will often decide its ability or inability to perform the function of ovulation. We are, however, entirely dependent, thus far, upon clinical manifestations in judging of the integrity of the second function.

The ability or total inability of the ovary to produce ova apparently exerts but little influence upon the woman's general health, and it is often a problem which defies solution by even the most expert to say whether sterility is or is not due to absence of ovulation. On the other hand, the second function, of which we know so little, seems to manifest its absence or deficiency by signs as plain as the handwriting on the wall—for example, the amenorrhœa, the uterine atrophy, and the "hot flushes." That the amenorrhœa is not the result of uterine atrophy is plain, as it often precedes this latter by several months.

It seems to us that the second function, and that alone, is to be considered as to the effects to be expected in the *persona propria* of the woman whose ovaries are removed. Sterility will, of course, result, but the question of the right or wrong of the total extirpation of ovaries capable even in part of normal ovulation is aside from the present question. Throughout the entire body marvelous mechanisms of compensation exist, so that any lesion is worse just in proportion to the suddenness of its inception and the lack of opportunity for the establishment of salutary compensation. Moreover, practically all organs which are avowedly elaborators of internal secretions are provided with what might be termed autonomous powers of compensation. In other words, a very small proportion of their entirety will satisfactorily supply quite sufficient of the internal secretion to maintain the normal equilibrium. Witness the removal of all but a comparatively small proportion of the thyreoid gland without producing subsequent myxœdema; of all but a very small portion of the pancreas without diabetes or fat necrosis; and of all but a twentieth part of the normal volume of the suprarenals without grave circulatory disturbance or death. And thus we assume it to be with the ovary. As examples, might be cited the many cases of bilateral ovarian cystomata which have been removed in which scarcely a trace of ovarian tissue could be found and in which certainly no ovarian tissue remained to the woman after the operation, and in which the manifestations of the suddenly induced menopause were entirely lacking. This is evidently the result of the ovarian loss being so gradual as to permit nervous compensation.

The effects produced upon the nervous system and the metabolism and nutrition of the uterus by the total bilateral extirpation of the ovaries is the analogue of the diabetes following pancreatic destruction or removal. And had this analogy been complete, had total ovarian extirpation been as universally fatal as total pancreatic removal, gynæcologists would long ago have learned how safely to conserve the small portion of ovarian tissue necessary to the adequate continuance of the internal secretion. It should be learned now. More careful observation and more thoughtful study are going to dispel the mystical haze which still surrounds ovarian extirpation, and the sentimentalism now propagated by a large proportion of the profession and greedily grasped by the laity is going to give place to sound scientific knowledge which shall by force of inherent truth carry conviction even to the laity.

One further point which deserves the most emphatic statement, and which any one of experience can verify, is the fact that it is the diseased condition of the ovary for which it has been removed which temporarily abates or destroys sexual desire, interferes with general and nervous metabolism, and not the curative operation *per se*. In exceptional cases the pelvic viscera have been so profoundly diseased and the operation has been so long deferred that any restoration of function in any of the sexual organs seems hopeless, but careful investigation shows that it is overwhelmingly the rule for normal sexual desire and ability of gratification to return after the total removal of diseased ovaries and to be still normal four, six, and even ten or more years after the operation. Likewise, the excessive accumulation of fat is the exception, and not too common to be considered the proof of the rule. Persons long ill with ovarian disease have, of course, lost flesh, and the removal of the disease naturally leads to the resumption of the normal nutrition, with the consequent filling out of the fat spaces, exactly as occurs after typhoid fever or any other long illness. The patient merely finds her normal position as to both strength and flesh. The loss of femininity, the acquisition of mannishness, the growth of superfluous hair, and the deepening of the voice do not occur.

For the best ultimate results in gynæcology it must be learned to discriminate better between healthy and diseased ovarian tissue, and for the sake of the salutary preservation of the internal secretion it must become the rule never to remove any tissue capable of elaborating such a needed secretion if its retention can be accomplished without incurring greater risks than those incident to the loss of the secretion.

DANIEL H. CRAIG.

SANITATION AND THE PANAMA CANAL CONSTRUCTION.

The American Medical Association has done well to ask for the appointment of a representative of the medical profession on the Panama Canal Commission, and its recommendation of Colonel Gorgas for the appointment is so eminently fit that we trust there will be no hesitation in acceding to it.

It is in pursuance of action taken on February 11th that the association's committee on medical legislation, of which Dr. Charles A. L. Reed, of Cincinnati, is the chairman, has thus approached the general government. In view of the well known insanitary conditions prevailing on the isthmus, as shown by the large percentage of sickness and death among the laborers engaged in previous work on the canal, it is pointed out that the problems of sanitation in the further prosecution of the work must be met by an officer having the authority of a commissioner. Convincing reasons are given for the selection of Colonel Gorgas for appointment on the commission—reasons which do not need to be rehearsed to our readers.

THE ORDINANCE AGAINST PUBLIC SPITTING.

We are glad to learn that Commissioner Darlington is making a determined effort to enforce the ordinance. Nobody's doubts as to the necessity of suppressing the practice of spitting in public—and they are harbored by only those whose opinions are of no account—ought to be allowed to stand in the way of a rigorous enforcement of this most wholesome ordinance.

Obituary.

OGDEN C. LUDLOW, M. D.

The intelligence of the death of Dr. Ogden Curtis Ludlow, secretary of the New York County Medical Association, which reaches us as this issue of the *Journal* is being put to press, will be received with sincere sorrow by the profession in New York and in other parts of the State where he was well known and much esteemed. Dr. Ludlow contracted typhoid fever while in attendance upon the meeting of the State Medical Society, at Albany, last January, and, notwithstanding the best care and treatment, died at his home in this city last Wednesday morning. The deceased was a graduate of the University of the City of New York, a member of the American Medical Association, and of the Medical Society of the State of New York, and was attending physician at St. Joseph's Hospital. Dr. Ludlow acted as a medical reporter for many years, being a frequent contributor in this way to the columns of the *New York Medical Journal*. He displayed great efficiency as a reporter and exercised excellent judgment in presenting the salient features of papers and discussions in a readable and an interesting manner.

News Items.

Society Meetings for the Coming Week:

Monday, *March 7th.*—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association (annual meeting); Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society.

Tuesday, *March 8th.*—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society (private; Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J.; Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

Wednesday, *March 9th.*—New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox Medical and Surgical Society (private); Medical Society of the Borough of the Bronx, New York.

Thursday, *March 10th.*—Society of Medical Jurisprudence and State Medicine, New York; New York Academy of Medicine (Section in Pædiatrics); New York Academy of Medicine (Section in Otology); Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

Friday, *March 11th.*—Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

Saturday. *March 12th.*—Obstetrical Society of Boston (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending February 27, 1904:

	Week end'g Feb. 27.		Week end'g Feb. 20.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	1,239	18	975	25
Diphtheria and croup	368	57	447	44
Scarlet fever	452	32	448	25
Smallpox	..	..	3	1
Chickenpox	112	..	159	..
Tuberculosis	419	180	371	192
Typhoid fever	40	10	21	5
Cerebrospinal meningitis	..	..	..	3
Totals	2,630	297	2,424	295

Alumni of Kings County Hospital.—The eleventh annual dinner and election of officers of this organization took place on February 25th, at the Oxford Club, Brooklyn, some fifty members taking part. The election of officers resulted as follows: President, Dr. Victor A. Robertson; vice-president, Dr. Harmon Smith; secretary and treasurer, Dr. J. J. Wagner; historian, Dr. E. H. Mayne.

The Coney Island Hospital.—The Coney Island residents who are members of the Thirty-first Ward Board of Trade are trying hard to get the proper authorities to reopen the Emergency Hospital immediately. There are several thousand men employed at present at the three big amusement parks, and in the burned district. Nearly all of them are forced to climb up to the top of high structures, and taken altogether, the men say it is dangerous. There have been numerous accidents during the past winter, and in every case a long delay precedes the arrival of an ambulance. The Emergency Hospital closed its doors last October, and it is said will not again open until May.

The Socalled Optometry Bill.—That the opposition to this bill is not confined to the members of the medical profession, and that the representative opticians are willing to do all in their power to defeat this measure, is made clear by the following extract from a letter by E. B. Meyrowitz to the oculists of the State:

> "For my part I purpose to urge upon as many opticians as are willing to go up to Albany and put in a strong protest against it. The refractionists are working hard, and will in all probability make a strong showing, and in order that we may show that the influences opposing the measure are if anything more powerful, an equally good showing should be made. In the interest of the cause, I would, therefore, ask you immediately to communicate with those opticians whom you patronize and urge them to oppose this bill in both Senate and Assembly, and attend the hearing at Albany on Tuesday, March 9th, and finally strengthen and dignify the protest against the measure, by yourself appearing before the committee on that date. Should it be impossible for you to go up to Albany, I would suggest that you write me a letter to that effect, as I may be able to use it to advantage at the hearing. Hoping that you will give this your immediate attention, I remain,
>
> "Very truly yours,
> "E. B. Meyrowitz."

Academy of Medicine, 17 West Forty-third Street.—The Section on Surgery will meet on Friday evening, March 4th, at 8.15 o'clock. Dr. A. V. Moschowitz will present patients, showing Endbearing Stump of the Thigh, Endbearing Stump of the Knee, Endbearing Stump of the Leg. Papers: A Case of Arteriovenous Aneurysm with the Suggestion of the Application of the Matas Method of Operation, by Dr. Warren S. Bickham; Technical Errors in the Use of Rubber Gloves, by Dr. Howard Collins; Osteoplastic Amputation at the Ankle Joint, by Dr. A. V. Moschowitz. Dr. Martin W. Ware will present A New Hæmorrhoid Clamp. Charles S. Peck, M. D., secretary, 37 West Forty-eighth Street.

The Section on Otology will meet on Thursday evening, March 10th, at 8.15 o'clock. Paper: Report of a Fatal Case of Multiple Otitic Abscesses in the Temporal Lobe, with remarks, by Dr. C. H. Richard Jordan. Thomas J. Harris, M. D., secretary, 117 East Forty-ninth Street.

The Section on Pædiatrics will also meet on the evening of March 10th, when Dr. Sara Welt Kakels will present A Case of Rectovestibular Fistula in a seven months' old baby, and Dr. Alfred S. Taylor, A Case of Hydrocephalus Treated by Drainage. Paper: The Limitations of Chemistry in Infant Feeding, by Dr. Henry Dwight Chapin. Matthias Nicoll, Jr., M. D., secretary, 124 East Sixtieth Street.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g Feb. 20.		Week end'g Feb. 27.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	49	13	26	12
Diphtheria	70	11	54	11
Scarlet fever	106	13	77	7
Typhoid fever	142	12	148	23
Consumption	..	66	..	80
Cerebrospinal fever	..	..	..	..

The American Society of Tropical Medicine, organized in Philadelphia, has applied for a charter.

Dr. R. B. Okie, of Berwyn, was caught between a train and a freight platform at Berwyn station last week, but fortunately escaped serious injury.

Epidemic of Influenza in West Chester.—Several hundred cases of influenza have been reported in West Chester, Pa. The disease is not of a virulent type.

Dr. Jay Schamberg, of Philadelphia, delivered a lecture last week, on smallpox and vaccination, to the recently appointed assistant medical inspectors of that city.

Dr. Anita Newcomb McGee, president of the National Association of Spanish-American Nurses, will have charge of the first detachment of nurses to leave Philadelphia for the seat of war in the East.

The Pennsylvania State Board of Health is contemplating the supervision of the water supplies of all communities in Pennsylvania, having no doubt been inspired to such a course by the recent Butler epidemic.

J. C. Wilson Medical Society, of Philadelphia.—W. P. Northrup, M. D., addressed this society February 19th on the subject: Joseph O'Dwyer, M. D., The Method of His Work on Intubation: the Measure of His Success: the Interest of Both to Young Practitioners.

The Analysis of the Adulterated Beverages, recently carried out in Philadelphia, showed that the adulteration of the beer was done with salicylic acid. The "orangeade was not a product of oranges," but was flavored with citric acid, preserved with benzoic acid, and colored with a coal tar product.

Philadelphia Obstetrical Society meetings for 1904: Thursday, February 4th; Thursday, March 3rd; Thursday, April 7th; Thursday, May 5th; Thursday, June 2nd; July and August no meeting; Thursday, September 1st; Thursday, October 6th; Thursday, November 3rd; Thursday, December 1st; Thursday, January 5th, 1905.

The officers are: President, Richard C. Norris, M. D., 500 North Twentieth Street; vice-presidents, Wilmer Krusen, M. D., 127 North Twentieth Street; F. Hurst Maier, M. D., 2244 North Broad Street; secretary, Frank C. Hammond, M. D., 1419 Tioga Street; treasurer, J. W. West, M. D., 1125 Wallace Street; curator, Andrew J. Downes, M. D.; council, Stricker Coles, M. D., George M. Boyd, M. D., M. M. Franklin, M. D., John C. DaCosta, M. D.; publication committee, William E. Parke, M. D., Theodore A Erck, M. D., Stricker Coles, M. D., John G. Clark, M. D.; library committee, Levi J. Hammond, M. D., Wilmer Krusen, M. D.

Typhoid Fever again increased in Philadelphia during the week ending February 27th, 142 new cases having been reported, the largest number in one week for the past ten months. Only three wards were exempt during that week. The disease is increasing very rapidly. By Tuesday of this week almost as many cases were reported as for almost the whole of the preceding week. It is now believed that this outbreak is largely due to a recent break in the Flat Rock Dam of the Schuylkill River, permitting precipitated pollution to enter the drinking water.

Dedication of the University Medical Laboratories.—The new University Medical Laboratories, which are rapidly nearing completion, will be formally dedicated on June 10th. The cost of erection will be in the neighborhood of $500,000. It is intended to have at the dedication a gathering of medical experts from all parts of the world. Delegates from the universities of Heidelberg, Vienna, Oxford, and Cambridge are expected to attend. The committee in charge of arrangements, as announced by Provost C. C. Harrison, is composed of Dr. Francis W. Bennett, Dr. Thomas F. Branson, Dr. Radcliffe Cheston, Dr. Walter Crystie, Dr. Roland G. Curtin, Dr. G. E. de Schweinitz, Dr. Samuel G. Dixon, Dr. Norton Downs, Dr. Edward L. Duer, Dr. David M. Edsall, Dr. Charles H. Frazier, Dr. John H. Girvin, Dr. Samuel McC. Hamill, Dr. Richard H. Harte, Dr. B. Hawes, Dr. A. O. J. Kelly, Dr. Samuel W. Latta, Dr. Robert G. LeConte, Dr. Leo Loeb, Dr. Alexander Marcy, Jr., Dr. Edward Martin, Dr. Philip Marvel, Dr. John K. Mitchell, Dr. Charles K. Mills, Dr. John H. Musser, Dr. Henry Norris, Dr. Richard C. Norris, Dr. Francis R. Packard, Dr. R. A. F. Penrose, Dr. William Pepper, Dr. William C. Posey, Dr. Thomas C. Potter, Dr. Edwin T. Pritchett, Dr. David Riesman, Dr. Joseph Sailer, Dr. J. Alison Scott, Dr. William T. Sharpless, Dr. Wharton Sinkler, Dr. Allen J. Smith, Dr. Louis Starr, Dr. Alfred Stengel, Dr. Colin C. Stewart, Dr. George C. Stout, Dr. William J. Taylor, Dr. James Tyson, Dr. J. William White, Dr. A. H. Whitcomb, Dr. De Forest Willard, Dr. Horatio C. Wood, Dr. Horatio C. Wood, Jr., Dr. George Woodward, Dr. George E. Nitzschke (secretary).

GENERAL

Jail Physician of Cincinnati, O.—The Covington General Council, on February 23rd, named Dr. J. A. Davis as jail physician; he succeeds Dr. Guy Eckman.

The Massachusetts General Hospital benefits to the extent of $10,000 by the will of Mr. George B. Upton, of Milton, Mass.

The Antitoxine Stations of the Chicago Health Department are to be reopened, arrangements having been completed to obtain a sufficient supply of antitoxine from New York and other Eastern cities.

The Waltham, Mass., Hospital becomes ultimately sole beneficiary by the will of the late Mr. Nathaniel A. Moody, of that town, his property, estimated at some $20,000, being held at present in trust for his widow.

Statement of Mortality in Chicago for the Week Ending February 27, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on estimated midyear populations of 1,950,000 for 1904 and of 1,885,000 for 1903:

	Feb. 27, 1904.	Feb. 20, 1904.	Feb. 28, 1903.
Total deaths, all causes	674	651	713
Important causes of death—			
Acute intestinal diseases	28	29	33
Apoplexy	17	18	16
Bright's disease	37	41	35
Bronchitis	37	35	30
Consumption	69	70	72
Cancer	32	21	20
Convulsions	11	20	20
Diphtheria	5	12	13
Influenza	9	5	16
Heart disease	60	50	62
Nervous diseases	21	20	27
Pneumonia	151	170	162
Typhoid fever	10	8	16
Scarlet fever	9	9	10
Suicide	10	7	6
Violence—other than suicide	36	20	26

Smallpox in Chicago.—Two migrant cases of smallpox were discovered and sent to the Isolation Hospital during the week. These were traveling salesmen, recently from Pennsylvania; aged 33 and 49 years, respectively. The younger had never been vaccinated; the elder was vaccinated 40 years ago, never revaccinated. Since the first of the year there have been 16 cases and at the close of the week 3 remain in hospital; at the same date last year there were 59 in hospital.

Christ's Hospital, Jersey City.—Dr. H. J. Bogardus, of Jersey City, N. J., has been appointed orthopædic surgeon to Christ's Hospital in that city.

State Board of Charities.—Through the courtesy of Mr. Homer Folks, secretary, we are in receipt of the thirty-seventh annual report of the State Board of Charities furnished on February 1st to the legislature of 1904.

Erratum.—Mr. Richard P. Venall writes to us, with regard to his letter published in our issue for February 20th, that "in the seventh paragraph the name 'Josephus' should read 'Gibbons.' The work referred to was Gibbons's History of the Decline and Fall of the Roman Empire."

Scientific Investigation of a Hitherto Neglected Disease.—The Denver Clinical Society, composed of the women practitioners of the city, at a dinner held on Friday 15th, discussed "Valentinitis." The discussion was divided as follows: Ætiology, Dr. Mary E. Bates; Symptoms, Dr. Una Roberts; Pathology and Culture Media, Dr. Hawes; Optical Illusions, Dr. Jean Gale; Diagnosis, Dr. Rose Kidd-Beere; Attitude on Life Risks, Dr. Lillian Pollock.

The Twenty-fifth Anniversary of the Invention of the Cystoscope.—A committee, consisting of Professor Carl Posner, Dr. Hans R. Wossidlo, and Dr. H. Goldschmidt, of Berlin, are arranging for a celebration, on March 19th, of the twenty-fifth anniversary of the first demonstration of the cystoscope by Professor Max Nitze. Dr. Ferdinand C. Valentine is cooperating with the committee on behalf of the profession in America and proposes to send a congratulatory cable to Professor Nitze on March 19th, signed by members of the profession in the United States who are interested in this work and who wish to express their appreciation of his labors.

The California Woman's Hospital and training school for nurses, of San Francisco, receives a bequest of $6,000 under the will of the late Emily F. Pope, widow of A. J. Pope.

St. Francis's Hospital, Hartford, Conn., has received a gift of $5,000 from Bishop Tierney, one third of the amount he received lately from the priests of his diocese on the celebration of the tenth anniversary of his consecration as bishop.

Rowan County, Ky., Board of Health.—Information comes from Morehead to the effect that Dr. J. Wilson, Dr. J. F. Woodward, and Dr. Charles E. Bishop have received commissions from the State board of health appointing them members of the Rowan county board.

Nurses at the Government Hospital for the Insane and other attendants have had a bill introduced into Congress by Senator Gallinger in their interest. The bill calls for an increase of some ten dollars a month in the pay of each individual and appropriates $35,000 for the purpose.

Opposition to Vaccination.—It is reported from Jamestown, N. Y., that when the board of education issued an order requiring the vaccination of all teachers and pupils, on February 24th, more than half the pupils and many of the teachers left the schools, refusing to submit to the operation.

Pennsylvania State Hospital for Epileptics.—Architects have been commissioned to prepare plans and specifications for a modern building to be erected in the eastern part of Pennsylvania to be known as the State Hospital for Epileptics. The contemplated improvement will cost about $400,000. Fifty thousand dollars was appropriated by the last Legislature for the purpose. The site will contain between 300 and 700 acres.

Tennessee Quacks.—An effort is being made to drive out the thousand odd unlicensed practitioners who are doing business in Tennessee. They will be compelled to submit to the regular State examination to be held on April 6th next and only those who are successful will be permitted to continue practice. The medical board, who prepare the examinations, consist of: Dr. Robert Pillow, of Columbia, president; Dr. W. H. Holbert, of Nashville, secretary; Dr. T. J. Happel, of Trenton, treasurer; Dr. E. E. Hunter, of Elizabethton; Dr. W. L. McCreary, of Knoxville, and Dr. F. S. Raymond, of Memphis.

A Physician as a Member of the Panama Canal Commission.—The committee on medical legislation of the American Medical Association, through their chairman, Dr. Charles A. L. Reed, have addressed a letter to the President urging that a member of the medical profession be appointed as a member of the Panama Canal Commission; that Colonel William G. Gorgas, U. S. A., be appointed to such position; and that a personal hearing on this question be given the committee before the commissioners are finally selected. The letter points out that to the lack of such an officer was the failure of the French to complete the canal largely due, the mortality among those engaged on the work being truly frightful. Colonel Gorgas is recommended as possessing technical skill, courage, experience, and executive ability.

Albany Medical College.—The first year students of this institution have elected class officers as follows: President, J. Bendell; vice-president, J. Jennings; secretary, T. Kidd; treasurer, E. Conning; sergeant-at-arms, V. Twedlow.

The Watertown, N. Y., Epidemic of Typhoid Fever has been definitely traced to the water of the Black River into which drain numerous villages. In the territory above the city there were a number of cases of typhoid some months ago.

Virginia Hospital.—Plans and specifications have been submitted for the erection of two additional wards to this institution at Charlottesville, provided for by a State appropriation of $31,000. Each ward will contain forty-three beds, six nurses' rooms, a lecture room for pupil nurses, and an operating room for private patients.

Medical Appointments in Ohio National Guard.—Dr. Frank W. Hendley has been appointed regimental surgeon of the First Regiment of the Ohio National Guard, with the rank of Major, to succeed Dr. H. O. Rusk, resigned. Dr. C. W. Cullen becomes assistant surgeon, with the rank of lieutenant, succeeding Dr. J. W. Macready, resigned.

The Nathan Littauer Hospital, of Gloversville, N. Y.—The additions to this institution will soon be under way, the site having been selected, and the necessary $25,000 having been promised by Mr. Littauer. The plans call for an addition directly back of the centre of the main building, 40 by 75 feet in dimensions, with a subbasement and basement.

Practice of Medicine in the District of Columbia.—A bill has been introduced in the United States Senate providing that all physicians who have practised medicine in any State of the Union for ten years or more shall be allowed to practise in the District without further examination on payment of a fee and the exhibition of a certificate of good character.

The Medical Profession in Great Britain.—It is estimated that there are more than 6,000 physicians in London alone, and the total for Great Britain and Ireland comes to 37,730. The doctors increase at the rate of about four hundred per annum. Great as this increase is, it was more than double that amount some years ago before the course of study was increased from four years to five.

Large Bequest in London, Eng.—It is said that a bequest of $1,250,000 has been left for the benefit of needy and deserving patients of several London hospitals, by the late Edward Dresden. The money is to be held in trust to create a fund, the income of which is to be applied for the benefit of deserving patients on their being discharged. Special bequests are for the maintenance in perpetuity of beds. The legacies provide that no portion of the money is to be expended for building, furnishing, or decorating the hospitals.

St. Peter's Hospital, Albany, N. Y.—The handsome addition to this institution was thrown open for public inspection on February 9th, after Bishop Burke had solemnly dedicated the building. Great interest and approval were manifested by the visitors.

Health Boards Appointed at Dublin, Ga.—The county commissioners have created a board of health, with Dr. L. J. Thomas as health officer. The following are the members of the board: Commissioner: A. R. Arnau; Ordinary: W. A. Wood, Dr. L. J. Thomas, Dr. J. E. New, and Dr. J. G. Carter. The city council has reorganized the board of health with the following members: Mayor E. R. Orr, Dr. R. H. Stanley, Dr. W. R. Brigham, Dr. J. L. Weddington, and W. F. Higgins and M. C. Moffett. Dr. Stanley remains health officer of the city.

Exhibition at the Tenth International Congress of Ophthalmology, Lucerne, September 18, 1904.—The committee of the Tenth International Congress of Ophthalmology has charged Professor A. Siegrist, of Bern, Director of the Ophthalmological Clinic of the University, with the preparations for the appropriate exhibition of all scientific apparatus, instruments, and the various appliances for instruction, which will be sent to the Congress. He therefore requests all colleagues, as well as all scientific, optical, and mechanical firms who wish to exhibit any objects at the International Ophthalmological Congress in Lucerne to apply to him before July 1, 1904, giving an exact statement of the object to be exhibited, of the space demanded, and of the kind and strength of electric force which may be required. Objects which are announced later can only be accepted as far as the space at disposal will still allow.

Medical Society of the Missouri Valley.—The next meeting of this association will be held at Lincoln, Neb., March 24 and 25, 1904. Those desirous of presenting papers should send their titles to the secretary not later than February 20th. Papers will appear upon the programme in the order in which they are received. A symposium on pneumonia, followed by personal experiences, will be a feature of the programme. It is earnestly hoped that all members of the society will make it a point to be present at this meeting, as a new constitution and by-laws will be submitted, and a proposition for reorganization will be presented to make this society an auxiliary to the American Medical Association. Organization is the order of the day, and every member of the medical profession should make it a duty to add his unit of strength in building up a powerful and influential National society. The profession is cordially invited. Non-members are requested to send applications to the secretary at once. Annual dues $1.00. Officers: President, A. D. Wilkinson, M. D., of Lincoln, Neb.; first vice-president, R. R. Williams, M. D., of Manning, Iowa; second vice-president, J. H. Cleaver, M. D., of Council Bluffs, Iowa; treasurer, Donald Macrae, M. D., of Council Bluffs, Iowa. Charles Wood Fassett, M. D., secretary, St. Joseph, Mo.

Pith of Current Literature.

SEMAINE MEDICALE.

January 20, 1904.

Therapeutic Indications in Infective Cholelithiasis,
By A. Chauffard.

Cholelithiasis.—Chauffard states that operation or expectant treatment must depend upon the old adage " ars tota in indicationibus." Chill and fever are classical indications of infection; one may occur apparently without the other, but if either is severe and accompanied by severe pain, infection is sure. A leucocytosis of 18,000 to 34,000 will leave no doubt. Bimanual palpation of the subhepatic region will elicit pain. Slight jaundice is common as well as a slight splenomegaly. Kidneys, heart, lungs, and pleuræ should always be examined carefully. When all symptoms are marked, there should be no delay in surgical intervention, especially when there is biliary retention, and immediate or threatening suppuration. When there may be nephritis, endocarditis, or pulmonary congestion, operation is always to be considered. Old, stout, and flaccid women, perhaps, should not be operated upon, although many remarkable results have been obtained upon such unpromising subjects. The writer admits that he has seen remarkable results from purely medical treatment, the principal measure, apparently, having been the administration of alkaline waters. Operative interference, however, remains as the last resort, although the ingestion of large quantities of water should be tried together with salicylic acid, carbolic acid, and naphthol, and, externally, tepid baths. Chauffard feels that non-surgical methods have not had a sufficient trial.

LYON MEDICAL.

January 17, 1904.

1. Myomectomy of the Gravid Uterus, By Condamin.
2. The Knee in Coxalgia (*Concluded*), By Latarjet and Duroux.

1. **Myomectomy.**—Condamin says the question between this operation and hysterectomy depends upon age, the volume and site of the tumors, the stage of pregnancy, and the desire of the patient to be a mother. Four operations are detailed.

2. **Gonalgia** *(Concluded)*.—Latarjet and Duroux take up the inflammatory form which requires constitutional treatment as well as blistering, etc. Where immobilization is required, mechanical extension demands application to the lower end of the femur only and the pulleys must be in the same horizontal plane. If the limb is plaster bandaged, the leg should be slightly flexed on the thigh, no play allowed the joint, and massage of the joint and muscles practised.

PRESSE MEDICALE.

January 27, 1904.

1. Cardioptosis, By Ernest Barié.
2. Serumtherapy in Plague, By Victor Godinho.

1. **Cardioptosis.**—Barié speaks of a normal cardioptosis depending on the elasticity of the great vessels and disappearing as atheroma sets in; of the temporary displacement caused by food, exercise, emotion, or venereal excess; of that brought about by pleurisy, or wounds; and finally of the genuine or protopathic cardioptosis. This is commoner in men and in the weak and emaciated. It may be incomplete or complete, the latter involving the liver and a lung. The symptoms include inability to lie on the left side, vertigo, palpitation, bradycardia, dyspnœa, pain on pressure over seventh rib near the axillary line and, more rarely, pain on percussion of the left lobe of the liver when the patient is standing erect. Prognosis is good. The treatment is along hygienic lines, although a support has been devised to be worn over the apex.

2. **Serumtherapy in Plague.**—Godinho's experiments with a microbicide serum obtained at San Paulo have convinced him that a specific has been found; it will cure even if administered as late as the fifth day.

January 30, 1904.

1. Ether and Chloroform Anæsthesia, By A. Mayor.
2. Blondlot's Rays, By Georges Vitoux.
3. Chats on Electricity; Direct Current; Induced Current, By M. Lermoyez.

1. **Anæsthesia.**—Mayor says the mydriasis noted in ether anæsthesia, as opposed to the meiosis from chloroform, is due to asphyxia and the inhalation of saliva, which is also the cause of pneumonia, and is mistaken for a bronchial outpouring. A very small dose, three two thousandths of a grain, of atropine sulphate, added to one third of a grain of morphine hypodermically, the writer has found corrective. Chloroform should be administered at first greatly diluted; it kills by its action on the heart, and direct massage of the latter seems to be the only possible remedy.

ZENTRALBLATT FUER GYNÆKOLOGIE.

January 23, 1904.

1. Eighty-seven New Cases of Accidental Leaving Behind in the Abdominal Cavity of Instruments, and Sponges and Pads Used During Operation, By F. von Neugebauer.
2. Surgical Treatment of Retrodeviation of the Uterus by Means of a New Method of Suspension of the Uterus by Anchorage of the Round Ligaments, By N. Bardescu.

1. **Accidental Sequels of Laparotomy.**—Neugebauer has collected eighty-seven new cases from all over the world of instances in which artery clamps, scissors, sponges, and pads have been accidentally left in the abdominal cavity during an operation. To avoid these disagreeable sequels, Neugebauer advises constant and unceasing watchfulness, a special attendant, to watch and count sponges and pads, the use of the Trendelenburg posture, to secure as wide a view of the operative field as possible, and as perfect anæsthesia as can be obtained, in order that the operator's attention shall not be distracted from the wound. The use of as few instruments as possible should also be practised by every operator.

2. **New Operation for Retrodeviation of the Uterus.**—Bardescu describes this procedure, which consists in bringing the round ligaments out upon the transversalis fascia and uniting them after having anchored each one separately. [This operation appears to be but a modification of Gilliam's, the change consisting in the union of the two round ligaments after the separate anchorage of each, though it is described as a new operation.]

RIFORMA MEDICA.

January 20, 1904.

1. Contribution to the Study of Phonomyoclonus, By F. Sicuriani.
2. Bacteriological Researches on Carnival Masks, By E. Tirelli, and Ferrari Lelli.
3. Tumors of the Brain (*To be continued*), By Armando Testi.
4. On the Toxic Effects of Some Organic Extracts. Anatomical and Histological Observations (*Concluded*), By Giovanni Ghedini.

1. **Phonomyoclonus.**—This is a phenomenon which was described for the first time by Bernabei, in 1903, and consists in the occurrence of a distinct vibratory sound perceptible on auscultation over a muscle which is in the state of myoclonus. Sicuriani describes a number of cases of various nervous affections in which this phenomenon was observed. A normal muscle, as is well known, gives rise to vibratory sound upon contraction, although this sound cannot be heard with the ear alone, and can be only measured with delicate instruments. In the state of rest, however, a normal muscle does not give rise to any sound whatever, and the conclusion is that the sound produced during contraction is the result of the fibrillary movement of the constituents of the muscle. The phenomenon of phonomyoclonus, however, is a much more intense sound, heard on applying the ear to any part of the body, especially to the thorax or the limbs, and, what is very important, it is heard when the muscles are apparently in the state of rest, as well as when they are undergoing clonic contractions. It is probable, therefore, that this sound is due to the increased fibrillar activity of the muscles, which goes on in a degree not perceptible to the eye when the muscles are seemingly at rest, in certain nervous affections. The author thinks that this phenomenon is not so rare as may be imagined, and that it may be destined to play an important rôle in neurodiagnosis in the future, although he admits that as yet the observations as regards to its clinical relations are scanty.

2. **Bacteria in Masks.**—Tirelli and Lelli demonstrate a probable source of disease transmission in the lending of masks by costumers. Virulent tubercle bacilli, to say nothing of pneumococci, streptococci, etc., were found in eight out of forty-two masks examined.

4. **Animal Extracts.**—Ghedini concludes an exhaustive experimental study of the organic animal extracts as follows: Animals treated for a considerable length of time with organic extracts lose in weight and strength, even if they are also fed and kept according to the most approved methods. The lymph nodes adjacent to the place of injection of the extracts show distinct inflammatory lesions. Inflammatory and degenerative changes are found as the result of this treatment in the thyreoid gland, the liver, the kidneys, and the spleen, of these animals, but the presence of these lesions does not depend on the quality of the organic extract, as they occur after the use of any of the extracts. The intensity of the lesions is greater, however, after the use of suprarenal extract, while the use of the thyreoid extract is followed by the mildest lesions. The use of suprarenal extract is also followed by special circulatory changes—anæmia of the skin, cerebral and subcutaneous œdema, and a greater degree of hæmolysis, due to the increased venous stasis. No appreciable changes were found in the organs or tissues analogous to those injected. The author does not intend to oppose the use of organic extracts as a method of treatment, and recognizes the many clinical applications of this method in which it has proved of value; yet the lesions found in the twenty-five animals experimented on under the same conditions as obtain in the treatment of human beings, suggests that possibly a great deal of harm may be done in man by the use of the same extracts in the form of a prolonged course of injections.

January 27, 1904.

1. Cephalopine and Cerebral Organotherapy, By Marco Sciallero.
2. A Case of Acute Poisoning with Acetic Acid, By Vincenzo Giordano.
3. Tumors of the Brain (*Concluded*), By Armando Testi.

1. **A New Cerebral Extract.**—Sciallero of Maragliano's clinic describes a new organic extract of the brain which he styles "cephalopine," and which he asserts to be perfectly non-irritant and non-toxic, containing the constituents of the brain substance, without any admixture of chemicals or preservatives. It is an oily extract of the brain substance, occurs as a clear fluid, and may be kept for a long time without giving rise to any precipitate. It is neutral in reaction and does not contain any albumin. The author has devised a method of determining the value of a organic cerebral extract by measuring the amount of it necessary to neutralize a fatal dose of strychnine per weight unit of an animal. In this manner he has been able to study the comparative activity of the various preparations of cerebral extract. The new preparation can be used for all purposes for which cerebral extract has been used. It is said to be especially useful in neurasthenia, in hysteria, in neuroses, tics, chorea, etc.; also to diminish the frequency and severity of the paroxysms in epilepsy.

2. **Acute Poisoning with Acetic Acid.**—Giordano reports the case of a girl aged nineteen years who swallowed a considerable amount of strong acetic acid with suicidal intent. She immediately was seized with violent vomiting and with pain and intense burning in the mouth and pharynx. At the hospital, she developed a series of pronounced symptoms which are interesting in view of the rarity of cases of acetic acid poisoning.

There was a frequent and feeble pulse and a slightly elevated temperature, a persistent and violent cough, with a very abundant purulent expectoration, a veritable bronchorrhœa, and occasionally efforts at vomiting which were not successful. The urine was black and smoky, like that of carbolic acid poisoning, and contained one per cent. of albumin. The red blood discs in the fresh blood were very pale, with little tendency to form rouleaux, and with frequent mulberry-shaped distortion. The serum, when separated, showed a distinct reddish tint, showing that the hæmoglobin had been dissolved from the cells. The heart sounds and the apex beat were very weak. The symptoms gradually disappeared, and the patient was discharged cured. The treatment consisted of stimulation in the shape of injections of caffeine, a milk diet, and the use of pieces of ice and of a tannin gargle for the throat. The author calls special attention to the changes in the blood, the purulent bronchitis, and the degenerative changes in the myocardium resulting in heart weakness with danger of cardiac failure.

ROUSSKY VRATCH.

December 6, 1903.

1. Taste and the Needs of the Organism, By L. B. Popelsky.
2. Cicatricial Stenoses of the Small Intestines, By B. N. Kholtzoff.
3. A New Apparatus for Measuring Kyphoses, By N. F. Goun.
4. Credé's Ointment in the Treatment of Puerperal Sepsis and Puerperal Scarlatina, By G. L. Davidoff.
5. A New Method of Detecting Feigned Deafness, By A. A. Gofseyeff.
6. The Third Tonsil in the Infant, By I. M. Potapoff.
7. On the Influence of Radium Upon the Agglutinating Powers of the Serum of Typhoid Fever Patients, By P. P. Iagn.

1. **Taste and the Body's Needs.**—Popelsky discusses a recent article of Borissoff in which the author announced the principle that "there is a close connection between the taste of an animal and his bodily needs." This idea is closely akin to the law of digestion laid down by Pavloff; namely, that a specific stimulus to the stomach and other digestive organs is given by each element in the various foods, each of these stimuli giving rise to the secretion of that particular ferment which acts upon the foodstuff in question. In other words, the composition of the gastric and intestinal juices varies with the quality of the food ingested, as there is a connection between the quality of the food and the varieties of ferments found in the digestive fluids. This theory, according to the present author, has no foundation in fact, as has been proved by numerous recent experiments, including those of Popelski himself. While taste may, to a certain extent, assist the body in selecting its food, it is not correct to say that taste controls what is good or bad for the body. The experiments of Borissoff were too few in number to be regarded as conclusive. His chief reliance was placed on experiments upon hens and cocks which were given lime with their grain, the hens taking the lime readily, while the cocks refused it as a rule.

3. **Apparatus for Measuring Kyphoses.**—Goun describes an instrument constructed on the principle of the pantograph, used for enlarging drawings, for measuring the size and shape of a kyphosis. It consists of a vertical rod to which are attached horizontals connected with a leather collar and belt, respectively. These straps are passed around the patient's body and the arrangement of levers which slides on the vertical rod is attached to the apparatus. One end of this set of levers slides on the spine, while the other, bearing a writing-point, traces the outline of the kyphosis upon a screen attached to the vertical rod by two brackets.

5. **A New Method of Detecting Feigned Deafness.** — Gofseyeff tells the military candidate feigning deafness that his sense of touch is to be tested first. Various tests are made with pins, etc., on various parts of the body. Then a clothes brush is rubbed across his back a few times, and he is asked whether he feels it. The sound of the brush is unconsciously associated with the sensation by those who can hear. If the examiner now passes his hand lightly over the candidate's back and at the same time passes the brush over his own clothes, the candidate who can hear will think that the brush is still being rubbed over his clothes, and cannot distinguish the hand from the brush. On the other hand, a deaf man will always give the correct answer to the question as to whether the hand or the brush is used. The same correctness will be observed in healthy persons when the ears are closed tightly. This is because when the hearing is eliminated, the difference in the sensation between the hand and the brush passed over the clothes is noticed much more acutely than when the sound of brushing accompanies the procedure and confuses the observer.

7. **Action of Radium on Typhoid Serum.**—Iagn experimented with the serum of typhoid fever patients, exposing samples to the influence of radium bromide. He found that: (1) The agglutinating power of the serum of typhoid fever patients upon cultures of the typhoid bacillus was destroyed completely upon exposure to radium for three days. On exposing this serum to radium for a shorter period, the agglutinating power was diminished. (2) This effect was entirely the result of the activity of the beta rays.

December 13, 1903.

1. On the Toxic Symptoms in the Development and Absorption of Dropsies of Cardiac Origin, By A. I. Kostkevitch.
2. Some Causes of the Development of Endogenous Infections of the Eye After Operations on the Eyeball, By F. A. Korolkoff.
3. Cæsarean Section for General Contraction and Deformity of the Pelvis, By M. M. Mironoff.
4. Spinal Anæsthesia in Gynæcology, By A. I. Katz.
5. A Case of Cavernous Tumor of the Orbit, By A. E. Versine.
6. The Successes of Modern Cystoscopy, By N. A. Mikhailoff.

2. **Endogenous Infection in the Eye After Operations.**—Korolkoff says that the presence of

germs in the blood may be followed by a localized infection in the eye as the result of some influence which causes the centralization of the infection in the eyeball. Operations, although perfectly aseptic, may be followed by the development of an eye infection as the result of the irritation produced by the operative act. The author experimented on animals with a view of determining how an operation on the eye acts in such instances. He concludes as follows: The probability of a localization of an endogenous infection in the eye after an operation only exists during the first few hours after the procedure in question. When the wound has begun to heal, this probability is not greater in eyes that have been operated upon than in other eyes under the same conditions of infection, provided the healing takes place normally. The irritation of an operation is very short in duration, and cannot be compared in intensity with the irritative processes induced experimentally to demonstrate the action of irritants in localizing an infection in the eye. The wound itself is not a place of least resistance for the lodgment of the endogenous microbes, and the favorite camping ground of these germs in such cases is in the chorioid or the iris. Endogenous infection of the eye may occur as the result of microbic emboli or from the passage of germs into the anterior chamber of the eye when the blood vessels are severed during an operation. This infection is especially apt to take place when the two layers of the lens capsule are torn and when the lens lies free in the anterior chamber. The occurrence of hæmorrhages into and beneath the retina in iridectomy plays an important rôle in the production of these infections.

3. **Cæsarean Section for Deformed Pelvis.**—Mironoff reports a case in which the pelvis was not only generally contracted, but markedly deformed on one side, as the result of rhachitis and of an injury which produced a fracture of the femur and of one side of the pelvis. Cæsarean section was performed at about term, and the patient made a good recovery. The author insists on the recognition of the transverse incision in the uterus, at its fundus, for the purpose of removing the child, as this incision gives far less marked hæmorrhage, and severs fewer large vessels. In a statistic of 102 cases, Fritsch found only three per cent. of considerable hæmorrhages with this incision, while with the ordinary vertical, the large bleedings occurred in about fifty per cent.

4. **Spinal Anæsthesia in Gynæcology.**—Katz calls attention to the indications of spinal anæsthesia in operations on the female genital tract. He says that when an operation is immediately required and the patient cannot bear chloroform or ether, spinal cocainization is indicated. The method should not be applied indiscriminately, as it is still in the experimental stage.

BRITISH MEDICAL JOURNAL.

February 13, 1904.

1. An Address on Puerperal Sepsis, By P. HORROCKS.
2. Fifty Consecutive Intraabdominal Operations on the Ovaries, Falloppian Tubes, and Broad Ligaments, By J. SWAIN.
3. Remarks on Five Successful Hysterectomies for Fibroid Disease in One Family, By J. M. LAWRIE.
4. Ovarohysterectomy (Porro). Notes on Twelve Cases Performed During the Last Seven Years in the Ishwari Memorial Hospital, Benares, By T. H. SWEENY.
5. A Note on Porro's Operation and a Suggested Modification, By W. H. HORROCKS.
6. A Case of Vesicular Mole of Unusual Size, By T. S. JONES.
7. Some Deceptive Abdominal Conditions and the Question of Operation, By A. H. TUBBY.

1. **Puerperal Sepsis.** — Horrocks classifies puerperal sepsis as follows: 1. Puerperal fever or septicæmia of the worst, and generally fatal, type. 2. Puerperal sapræmia—usually accompanied by an offensive discharge, recovery taking place. 3. Pelvic cellulitis—usually not fatal. 4. Pelvic peritonitis—usually recovered from. 5. Puerperal pyæmia; often a late stage of the preceding. Fatality depends on virulence of sepsis. 6. Phlegmasia dolens. 7. Milk fever. Inflammatory and transient, probably septic. Not fatal. Of the above the only important forms are puerperal sapræmia and puerperal septicæmia; the latter is often, the former seldom, fatal. When they occur together the case is still worse. Puerperal fever is contagious, but not infectious. Among its causes are erysipelas, purulent discharges, the handling of dead bodies, gonorrhœa, etc. Scarlatina and measles never cause puerperal sepsis. The streptococcus is the most usual originator of the septic process.

One of the very best methods of treating a woman in labor, in order to prevent puerperal fever, is to let her alone. The parturient canal is without pathogenic germs, so long as no digital or instrumental examinations are made. The high mortality from puerperal sepsis is due to too much interference with labor—too much douching, examination, etc. The author is opposed to routine douching, and states that examinations should be avoided as far as possible; when they must be made, the same precautions should be observed as when the finger is put into the peritoneal cavity during an abdominal section. After describing methods of disinfecting the hands and of making the examination, the author goes on to state that he never uses a binder—a clean diaper may be applied to the vulva. Any vulvitis, vaginitis or urethritis should be cured before labor begins; if present during labor, then copious syringing should be practised before the child is born. Syringing after labor is dangerous; swabbing out the vagina through a Sims speculum is more efficient and less dangerous. In cases of sapræmia an anæsthetic should be given and the interior of the uterus digitally explored, to remove any retained secundines. If the milk and lochia are scanty or suppressed, and the temperature is high, the case is probably one of septicæmia. Here, curetting is indicated. In some cases antistreptococcus serum seems to act wonderfully well. Sixty c. c. should be given in the first twenty-four hours, and twenty c. c. twice a day thereafter. Any wounds of the parturient canal should be repaired, and the surface dusted with some antiseptic powder. A doctor who gets a case of puerperal septicæmia should not continue his midwifery practice, unless he gives up the septic case.

2. **Intraabdominal Operations.**—Swain reports a series of fifty consecutive intraabdominal operations, with only two deaths. They comprised 22 ovarian adenocystomata, 2 parovarian cysts, 2 extrauterine pregnancies, 2 dermoid tumors, 4 malignant growths of the ovary, 7 broad ligament tumors, 10 tuboovarian inflammations or abscesses, and 1 fibroma of the ovary.

3. **Family Fibroids.**—Lawrie reports the instance of a family of nine sisters in which there were five examples of fibroid disease of the uterus, and five of cataract. Two only were entirely healthy. In three instances cataract and fibroids coexisted. In all five cases of fibroids hysterectomy was performed with excellent results. The author thinks that the frequent occurrence of cataract and fibroids in this family was not due to any association other than an accidental one. He reviews the literature of the subject, and agrees with Klobs that four women in every ten have fibroids; so that five in nine is not remarkable.

7. **Abdominal Operation.**—Tubby discusses the question of operation in deceptive abdominal conditions, dividing his remarks as follows: 1. The pulse and temperature may rise together, or the pulse rate may be entirely disproportionate. But the rectal temperature is almost always above normal. A subnormal temperature with a rising pulse is a condition of great gravity. The temperature should be taken every three hours. 2. The leucocyte count should not be divorced from the clinical condition of the patient. Leucocytosis is present whenever there is suppuration; it is absent in typhoid fever and in uncomplicated gastric ulcer. If the multiforminuclear cells are increased to over 70 per cent., then pus formation is almost certainly present. 3. Rigidity is a symptom which should always be carefully watched, particularly if it is persistent. Even in the absence of other abdominal symptoms it may justify operation. 4. Vomiting is a very variable sign—it often ceases after the administration of sedatives and is frequently absent in the latent period. If it recurs in spite of treatment, it is a very important sign. 5. The fatal significance of abdominal distention in the later stages of abdominal disease is well known. Persistent distention, unrelieved by turpentine enemata, is of grave moment. 6. Diarrhœa, occurring in the course of acute appendicitis, is significant of septic absorption from a non-evacuated abscess. 7. The persistence of local tenderness at the upper part of the rectus muscle may determine the site of incision in a suspected case of perforation in gastric ulcer. 8. Persistent hæmatemesis and melæna may determine the question of operation in cases of gastric or duodenal ulcer. 9. Increasing abdominal dulness is an important sign in cases of injury. 10. Effusion of blood beneath the abdominal walls is not a symptom to be relied on. 11. In every case where an illness begins with abdominal symptoms, which later subside, although the patient remains ill, a careful examination of the chest should be made. A pleuritic rub or pleural effusion may show that mischief is still going on and that an exploratory operation is called for.

LANCET.

February 13, 1904.

1. A Case of Adams-Stokes Disease (Persistent Slow Pulse with Epileptiform Fits), By P. KIDD.
2. The Significance of the Zoological Distribution, the Nature of the Mitoses, and the Transmissibility of Cancer, By E. F. BASHFORD, and J. A. MURRAY.
3. The Ætiology and Treatment of Suppuration of the Labyrinth, By W. MILLIGAN.
4. Filaria Perstans, and the Suggestion that it Belongs to the *Genus Tylenchus* (Bastian), By G. C. LOW.
5. Iodide Rash in a Syphilitic Paitent Resembling a Variolous Eruption, By E. J. HYNES.
6. Cancer in Australia: a Comparison with Other Countries, Together with a Specific Treatment for the Prevention and Arrest of the Disease, By G. C. ADAMS.
7. An Unusual Case of Cerebral Abscess; Bilateral Temporosphenoidal Abscess; Operations; Recovery, By A. L. WHITEHEAD.
8. On Latent, or Intermittent Nasal Obstruction, By M. COLLIER.

1. **Adams-Stokes Disease.**—Kidd reports the case of a woman, aged fifty-eight years, suffering from fainting fits and persistent slow pulse—the symptom-complex known as Adams-Stokes disease. The fits come on without warning, have always the same character, and last from a few minutes to half an hour. She may have five or six a day, or they may be absent for weeks. Sharp non-radiating pain is occasionally felt around the heart. The pulse varies from 25 to 28 per minute, with moderate tension and soft vessels. The fits are markedly epileptiform in character, the patient crying out, pupils dilated, and the whole body rigid and extended. On thyreoid extract and nitroglycerin the patient has improved steadily, having had no attack for over two months. The condition was first described by Adams in 1827, and since then by Stokes, Huchard, Osler, and others. Huchard thinks it the cardiobulbar form of arteriosclerosis; Osler explains the syncope as the result of transient disturbances of the cerebral circulation. In the author's case there is no sign of general arterial degeneration, though coronary lesion cannot be excluded.

2. **Cancer.**—Bashford and Murray bring forward evidence to show that the wide zoological distribution, the character of the mitoses, and the transmissibility of cancer are nearly related phenomena with a common basis. Malignant new growths have been found in all the domesticated animals and in many other vertebrates, their clinical, pathological, anatomical, and microscopical characters being identical with those found in man. The great diversity of the conditions of life of all these animals shows that the essential factors of cancer must be sought in the potentialities residing in the body cells. Malignant growths are recognized according to the ease of examination and the time they are kept under observation. A complicated sequence of cell changes has been found to be characteristic of carcinoma and

sarcoma alike, being the same as that which initiates the origin of the sexual generation in plants from the asexual, and is terminal in the history of the sexual cells in animals. The transmission of cancer from man to animals, or from one animal to another of different species, has never been successfully performed. It has been done between animals of the same species, however. A mass of tumor, sixteen pounds in weight, has thus actually arisen from the original one, and that without participation of the cells of the various hosts and without manifest change in structure. Malignant new growths are always local in origin, and of themselves produce no evident constitutional disturbances whatever. This explains the absence of any specific symptomatology.

4. **Filaria Perstans.**—Low discusses the recent suggestion of Bastian, that the nematode, *Filaria perstans,* may belong to some species of tylenchus, and that infection may take place through the eating or other uses of bananas, and concludes that the two worms have nothing in common. The tylenchus has a well marked alimentary system, while the filaria has none. The only physical features of the land to which the distribution of filaria corresponds, are high temperatures and dense tropical forests, and the banana has nothing whatever to do with the occurrence or spread of this parasite. The filaria embryos do not develop in the blood of man, and some insect must act as an intermediate host. From the peculiar distribution it is probably some forest mosquito or fly.

5. **Iodide Rash.**—Hynes reports a case of tertiary syphilis in which the administration of three ten-grain doses of potassium iodide caused a variolous rash, the diagnosis resting between syphilis with smallpox, and syphilis with iodide rash. Smallpox was present in the town, but it was excluded in this case for the following reasons: (1) The absence of prodromal symptoms of smallpox; (2) the mature, reticular nature of the eruption, even when present less than twenty-four hours; and (3) the hæmorrhagic nature of the eruption unaccompanied, at first, by grave illness of the patient. The diagnosis was confirmed by the appearance of bullæ, and by the reappearance of the rash when iodide was readministered.

6. **Cancer.**—(A continued article).

8. **Intermittent Nasal Obstruction.**—Collier states that, apart from the various forms of nasal obstruction, due to growths, deflections, etc., there is yet another form more common and more harmful than all the others put together—this he calls latent or intermittent nasal obstruction. It may come on in a nose which is physiologically perfectly patent; obstruction and perfect performance of function may alternate, the nose being absolutely occluded for twelve hours out of the twenty-four. The obstruction occurs as a rule during the night, when the body is in the horizontal position. The arteries become smaller and the veins larger during sleep, and the head and nose contain more blood. The distended turbinal bodies approach the sæptum on either side and press upon it so as to form a groove or exact cast of themselves, and so completely obliterate the lumen of the nasal chambers. This groove is to be sought for; it is a pathognomonic sign of intermittent nasal obstruction, and indeed the only objective sign. When present, together with subjective symptoms of laryngeal, throat, nose, or ear trouble, a diagnosis can be positively made.

MEDICAL RECORD.

February 27, 1904.

1. The Surgical Treatment of Facial Palsy with the Technics of Faciohypoglossal Nerve Anastomosis, By ALFRED S. TAYLOR, and L. PIERCE CLARK.
2. Questions of Uranalysis Bearing Upon the Diagnosis of Contracted Kidney, By BEVERLEY ROBINSON.
3. The Hot Full Bath, By FRIEDRICH GROSSE.
4. The Ordinary X and Ultraviolet Rays in the Treatment of Tuberculosis, By J. B. RANSOM.
5. Antistreptococcus Serum in Pernicious Anæmia, By JAMES J. WALSH.
6. Hæmatoma of the Sternocleidomastoid Muscle: A Study of Three Cases, By THERON WENDELL KILMER.

1. **Faciohypoglossal Nerve Anastomosis.**—Taylor and Clark assert that faciohypoglossal nerve anastomosis is indicated in all cases of palsy of the facial nerve from a lesion of the nucleus within the brain or of the nerve trunk on the base of the brain and in lesions of the nerve following operation for mastoid disease, as recovery from these affections is rare. It is justifiable in Bell's palsy when there is complete reaction of degeneration of the facial nerve after several months of faithful treatment, and there is no indication of volitional return of nerve power. They report three cases in which a lateral anastomosis was performed, the hypoglossal nerve not being divided. At the present time the question which awaits solution is as to whether the hypoglossal nerve should be completely divided and then sutured end to end with the facial, or whether the facial should be implanted laterally. At present there are not a sufficient number of cases on which to base conclusions, and it is as yet an open question whether the patient is better off with a more complete return of power in the facial supply with permanent paralysis of the hypoglossal, or whether, on the whole, he is better off with a somewhat less complete control of the facial and only a temporary disturbance of the hypoglossal.

2. **Contracted Kidney.**—Robinson reivews the difficulties in reaching a correct diagnosis in cases presenting symptoms suggestive of contracted kidneys. In such cases urinary analysis and the total daily output of urine cannot be relied upon exclusively in reaching an opinion. Even when all other clinical signs and symptoms have been carefully considered the practitioner may be left in doubt.

3. **The Hot Full Bath.**—Grosse believes that much confusion has arisen through a too loose use of terms. A warm bath, which is sedative in action, is a bath the temperature of which ranges between 98° and 100° Fahr. A hot bath, which

is stimulating in action, is a bath with a temperature ranging between 107° and 113° Fahr. The author is an enthusiastic believer in the therapeutic virtues of the full hot bath, which, he says, gives good results in a large class of diseases. As a rule, it should not be employed when pus is present or when there is a lesion of the central nervous system. The author details the technics of the treatment and discusses the physiology of the hot bath. The action of the hot bath is based upon: (1) a powerful stimulation of the entire nerve system for a brief period; (2) an intense revulsion of circulation leading to hyperæmia of the skin and anæmia of inner organs; (3) a perspiration more abundant than after any other form of bath; (4) a raising of metabolism, and (5) the creation of leucocytosis.

4. **X Rays and Ultraviolet Rays.**—Ransom has treated forty cases of tuberculosis by the x ray and ultraviolet ray. He reports eight cases cured, seventy-five improved, and two where treatment was discontinued. The forty cases are reported very briefly. Among these cases are examples of pulmonary, glandular, and bone tuberculosis. The author considers his results very satisfactory.

5. **Pernicious Anæmia.**—Walsh reviews Hunter's theory of the causation of pernicious anæmia, that the disease is due to infection arising in the teeth. Hunter alleged good results in two cases from the use of antistreptococcus serum and disinfection of the mouth. Walsh has tried Hunter's method in one case of pernicious anæmia. There was no improvement and the patient died. The author's patient had a remarkably fine set of teeth and there was no sign of the least infection.

MEDICAL NEWS.

February 27, 1904.

1. The Economic Value of Medical Science, By W. Gilman Thompson.
2. Ætiology of Rhachitis, By P. William Nathan.
3. Splint for Treatment of Fracture of the Inferior Maxilla, By Clinton B. Knapp.
4. Thrush, By H. Illoway.
5. The Internal Treatment of Diseases of the Bladder, By Louis Stern.
6. Chloroform in Labor, By Edwin Ricketts.

2. **Rhachitis.**—Nathan holds that the defective calcification in rhachitis is an expression of general or constitutional vice. Hence the ætiology of the disease must be sought for in a condition or series of conditions inimical to the calcification of growing bone. This being granted, the subject may be studied from two viewpoints: (1) We may assume that a constitutional anomaly is the cause of the inhibition of the calcium deposition, and attempt to explain the nature and cause of rhachitis by investigating the cause and nature of this anomaly; (2) or we may assume that a deficiency in the amount of the calcium within the organism is instrumental in producing not alone the faulty calcification but also the constitutional anomaly. The second of these two assumptions has met with most favor. Since it has been shown, however, that the amount of calcium salts in even the poorest kinds of infant foods is more than sufficient for the needs of the growing child it has been assumed that the fault of metabolism was due to defective assimilation or absorption of the calcium. It has been asserted that the lack of absorption is directly due to the want of HCl secretion in the stomach. The author, not believing that these theories are founded on fact, admits, however, that rhachitis can be produced in animals by withholding calcium bearing foods. Clinically rhachitis is not due to this cause. The author reports two cases of rhachitic children which go far to prove his position. In addition he tabulates 477 cases of rhachitis, treated by various methods, which indicate that medicinal treatment is of little or no utility. The author's personal beliefs on the ætiology of rhachitis are thus set forth: "We must, for these reasons, conclude that a deficiency in the quantity or a faulty absorption of the calcium ingested is not the cause of rhachitis. Such being the case, and our only clue to the ætiology of rhachitis being the faulty deposition of the lime salts in the bones, the assumption that an anomaly of the metabolism, which besides causing other abnormalities, is inimical to the normal calcification of the bones, must form the starting point of our search for the cause of rhachitis."

4. **Thrush.**—Illoway reviews some of the dangers that may follow neglect in the treatment of thrush. Nothing gives such brilliant results as a twenty-five per cent. solution of the tincture of iodine in glycerin.

6. **Chloroform in Labor.**—Ricketts is a strong advocate of the routine employment of chloroform in labor cases. He does not believe that the drug does harm and is certain that it often does good. It is important to administer chloroform properly and the author gives at length his method. "Pulmonary tuberculosis, with any of the heart lesions, diabetes, or albuminuria is not a contraindication to the use of chloroform."

AMERICAN MEDICINE.

February 27, 1904.

1. Diagnosis and Treatment of Thoracic Aneurysm, By Stephen Smith Burt.
2. Retroperitoneal Infection. A Result of Appendicitis, By I. S. Stone.
3. "Urethral Labia," or "Urethral Hymen" Pathologic Structures, Due to Repeated Traction, By Robert L. Dickinson.
4. A New Technics in Operations for Appendicitis, By W. Easterly Ashton.
5. The Pathology of Leucæmia, By Edward T. Williams.
6. The Treatment of Cervical Adenitis, By F. S. Bulkeley.
7. A Report on Hæmorrhagic Septicæmia in Animals in the Philippine Islands, By Paul G. Woolley, and J. W. Jobling.

1. **Thoracic Aneurysm.**—Burt reviews at length the symptoms of thoracic aneurysm. Three illustrative cases are reported. The treatment recommended is the one usually in vogue. The author believes that potassium iodide is capable, in

such cases, of reducing the pain and discomfort and it may possibly cause the sac to shrink and the blood to clot with greater firmness. The favorable influence of the drug on fibrin formation and deposition is problematic.

2. **Appendicitis.**—Stone devotes his paper to the consideration of the frequency, symptomatology, and treatment of retroperitoneal infection resulting from appendicitis. Six cases are reported in full. Whenever retroperitoneal infection is suspected careful search must be made for its location and drainage by a posterior route must be provided. The author concludes: (1) We should consider every "delayed case" with anxiety, lest there should be retroperitoneal infection. (2) We should be careful to give a guarded prognosis in every case of appendicitis ushered in by, or complicated by, chills or any symptoms of sepsis. (3) If operating in such cases, we should consider retroperitoneal infection as already started and act accordingly. The discovery and proper treatment of such infection is quite as important as the usual intraperitoneal technics.

4. **Appendicitis.**—Ashton describes a new way of treating the stump in appendectomy, the special feature of the method consisting in obtaining, by means of control ligatures, a steady and unsoiled field of operation. The stump of the appendix is inverted and secured by a pursestring ligature which is then buried by Cushing's sutures.

6. **Cervical Adenitis.**—Bulkeley thinks that not sufficient attention has been paid to the subject of wholly avoiding or at least minimizing the scar in the surgical treatment of cervical adenitis. Only certain cases lend themselves to the treatment proposed by the author. He gives the following summary of his views: (1) Many cases of cervical adenitis will be seen in which the avoidance or minimizing of scar is of great importance, and in which radical operative measures are not demanded. In such cases aspiration, or the use of a seton, or both, while not infallible, may prove successful. (2) While such measures might be successful in cases of tuberculous glands, they are attended with possible dangers and when the tuberculous glands do not subside under medical treatment, excision, done with extreme care and reasonably early, is the method of choice. (3) Neither aspiration nor the use of a seton should be resorted to in cases involving the deep cervical glands.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

February 27, 1904.

1. The Classification and Diagnostic Guides of Intestinal Obstruction, By H. TUHOLSKY.
2. Report on Two Children Operated on by Lorenz, By HARRY M. SHERMAN.
3. Table Wines. Is Their Use to be Encouraged? By HENRY O. MARCY.
4. The Decapsulation of the Kidney, with Reference to the Concomitant Intraocular Complications in Chronic Forms of Nephritis, By GEORGE F. SUKER.
5. Some Remarks Concerning the Ocular and Oral Requirements of Railroad Employees, By FRANK ALLPORT.
6. The Blue Light Treatment in Diseases of the Skin, By LOUIS E. SCHMIDT.
7. Strangulated Femoral Hernia Containing Appendix. Report of Two Cases, By J. HENRY BARBAT.

2. **The Lorenz Operation.**—Sherman reports on the result of two of the operations for the bloodless reposition of the congenitally dislocated hip performed by Lorenz. Illustrations from radiographs are given for each case. The author asserts that not only were the operations of no benefit to the patients, but that in one of the cases the condition of the hip was worse after operation.

4. **Decapsulation of the Kidneys.**—Suker reports fifteen cases of renal decapsulation and attempts to determine whether the operation can be considered as either a palliative or curative measure for the various intraocular complications accompanying diffuse, interstitial, or chronic parenchymatous nephritis. The following conclusions are announced: (1) The operation of decapsulation so far is not warranted in all instances, nor does it offer any hope in cases of bilateral chronic nephritis with retinal complications. (2) Though there is an improvement in the eye ground directly after operation, still it is decidedly temporary, judging from the present statistics. (3) The operation may be of service in unilateral nephritis with fundus lesions in the initiatory stages. These cases, however, are rare, and, if found soon, become bilateral. Therefore, these latter cases would come under the first remark. (4) The mortality rate for albuminuric retinitis in chronic nephritis has not been lessened by the operation. (5) The statistics show that retinal complications are a decided index as to the severity of the kidney involvement. (6) In nearly all the cases of nephritis chronica the cardiac involvement is present and is an important prognostic factor. With the retinal lesion, it is usually present. (7) Unilateral retinal lesions are the exception in chronic nephritis. (8) As yet the medical treatment of all these cases yields as good results, if not a trifle better, than the kidney decapsulation. (9) Statistics of the mortality rate of albuminuric retinitis based on urethral catheterization are indicated. This is to determine whether those that outlive the two-year period might be cases of unilateral nephritis or are late in becoming bilateral.

6. **The Blue Light Treatment.**—Schmidt reports nine cases treated both by the x ray and the blue light methods. In the majority of these cases the results obtained by the latter method were by far the most encouraging. Cures were obtained by the blue light when the x ray had failed utterly to give relief. The author believes that this new method of treatment possesses great advantages over other methods in the treatment of a large number of skin affections.

7. **Femoral Hernia.**—Barbat reports in detail two cases of femoral hernia in which the sac contained only the strangulated appendix. Both cases occurred in women over sixty-five years of age, who were operated upon, making a good recovery.

Proceedings of Societies.

THE WESTERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

Thirteenth Annual Meeting, held at Denver, Col., December 28 and 29, 1903.

(*Continued from page 332.*)

Two Cases of Acute Hæmatemesis in Which Gastroenterostomy Was Performed.—Dr. Leonard Freeman, of Denver, Col., detailed a case in which he performed a posterior gastroenterostomy. A Murphy button was employed, having the end within the stomach smaller than that within the bowel. The stomach contained bloody fluid. Recovery was uninterrupted. The button was passed on the twenty-third day. There was no further hæmorrhage. About seven months later this patient suddenly died from hæmatemesis, the hæmorrhages having begun about three months after the operation, small quantities of blood being frequently vomited subsequently.

In Case 2 a posterior gastroenterostomy was done, and a Murphy button used, the ends of which were of unequal size. The stomach showed no external sign of ulcer, and no internal exploration was attempted. The organ was markedly dilated with gas and fluid. Reaction from the operation was so satisfactory that hopes of recovery were entertained; but in spite of there being no recurrence of the hæmorrhage, death occurred at the end of fifty hours, due apparently to the great loss of blood. Autopsy revealed an ulcer as large as a watermelon seed on the posterior wall, at the junction of the lower with the upper two thirds of the stomach. A small atheromatous artery, plugged by a thrombus, could be seen in the floor of the ulecr.

Dr. H. D. Niles believed that in cases of acute hæmatemesis any operative procedure would be attended with a high mortality. It was difficult to diagnosticate gastric ulcer from the external appearance of the stomach with sufficient accuracy to deal directly with it, at least to determine upon an operation. Gastroenterostomy was not, in his opinion, an infallible remedy for the treatment of gastric hæmorrhage. Unless one knew positively the source of the hæmorrhage before opening the stomach, he thought it was better to perform the operation before hæmorrhage was dangerous.

Dr. J. E. Summers mentioned a case of hæmatemesis the result of acute alcoholism. He opened the abdomen widely and found that hæmorrhage came from eight or ten small erosions. He used hot water as hot as could be borne without irrigation, and controlled the hæmorrhage for a time, but it subsequently recurred and the patient died.

Dr. James E. Moore said the treatment of gastric hæmorrhage by gastroenterostomy at the present time was more or less empirical. The profession had not arrived at that point when positive statements could be made as to its value. The past history of cases showed that a considerable proportion of them not only recovered from immediate hæmorrhage, but permanently without operation.

Dr. O. Beverly Campbell, of St. Joseph, Mo., said, in regard to the closure of the opening made in gastroenterostomy by the suture method, he had performed sixteen experiments on dogs. In twelve he used the Kocher method of suturing, and in all of them he did an anterior gastroenterostomy. The opening in each instance was quite large. The dogs were again operated on at periods of from three to six months, and at the end of three months in six cases the opening was reduced to such an extent that the index finger could not be passed through it without a little force. In six of the cases there was almost total obliteration of the opening at the end of six months. In four there was a slight opening through which only a small probe could be passed. A vicious circle was established in forty per cent. of the cases. These experiments showed a tendency, where there was no obstruction at the pylorus, for the opening to close, whether it was made with the Murphy button or by the suture method. A large opening was obtained if the Connell suture or the Kocher suture was used, and in every case the speaker made a rather large opening. Six dogs, in which a vicious circle was established, began to fail in flesh at the end of about two months, and at the end of the third month they were opened and a vicious circle found. In every instance there was more or less narrowing of the opening.

Dr. Charles H. Mayo reported a case in which gastroenterostomy failed to arrest hæmorrhage. During the past year he had operated upon a man, forty years of age, who gave a history extending over a few years of occasional stomach disturbance and vomiting of blood. By the laboratory test a little blood was found in the stomach. At the operation, in examining the stomach, he did not find any external evidence of the ulceration. The stomach was dilated. He did a gastroenterostomy, but there was more hæmorrhage after it than before, and the man died at the end of four days. He was very anæmic at the time of operation. At the autopsy the intestines were found filled with blood. The gastroenterostomy was a posterior one, after the Mikulicz method, and the line of suturing was perfect. There were no large ulcers in the stomach, but there were two or three points of erosion.

Dr. D. S. Fairchild said a distinction should be made between chronic gastric ulcers which bled and fissure ulcers which sometimes gave rise to profuse hæmorrhage. The chronic ulcers could be treated by gastroenterostomy, but in fissure ulcers, where the hæmorrhage was considerable, gastroenterostomy was not sufficient, and it became necessary to dissect the ulcer out. A case was narrated in point.

Dr. Connell had had recently three cases of acute hæmatemesis under observation. One bled very profusely. Operation was advised, but refused, and it was thought the patient would die; but she recovered. There were no signs of ulcer. The second case was that of a child, four years of age, who had acute hæmatemesis. Operation was refused, and the child died. The third case he operated on, bearing in mind Moynihan's advice, that it was unnecessary to search for the bleeding point, as gastroenterostomy would cause a cessation of the hæmorrhage. He operated, but the patient died. From the post mortem examination in this case he felt confident that had he made a careful examination of the stomach with the object of finding the bleeding point, he would have found it, and had the ulcer been dissected out, in all probability the patient would have recovered.

Dr. FREEMAN, in closing the discussion, said there were two kinds of cases upon which the surgeon had to operate: First, those in which the surgeon could take time and search for the ulcers; and if he found them, he could deal with them accordingly. The other class was illustrated by the two examples cited in the paper.

The Correction of Retrodisplacements of the Uterus.—Dr. CHARLES W. OVIATT, of Oshkosh, Wis., in a paper on this subject referred to the many operations devised for correcting uterine retrodisplacements. He stated that whatever the operation selected, it should permit of thorough intrapelvic work and should be one that restored the normal axis of the uterus, at the same time leaving it free to adapt itself to its normal range of motion. The operation he described as meeting these requirements was that devised by Dr. George H. Noble, of Atlanta, Ga. A description of the Noble operation could be found in medical literature.

During the last year the author had done this operation twenty-three times. In all cases but three there were intrapelvic or other complications. In ten the appendix vermiformis was removed, either because of a history of definite recurring attacks of appendicitis, or because from its appearance it was deemed wise to remove it. In one case a broad ligament cyst was removed, and in several diseased appendages were taken out. These were mentioned to show that there was no difficulty in doing any necessary intrapelvic work through the transverse incision and separation of the recti muscles. In all the cases local office treatment by means of tampons or pessaries had been resorted to without relief. Most of the cases were in women who were obliged to work and who preferred to undergo an operation rather than submit to further treatment. The three uncomplicated cases were marked neurasthenics with dysmenorrhœa. While the displacement remained corrected, there had as yet been no improvement in the dysmenorrhœa, and little or none in their general condition. There were no deaths or serious complications following these operations.

The advantages of the operation were: Through the one incision any pelvic complication might be treated. The operation utilized the strongest part of the round ligament instead of its distal end. The normal mobility of the uterus was not disturbed, and it was left in the pelvis where it belonged. It caused no bladder irritation and no dragging because the traction on the ligaments was in the direction of their natural course.

The writer then quoted Dr. Noble, as follows: "The anchorage is superior in permanency to all peritoneal attachments; the uterine portion of the ligament will not stretch away. There are no sutures in the fundus to irritate the uterus. The fixation is extraperitoneal. No irritated point invites subsequent adhesions to abdominal viscera. The peritoneal investment of the ligament is not drawn into the abdominal walls, producing funnel-shaped depressions and inviting hernia. It does not interfere with the physiological development of the uterus during pregnancy."

The Surgical Treatment of Goître.—Dr. CHARLES H. MAYO, of Rochester, Minn., in discussing this subject, said that the respect American surgeons held as to the ability of Continental surgeons was to a considerable extent due to their statistics on goître. To the peculiar formation of the capsule of the thyreoid were due many of the symptoms occasioned by enlargement. Closely investigating the gland, it divided posteriorly and also enclosed the trachea, œsophagus, and part of the pharynx. Accessory glands were not uncommon in the lines of inversion from the pharynx in the original formation of the organ. It was probable that the lymphatic system acted as its duct, and a study of the function of the lymphatics would explain some factors in the ætiology of diseases of this body.

In young people at the age of sexual activity, parenchymatous goîtres were quite common, but, as a rule, readily responded to treatment.

Reverdin, in an analysis of 3,408 cases, placed the mortality from total extirpation at 19 per cent.; partial, 3½ per cent.; from intraglandular enucleation, at 0.78 per cent.; from resection at 6.6 per cent. The writer's experience was derived from 108 operations upon thyreoid tumors. Of these, there were 34 exophthalmic cases, with 6 deaths; 2 malignant, with 1 death; one large lingual thyreoid. Two cases presented separated tumors of the pyramidal lobe. There were 71 cases of cystic, colloid, adenomatous and mixed types of goître operated on, with one death, from pneumonia, on the eighth day.

The recurrent laryngeal was permanently injured once, and its function temporarily impaired several times.

The Kocher collar incision was ordinarily used and a free exposure of the gland made. The overlying muscles were either tracted aside or severed, according to the case. If the capsule was thickened over the local tumor, or whole gland, the Socin method of enucleation was commonly employed. If the gland retained its general form, the largest lobe, usually the right, was extirpated, frequently leaving its posterior capsule to protect the laryngeal nerve. Ether anæsthesia was usually employed. Occasionally cocaine was used locally, if there was much tracheal disturbance or severe exophthalmic symptoms. Chloroform was rarely given. All anæsthetics were preceded by a hypodermic of morphine. Some thyreoidism usually followed for one to three days.

Intestinal Perforation in Typhoid Fever.—Dr. BYRON B. DAVIS, of Omaha, Neb., referred to the statistics of Taylor, Osler, Finney, Keen, and others, and said that even under the past dilatory tactics the results had been very gratifying. The first twenty-four operations for typhoid fever reported showed six recoveries, or twenty-five per cent. When it was considered that a very large number of the operations thus far reported for typhoid fever had not been done until general peritonitis had been fully established, fifty per cent. of recoveries did not seem unreasonable, if operation was done before the advent of the peritonitis. The latest statistics from Johns Hopkins gave forty-one per cent. of recoveries. There they were striving to operate for the perforation merely, but several cases were recorded with a fully developed peritonitis. Another point affecting the mortality was that a small percentage of the cases dying after operation did not die from the operation *per se* or the perforation, but as a result of the general typhoid infection. The author thought such cases should not be charged against the operation.

In the author's own limited experience, the most marked symptoms had been abdominal pain, localized tenderness, thoracic breathing, and muscular rigidity. Sudden decline of temperature and the phenomena of shock had not been so constant.

Three cases were reported that had come under the writer's observation. The first was operated on the third day after the perforation symptoms arose, death following twenty-four hours later. The second was operated on twenty-six hours after perforation, and was followed by death in eighteen hours. The third was seen only seven hours after the perforation occurred, and there was so much doubt about the diagnosis that no operation was done. As the later history and the autopsy showed, this was the most favorable case among the three for operation, and had served to stimulate the author to a study of the subject and to revise his opinions as to the treatment of this condition.

In the last case he could not help thinking that frequent estimation of the hæmoglobin and a red blood cell count might have been of material value in distinguishing between intestinal perforation and hæmorrhage.

Dr. E. J. A. Rogers, of Denver, Col., said the main point to be reiterated was that if one waited for a positive diagnosis it would be too late probably to operate. In very few cases of typhoid fever could a diagnosis of perforation be made. He mentioned an interesting case in which an operation was performed for perforation of the intestine eight hours after it occurred; but the patient survived only thirty-six hours thereafter, and died from what was thought to be general peritonitis.

Dr. Van Buren Knott, of Sioux City, said his experience coincided with that of the essayist. He had encountered two cases of perforation of the intestine due to typhoid fever, with two deaths. One of them came to operation eighteen hours after perforation, the other thirty.

Dr. James E. Moore, of Minneapolis, Minn., mentioned a case in which operation was performed on the third day after perforation had taken place. General peritonitis was present, yet the patient recovered.

Dr. A. I. Bouffleur, of Chicago, referred to the differential diagnosis between perforation and hæmorrhage. One case operated on by him was one in which there was a difference of opinion as to whether or not hæmorrhage or perforation was present. This case occurred several years ago, before the value of a blood count was emphasized. Operation was performed, and the patient recovered. The case emphasized the point that even in cases of doubt as to whether there was perforation or marked hæmorrhage, operation was not necessarily fraught with serious danger.

Dr. C. H. Wallace, of St. Joseph, Mo., recalled a case that came under his observation some eight years ago, the patient having suffered from a second attack of typhoid fever. Perforation had undoubtedly occurred as the man exclaimed that he "felt something escape into the abdominal cavity." Operation was advised, but refused. An ice bag was applied, peristalsis controlled, and although patient had pronounced shock, with localized tenderness, etc., he recovered. The speaker thought this was a case in which the localized perforation was taken care of by nature.

Dr. H. A. Sifton, of Milwaukee, Wis., had encountered two cases of perforation of the intestines from typhoid fever, when engaged in general practice. He believed that a careful examination would usually reveal perforation, and it did not seem to him that in the majority of cases it was difficult to diagnosticate perforation. In both of these cases the perforation was confirmed by a post mortem examination.

The first case of perforation he operated on was in 1895, the diagnosis having been made within a few hours after perforation, and the operation resulted in a recovery. The second one occurred two or three years ago, the perforation in this case having been in the appendix. This case resulted fatally.

Dr. Charles E. Bowers, of Wichita, Kan., emphasized the element of time in cases of perforation from typhoid fever. In searching for rupture of the intestine from typhoid fever ulcer, he said, it seldom, if ever, occurred higher than three feet above the ileocæcal valve. One could shorten time very much by satisfying himself that it did not occur above that point.

Dr. H. G. Wetherill, of Denver, Col., said there had been a number of cases reported of perforation in which operation was done three days later, and other cases in which operation was not performed, with recovery. He called attention to the fact that perforation might give rise by erosion of the mucous membrane to the transmigration of bacteria through the serous coat without actual perforation, and that this condition of things was perhaps more frequent than physicians had heretofore believed. Some cases of perforation were probably of this class.

Speaking of diet and the matter of treatment of typhoid fever, he thought the time was not far distant when the general practitioner would reach the conclusion which surgeons had pointed out, that a milk diet was not the best for typhoid fever patients.

Dr. Davis, in closing the discussion, said the plea of his paper was toward early recognition of perforation and early operation.

(*To be concluded.*)

Book Notices.

An Atlas of Human Anatomy, for Students and Physicians. By Carl Toldt, M. D., Professor of Anatomy in the University of Vienna, assisted by Alois Dalla Rosa, M. D. Translated from the Third German Edition and adapted to English and American and International Terminology, by M. Eden Paul, M. D., Brux., M. R. C. S., L. R. C. P. First and Second Sections. New York: Rebman Company, 1903. Pp. 257.

The first two sections of this important work deal with osteology and arthrology. Though it is essentially an atlas, so that the text, judged by its bulk, is insignificant, it must not be supposed that the translator's labor has been trivial, for it requires broad knowledge to give the customary British and American equivalents of the usual technical anatomical terms employed by the Germans. The parts in which this atlas is published are exceedingly convenient to handle, and the publishers have had the good sense not to make the work burdensomely expensive by having recourse to the niceties of the engraver's art; though plain, the figures are sufficiently graphic.

The Pathogenic Microbes. By M. le Dr. P. Jousset, Physician to the Hôpital Saint-Jacques; Former Interne Lauréat (Gold Medal) of the Hospitals of Paris, etc. Authorized Translation of Horace P. Holmes, M. D. Philadelphia: Boericke & Tafel, 1903. Pp. 192. (Price, Cloth, $1.00).

This small book contains nothing original. The author simply goes over the questions of infection, immunity, and serum therapy in a general way, referring to the works of French investigators in particular. Here and there he gives his own views, not always in a convincing manner, however. He dwells particularly upon the fact that many pathogenic organisms may remain latent for a long time in the body, and then, in the presence of a morbid disposition and an external cause, become virulent and active. In this way the old idea of the morbid spontaneity of disease is explained.

The author objects seriously to the word "antitoxine," and states that the curative sera are not chemical antidotes or attenuated toxines, but that they are new products of the living cell, having an analogous and not a contrary action to that of the toxine. To those who have kept abreast of the work along these lines during the past few years the book offers nothing new, but it will prove instructive to the reader who wishes to refresh himself on the subject.

The translation of this small book is particularly crude and in places humorous. Some of the sentences are so much involved that we have been obliged after repeated readings to guess at the author's meaning. To give examples would mean to quote from nearly every page. If the reader is not disturbed by peculiar idioms, by many words foreign to ordinary medical literature, and by frequent typographical errors, he may be repaid by a perusal of the book.

Uric Acid as a Factor in the Causation of Disease. A Contribution to the Pathology of High Blood Pressure, Headache, Epilepsy, Nervousness, Mental Diseases, Asthma, Hay Fever, Paroxysmal Hæmoglobinuria, Anæmia, Bright's Disease, Diabetes, Gout, Rheumatism, Bronchitis, and Other Disorders. By Alexander Haig, M. A., M. D. Oxon., F. R. C. P. Physician to the Metropolitan Hospital, etc. Sixth Edition. With Seventy-five Illustrations. Philadelphia: P. Blakiston's Son & Co., 1903.

It shows the remarkable interest in the subject of the uric acid diathesis that a work so full of hypotheses and of views so sparingly accepted as Dr. Haig's should go through six editions. There can be no doubt that Dr. Haig is an original thinker, and has the courage which goes with conviction. The sixth edition of this work does not disappoint the seeker for further hypotheses. It is the more remarkable that some of the opinions expressed by Dr. Haig in the first edition of his work, which were considered at that time as, to say the least, bizarre, have been since established on a sound scientific basis and belong to the category of facts.

Still one must be chary to accept all of Dr. Haig's statements as proof of conditions which he attributes to the toxic properties of various foods. There is much truth, however, in his views, though he has carried his deductions to extremes.

An American Text Book of Surgery for Practitioners and Students. By Phineas S. Conner, M. D., Frederic S. Dennis, M. D., William W. Keen, M. D., Charles B. Nancrede, M. D., Roswell Park, M. D., Lewis S. Pilcher, M. D., Nicholas Senn, M. D., Francis J. Shepherd, M. D., Lewis A. Stimson, M. D., J. Collins Warren, M. D., and J. William White, M. D., edited by William W. Keen, M. D., LL. D., F. R. C. S. (Hon.), and J. William White, M. D., Ph. D. Fourth Edition, Thoroughly Revised and Enlarged. Philadelphia, New York, London: W. B. Saunders & Co., 1903.

The present is a great improvement upon the previous ambitious, but very faulty editions. Enlarged and very much altered, it is now a worthy American treatise on that branch of modern medicine to which Americans have made so many notable contributions. Entirely new and very instructive chapters have been introduced upon military surgery, by Brigadier General R. W. O'Reilly, surgeon general, U. S. army, and Major W. C. Borden; naval surgery, by Surgeon General P. M. Rixey, U. S. navy; tropical surgery, by Captain Charles F. Kieffer, U. S. army; blood examination, by Dr. Richard C. Cabot; and immunity, by Dr. Arthur K. Stone.

The work has been thoroughly modernized. Thus, the practically new chapter on the pancreas is in line with the recent investigations of Opie, Mayo Robson, and others, and ample description is given of Bloodgood's transplantation in inguinal kelotomy and Mayo's plastic operation for omental hernia, etc.

Diseases of the Stomach. By Franz Riegel, Professor of Clinical Medicine in the University of Giessen. Edited, with Additions, by Charles G. Stockton, M. D., Professor of Medicine in the University of Buffalo. Authorized Translation from the German, under the Editorial Supervision of Alfred Stengel, M. D., Professor of Clinical Medicine in the University of Pennsylvania. Illustrated. Philadelphia, New York, and London: W. B. Saunders & Company, 1903. Pp. 9 to 835. (Price, $5.00.) (*American Edition of Nothnagel's Practice.*)

So complete has been Riegel's well known work on *Diseases of the Stomach* in Nothnagel's *System* that it required very little editing. Notwithstanding this frank avowal on the part of the editor in his preface, his work shows careful and important modifications. It is true that, since the original publication much has been written on the subject, yet of this wealth of publication, much of which was prompted by the *furor scribendi*, there has been little of importance and much less of originality. It gave the editor, nevertheless, the double task of sifting the good from the bad in the laborious task of reading and cognizing all that had been published.

It speaks well for Dr. Riegel's acumen and foresight that what he has written remains thoroughly up to date; only in the chapters dealing with periodic vomiting in children, gastric syphilis, the ætiology of gastric ulcer, the blood in ulcer and cancer of the stomach diet in hyperacidity, *acute* dilatation of the stomach, digestion leucocytosis, benign tumors of the stomach, *achylia gastrica*, hæmatemesis of hepatic cirrhosis, congenital stenosis of the pylorus, operations in stomach diseases, has more matter of importance been added.

Dr. Riegel's forcible expression and clearness in presentation have been wonderfully preserved in the translation, a result which few translators attain and for which Dr. Stockton is to be especially congratulated.

The Practice of Medicine. A Text Book for Practitioners and Students. With Special Reference to Diagnosis and Treatment, by JAMES TYSON, M. D., Professor of Medicine in the University of Pennsylvania, and Physician to the Hospital of the University, etc. Third Edition. Thoroughly Revised and in Parts Rewritten. With 134 Illustrations, including Colored Plates. Philadelphia: P. Blakiston's Son & Co., 1903. Pp. xvii-1240.

The third edition of this textbook shows some changes, the most being confined to the articles on infectious diseases, on dysentery, and on nervous diseases. The chapter on dysentery is credited for the most part to Flexner and that on nervous diseases to W. G. Spiller.

In spite of the careful revision to which the work has been subjected, some errors remain uncorrected. It gives students a wrong idea to say that Henoch (who was a German) and Charcot were the French clinicians (page 460), who studied the form of cirrhosis of the liver known as "hypertrophic cirrhosis" most thoroughly. About ten lines further down Henoch is again mentioned in this connection. The reviewer supposes that the author wished to say Hanot, by whose name this form of hepatic cirrhosis is usually called. There is no doubt that the French school were more absorbed is investigating this form of liver disease and that Ollivier, Hayem, Charcot, Gombault, and Hanot were the investigators. But Henoch was neither French nor was he especially interested in the study of this disease. He was, however, interested in diseases of children, and described a form of purpura in children which is frequently called "Henoch's purpura."

BOOKS, PAMPHLETS, ETC., RECEIVED.

Transactions of the Ophthalmological Division of the American Academy of Ophthalmology and Otolaryngology, at its Eighth Annual Session, held at Indianapolis, Ind., April 10, 11, and 12, 1903 American Journal of Ophthalmology, St. Louis, Mo. Pp. ix to 138.

Transactions of the Medical Society of New Jersey, 1903. The L. J. Hardman Printing Co., 243 and 245 Market Street, Newark, N. J. Pp. 435.

Report Relating to the Registration of Births, Marriages, and Deaths in the Province of Ontario for the Year Ending December 31, 1902. Printed by Order of the Legislative Assembly of Ontario. Printed and Published by L. K. Cameron, Printer to the King's Most Excellent Majesty. 1903. Pp. 35, ccxxiii.

Catalogue Général des Livres de Sciences, Médecine, Histoire Naturelle, Agriculture, Art Vétérinaire, Physique, Chimie, Industrie. J. B. Baillière et Fils, Editeurs, 19 Rue Hautefeuille, Paris (VI°). 1904. Pp. 112.

Chart of the Sympathetic Nerve, from Original Dissections, Life Size. By BYRON ROBINSON, Chicago. 1904. E. H. Collegrove, Publisher, 65 Randolph Street, Chicago, Ill. [Price $.50].

Précis D'Urologie Clinique. Par AUGUSTE LETIENNE et JULES MASSELIN, C. Naud, Editeur, 3 Rue Racine, 3. 1904. Pp. xi to 463.

The American Year-Book of Medicine and Surgery (Medicine). Edited by GEORGE M. GOULD, M. D., Published by W. B. Saunders & Co., Philadelphia, New York, London. 1904. Pp. 673.

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New Inventions.

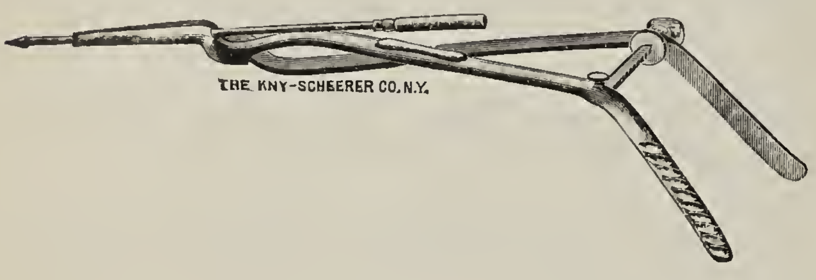
CUL-DE-SAC PERFORATOR FOR OPENING PELVIC ABSCESSES, ETC.

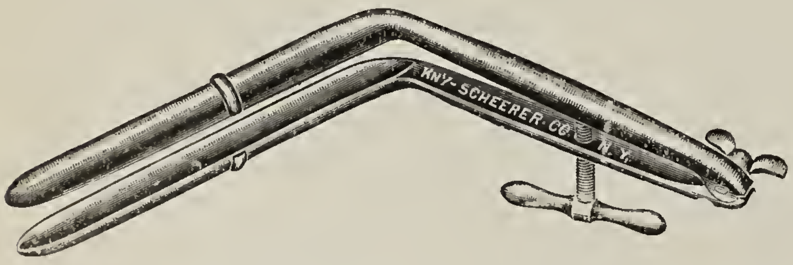
By H. J. BOLDT, M. D.,

NEW YORK.

For about fifteen years the generally adopted custom of opening, with scissors or a scalpel, the cul-de-sac of Douglas, no matter under what indication, has been given up by me, and instead I have used for the performance of this operation a Palmer uterine dilator, the ends of which have been ground down to a sharp point. After opening the cul-de-sac and spreading the branches of the perforator, another instrument is introduced through the opening made, if this is not sufficiently large to accomplish the object desired. The latter instrument is a "Bischoff's sphincter ani dilator;" with this my name has incorrectly been connected. I have not the honor of having invented this instrument, although I was the first to use it in doing pelvic surgery. Both instruments are sometimes inadequate to meet the requirements in individual cases. The sphincter dilator does not answer the purpose in those patients in whom the pelvic floor is unyielding, because of inflammatory processes; in such instances the branches of the dilator yield more or less, according to the resistance to be overcome by them, thus preventing the opening from being made large enough to introduce the hand into the pelvis, if this is desired. A further objection that I have found when using the Bischoff dilator is the occlusion of view by the handles, so that one cannot well see the field of work. The objections to the sharpened uterine dilator are, that the opening made by it is not sufficiently large to introduce the second instrument between the blades, thus necessitating the withdrawal of the perforator before the dilator can be introduced; it is then necessary to guide it by means of the examining finger through the small opening; and that the sharp points being in the pelvis and spreading apart, while the handles are being pressed together, give rise to a possibility of injury to intestine. I have detailed the objections to the armamentarium used by me for so many years, because the instruments are extensively used by many who have seen me use them.

To overcome the objections spoken of, I have had the Kny-Scherer Co., of New York, construct an instrument for me which I term a cul-de-sac perforator (see Fig. 1). This instrument permits of the opening being quickly made into the cul-de-sac of Douglas by means of the trocar, which is held between the blades of the dilator. The trocar bulb rests on the blades of the dilator, thus the trocar is prevented from receding while it is introduced. As soon as the perforation is made, the blades of the dilator are slightly separated by pressing together the handles, and the trocar is withdrawn. The blades may now be separated to their full extent, making an opening of sufficient size to answer the purpose in most instances. Should it be desirable in the particular case to enlarge the opening more, it may be done by introducing, between the blades of the perforator the blades of the dilator (Fig. 2). With this instrument an opening may be made large enough to introduce one's hand through; the pelvis may then be thoroughly explored manually. The handles being at an acute angle with the blades, the pelvis may be packed with gauze between them without the view being obscured.





For opening the cul-de-sac to operate on pelvic abscesses, retrouterine hæmatoceles, pyosalpinx sacs, in fact, any form of vaginal section, these two instruments are very valuable, and in my opinion offer a superior means of making a sufficiently large opening, with greater safety for the patient as regards hæmorrhage, than a knife or scissors; besides the operation can be more rapidly done with the dilators described. A very large number of vaginal sections done according to the technics described, permits me to recommend the method highly.

FLAT FOOT.

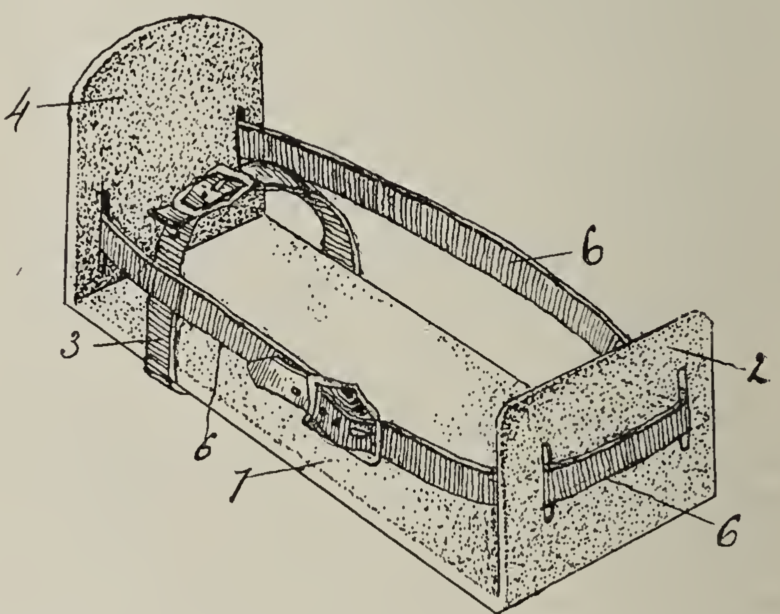
By C. L. DARBY.

A recent invention for the cure of flat foot is now being introduced to the medical profession. This deformity, which is common in young adolescents, occurs in both sexes, and in all classes, usually from some inherent congenital defect in the structures of the foot, aggravated by *overwork*, by the use of imperfectly constructed shoes, or by vicious eversion of the foot. It is often associated with disorder of the general health. Although it sometimes begins very early in life, it seldom becomes a source of deformity until after the age of fourteen. Both feet commonly suffer simultaneously, but not in the same degree.

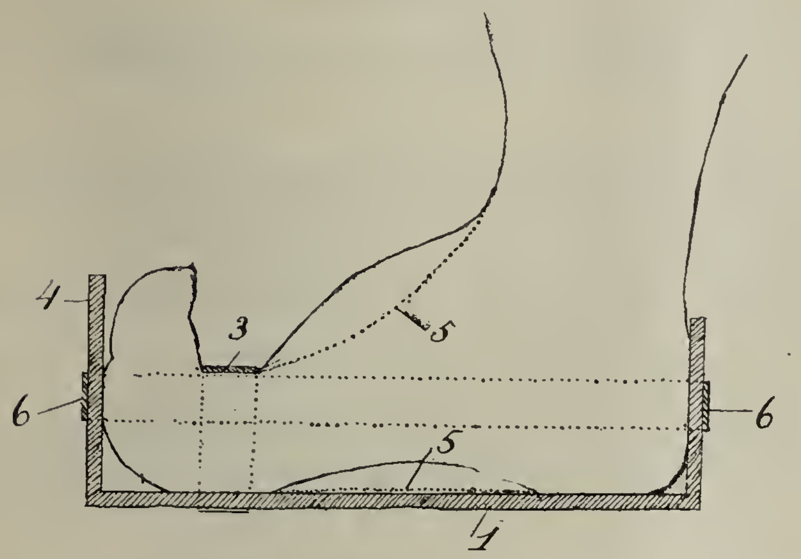
The affection essentially consists in a loss of the arch of the foot, so that when the individual stands up the sole rests flat upon the ground, instead of upon the heel and the ball of the toes. The external malleolus is uncommonly prominent, the foot inclines outward, and the ankle is remarkably large and full. In the worst forms, there is partial displacement of the bones of the foot, the convexity of the dorsum is lost, the toes are everted, and the foot is considerably elongated. The ankle joint, at all times weak, eventually loses its mobility, and the patient is permanently crippled and deformed.

The inventor of this new device has discovered that if the toes are sharply turned up, that is, at an angle to the sole of the foot, and preferably so far back as they can be forced without pain, the bones of the foot automatically form, or tend to form, an arch at the instep, as in a perfect, or normal, foot, and if this turning up is continued, the bones will eventually come back into their proper places, and the deformity in this way will be cured.

In the drawings, Fig. 1 shows the device in perspective, and Fig. 2 a longitudinal vertical cross section, with the foot in position, showing in dotted lines the outline of a flat foot.



The device consists of a sole piece, 1, having a turned up heel piece, 2, against which the heel rests, and a strap, 3, attached to the sole piece, which passes across the ball of the foot, as is shown in Fig. 2, and holds the ball of the foot down against the sole piece and prevents it from rising up. A toe piece, 4, against which the toes are sharply turned up, is shown in Fig. 2. It will cause the arch to form in the foot. An ordinary flat foot is shown in dotted lines 5, 5 in Fig. 2, and the same foot in full lines where the toes are turned up.



The appliance can be worn indoors as a shoe or sandal in the stocking feet, walking in them causing no pain or discomfort; or at night, while the wearer is in bed. A strap, 6, is provided to assist in holding the foot in proper position, and it is also an additional support to the toe piece, holding it unyieldingly in place.

The device is made by Tiemann & Co., of New York city, in all sizes, for men, women, and children, and for infants will be a most helpful support, preventing any strain in the tender foot muscles in their first efforts to stand or walk.

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Miscellany.

Cancer in the Lower Animals.—Cadiot, at a recent meeting of the *Académie de médecine*, as reported in *Bulletin médical* for February 3rd, gave his personal experience with cancer in animals, which has extended over many years. He has found epithelioma to be the commonest form, followed by melanosis and sarcoma; there are 40 epitheliomata to 7 sarcomata. Animals seem to be liable in the following order: dogs, cats, horses, cattle. In 2,220 dogs Cadiot found 954 cases of cancer, but only 208 cases in 18,100 horses. The site of the lesion varies with the species. In the horse, the jaw is most frequently attacked, then the sinus, the testicle, and the penis; in cattle, the liver, the kidneys, the bladder; in the dog, the skin, the teat; in the cat, the teat, the skin. In both dog and cat epithelioma of the lips or tongue is rare. Cadiot favors the ætiological theory of aberrant cells rather than that of a microbian origin. For periods of seven years Cadiot has forced old and feeble dogs to come in constant contact with cancerous dogs, yet he has never seen a single case of contagion. Repeated inoculation has never produced a malignant growth; there have occurred nodules which, however, were apparently defensive in their nature, and quickly disappared. Ingestion has given only negative results.

Questionable Methods of Advertising.—Efforts have recently been made to introduce a liquid preparation claiming to contain an organic iron compound in solution, which have attracted the unfavorable attention of many of the medical profession. The exploiters are not content with making extravagant claims for their own wares, but indulge in wholesale diatribes against all other iron preparations, including a class which has been well and favorably known to the medical profession for many years. Singularly enough, the manufacturers give no definite information regarding the composition of their own preparation beyond a so-called chemical formula, which has no meaning as it stands. The medical profession generally will no doubt be quick to condemn any manufacturer who indulges in such wholesale vituperation of others.

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Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending February 26, 1904:

Place.	Date.	Cases.	Deaths.
	Smallpox—United States.		
California—San Francisco	Feb. 7-14	5	
Dist. Columbia—Washington	Feb. 13-20	6	
Florida—Jacksonville	Feb. 13-20	5	
Georgia—Liberty County	Feb. 12		7
Illinois—Danville	Feb. 13-20	3	
Louisiana—New Orleans	Feb. 13-20	1 imported	
Maine—Calais	Feb. 18	5	
Maryland—Baltimore	Feb. 13-20	1	
Michigan—Detroit	Feb. 13-20	2	1
Missouri—St. Louis	Feb. 13-20	5	
New Hampshire—Manchester	Feb. 13-20	1	
New Jersey—Trenton	Feb. 13-20	7	
New York—New York	Feb. 13-20	3	1
New York—Niagara Falls	Feb. 13-20	5	
Ohio—Cleveland	Feb. 12-19	1	
Pennsylvania—Butler	Feb. 6-13	1	
Pennsylvania—Carbondale	Feb. 14-21	1	
Pennsylvania—Johnstown	Feb. 13-20	4	
Pennsylvania—Philadelphia	Feb. 13-20	49	13
Pennsylvania—Pittsburgh	Feb. 13-20	2	1
Pennsylvania—Titusville	Feb. 13-20	1	
Pennsylvania—Williamsport	Feb. 6-13	1	
Tennessee—Memphis	Feb. 13-20	31	
Tennessee—Nashville	Feb. 13-20	7	
Utah—Salt Lake City	Feb. 6-13	1	
Virginia—Danville	Feb. 6-13	2	
Wisconsin—Milwaukee	Feb. 13-20	11	
	Smallpox—Insular.		
Hawaii—Honolulu	Feb. 4	1	
		On U. S. A. T. *Logan.*	
	Smallpox—Foreign.		
Austria—Prague	Jan. 23-30	3	
Brazil—Pernambuco	Jan. 1-15		39
Brazil—Rio de Janeiro	Jan. 17-24	24	27
Canada—Quebec	Feb. 6-13	1	
Canada—Tower Hill, N. B	Feb. 15	2	
Colombia—Barranquilla	Jan. 27-Feb. 2		5
France—Marseilles	Jan. 1-31		29
France—Paris	Jan. 30-Feb. 6	31	2
Great Britain—Edinburgh	Jan. 30-Feb. 6	17	1
Great Britain—Glasgow	Feb. 5-12	46	2
Great Britain—Hull	Jan. 30-Feb. 6	3	
Great Britain—London	Jan. 23-30	4	
Great Britain—Manchester	Jan. 30-Feb. 6-	3	
Gt. Britain—Newcastle-on-Tyne	Jan. 30-Feb. 6	2	1
Great Britain—Nottingham	Jan. 30-Feb. 6	11	
Great Britain—Sheffield	Jan. 23-Feb. 6	3	
Great Britain—South Shields	Jan. 30-Feb. 6	1	
Great Britain—Sunderland	Jan. 30-Feb. 6	1	
India—Bombay	Jan. 19-26		7
India—Karachi	Jan. 17-24	2	1
Mexico—City of Mexico	Jan. 31-Feb. 7	4	3
Netherlands—Amsterdam	Jan. 30-Feb. 6	3	
Russia—Moscow	Jan. 16-23	5	4
Russia—St. Petersburg	Jan. 23-30	11	3
Spain—Santander	Feb. 1-8	5	
Turkey—Smyrna	Jan. 17-31		5

	Yellow Fever.		
Brazil—Rio de Janeiro	Jan. 17-24	3	1
Cuba—On Nor. bk. *Eugen*, from La Guaira, wrecked on south coast	Feb. 16	7	5
Mexico—Merida	Jan. 31-Feb. 13	1	4
Mexico—Progreso	Jan. 31-Feb. 13	1	
Mexico—Vera Cruz	Feb. 6-13	1	1
	Cholera—Insular.		
Phillipine Islands—Manila	Jan. 2-9	4	4
	Cholera—Foreign.		
India—Calcutta	Jan. 8-23		38
Turkey in Asia—Diarbekir	Jan. 9		1
Turkey in Asia—Kerbela	Jan. 11-12	5	5
	Plague—United States.		
California—San Francisco	Feb. 12		1
California—San Francisco	Feb. 14		1
	Plague—Foreign.		
Brazil—Pernambuco	Jan. 1-15		1
Brazil—Rio de Janeiro	Jan. 17-24	8	6
India—Bombay	Jan. 19-26		231
India—Calcutta	Jan. 8-23		23
India—Karachi	Jan. 17-24	8	7
India—Madras	Jan. 16-22		1
Peru—San Pedro	Feb. 20		A few cases
Russia—Cronstadt	Jan. 20		1 Laboratory case.

Navy Intelligence:

No changes in the Medical Corps of the United States Navy have been reported for the week ending February 27, 1904.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending February 27, 1904:

GIRARD, ALFRED C., Colonel and Assistant Surgeon-General. Will report in person to the commanding officer of the Department of California for duty as chief surgeon of that department.

KENDALL, WILLIAM P., Major and Surgeon. Relieved from duty at the U. S. Army General Hospital, Presidio of San Francisco, Cal., and ordered to Ord Barracks, Cal., for duty.

PATTON, IRVINE W., First Lieutenant and Assistant Surgeon. Relieved from further duty at Fort Hamilton, N. Y., and assigned to duty as surgeon on the transport *McClellan.*

TORNEY, GEORGE H., Lieutenant-Colonel and Deputy Surgeon-General. Relieved from temporary duty as chief surgeon of the Department of California, and assigned to duty in command of the U. S. Army General Hospital, Presidio of San Francisco, Cal.

WATERHOUSE, SAMUEL M., First Lieutenant and Assistant Surgeon. Granted two months' leave of absence.

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending February 25, 1904:

ANDERSON, J. F., Passed Assistant Surgeon. Granted leave of absence for two days from February 18th, on account of sickness.

BERRY, T. D., Assistant Surgeon. Directed to rejoin station at Louisville, Ky., upon the return of Surgeon G. M. GUITERAS. February 19, 1904.

HERTY, F. J., Pharmacist. Granted leave of absence for four days from February 14, 1904, under paragraph 191 of the regulations.

MCCLINTIC, T. B., Assistant Surgeon. To report to chairman of examining board at Washington, D. C., March 9, 1904, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

STANSFIELD, H. A., Assistant Surgeon. To report to chairman of examining board at Washington, D. C., March 9, 1904, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

STONER, G. W., Surgeon. Granted four days' leave of absence from February 24, 1904, under paragraph 189 of the regulations.

Promotions.

Passed Assistant Surgeon H. D. GEDDINGS commissioned as surgeon, to rank as such from November 23, 1903.

Passed Assistant Surgeon C. P. WERTENBAKER commissioned as surgeon. February 16, 1904.

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Births, Marriages, and Deaths.

Married.

ARCHBOLD—BARRON.—In Irvington, N. Y., on Tuesday, February 16th, Mr. John F. Archbold and Miss May Barron, daughter of Dr. John C. Barron.

DILLON—MURNAGHAN.—In Boston, Massachusetts, on Monday, February 15th, Dr. Thomas J. Dillon and Miss Elizabeth Murnaghan.

PECKHAM—CONDELL.—In New York, N. Y., on Wednesday, February 17th, Dr. Cyrus Tracey Peckham, of the marine hospital corps, and Mrs. Lillian Scudder Condell.

SAVAGE—HOGE.—In Washington, D. C., on Tuesday, February 16th, Dr. Francis Joseph Savage and Miss Rachel Schofield Hoge.

WILKINSON—SIMS.—In Kansas City, Kansas, on Monday, February 22nd, Dr. Hugh Wilkinson and Miss Ethel Sims.

WILLIAMS—WORCESTER.—In New York, N. Y., on Thursday, February 25th, Dr. Charles Mallory Williams and Miss Margaret D. Worcester.

Died.

BORCHARDT.—In Detroit, Michigan, on Wednesday, February 17th, Dr. E. A. Borchardt, in the forty-ninth year of his age.

DICKENSON.—In Cleveland, Ohio, on Friday, February 19th, Dr. John Dickenson, in the seventieth year of his age.

DOWNEY.—In Middletown, Connecticut, on Monday, February 15th, Dr. R. C. Downey, in the thirty-sixth year of his age.

GALLISON.—In Franklin, Massachusetts, on Monday, February 22nd, Dr. Jefferson Cushing Gallison, in the sixty-fourth year of his age.

GIBSON.—In Bangor, Maine, on Sunday, February 21st, Dr. Arthur C. Gibson, in the forty-fifth year of his age.

GILLETTE.—In Dorchester, Massachusetts, on Saturday, February 20th, Dr. George W. Gillette, in the twenty-sixth year of his age.

JOHNSON.—In Pittsburgh, Pennsylvania, on Saturday, February 20th, Dr. S. L. Johnson, in the seventy-eighth year of his age.

LAIRD.—In Montgomery, West Virginia, on Monday, February 15th, Dr. James M. Laird.

LIEBMANN.—In Brookline, Massachusetts, on Saturday, February 20th, Dr. Gustave Liebmann, in the seventy-first year of his age.

MARTIN.—In Cleveland, Ohio,, on Monday, February 15th, Dr. A. S. Martin, in the seventy-first year of his age.

MILLER.—In St. Louis, Missouri, on Sunday, February 14th, Dr. Samuel Miller, in the eighty-third year of his age.

MILLS.—In Chateaugay, N. Y., on Tuesday, February 23rd, Dr. W. C. Mills, in the thirty-ninth year of his age.

NEVILLE.—In Bethel, Kansas, on Sunday, February 21st, Dr. George W. Neville, in the eighty-second year of his age.

RANKIN.—In Newark, New Jersey, on Thursday, February 25th, Dr. William Rankin, Jr., in the fifty-seventh year of his age.

RUSSELL.—In Evansville, Indiana, on Tuesday, February 16th, Dr. Ephraim H. Russell, of Hopkinsville, Kentucky.

SETON.—In Phœnix, Arizona, on Thursday, February 11th, Dr. William Seton.

WILDING.—In Malone, N. Y., on Wednesday, February 24th, Dr. R. J. Wilding, in the sixty-eighth year of his age.

WOOD.—In Baltimore, Maryland, on Friday, February 19th, Dr. P. Bryson Wood, in the forty-sixth year of his age.

New York Medical Journal
AND
Philadelphia Medical Journal.
CONSOLIDATED.

A Weekly Review of Medicine

Vol. LXXIX, No. 11. SATURDAY, MARCH 12, 1904 Whole No. 1319.

Original Communications.

A SIMPLE METHOD OF INTESTINAL ANASTOMOSIS.*

By H. M. HEPPERLEN, M. D.,

BEATRICE, NEB.

Intestinal anastomosis, like many other surgical operations, is thus far quite remote from a state of perfection; and before such a state can be attained, it will be necessary to devise some means by which the adjacent parts may be placed in coaptation by the simplest possible method that will prevent the escape of gases and bowel contents, and enable the work to be done quickly and with the least shock to the patient. To obtain this result, many methods have been devised of late years by our abdominal surgeons, but all have their serious objections.

Some few years ago, when Murphy came forth with his ingenious button, it seemed for a time that the mystery had been solved, and that at length we had a device on which it would be difficult to improve. Our medical journals were flooded with endorsements, which elicited trials by abdominal operators, but they soon found the many objections to his method. Five years ago, while doing post graduate work in Europe, I was surprised to see, at the old Billroth Clinic, operators teaching and using the same method that that master had devised a quarter of a century before. While taking a course in operative surgery under the surgeon who was Billroth's first assistant during the last years of his life, I was informed that they had tried all the newer methods, but that no improvement could be discovered in them over the old, so they were still teaching and using it until some more simple and better method could be devised. American surgeons have devised methods until nearly every operator has one of his own. During the current year, scarcely a month has passed that some new method for intestinal anastomosis has not been recommended through the journals. I have paid particular attention to all of them, and as none compares with my idea, I have devised a stitch and new support for the bowel, while stitching in a manner different to any that has come within my observation. With all the methods recommended, except Murphy's, it is conceded that we must accomplish our best results by stitching. All of the new methods, such as a complicated stitch, forceps, or a rubber inflator to support the bowel while stitching, are difficult to understand and tedious to use, oftentimes not affording the proper protection and allowing gases and bowel contents to escape, which interferes very materially with the results of the operation. On the other hand, when the bowels are properly united and the work satisfactorily completed, the time necessary to introduce and remove these various instruments and the requisite manipulation of the parts in so doing produces shock, and a much higher mortality results than would otherwise occur. My method is after the plan recommended by Halsted, in the *Philadelphia Medical Journal* of January 8, 1898. He recommends an inflated rubber cylinder in the bowel over which the stitching is to be effected. I use a cylinder made of gelatin (Fig. 1), which serves as a firmer support, takes a very short time to introduce, and, when the work is completed, becomes absorbed, leaving no after trouble. One will readily see the advantage of this over the inflated rubber cylinder, the potato button, or the decalcified bobbin. The surgeon can have these different sized cylinders put up in aseptic packages in his emergency box, and in case the use of such a device is required when not expected, no time need be lost in sterilizing and making preparations before the operator can begin his anastomosis. The same material may also be used for gastroenterostomies or gall bladder work, by having it moulded in requisite sizes. I am now having one of our leading capsule manufacturers make capsules of proper thickness, and have them slightly formalinized so that they will retain their shape at least fifteen minutes anywhere within the alimentary canal, and then completely dissolve.

When the capsule is placed in position, I insert a few interrupted sutures through all the coats of the bowel to hold the parts in coaptation. (See Fig. 2.) I then complete the work by using a suture that I have never yet seen recommended. I use a fine intestinal silk, twenty-four inches long, doubled, with a needle on each end, having the knot where the ends of the silk are tied in the centre (See Fig. 1). I start my first suture under the mesentery attachment, inserting a needle with each hand at the same time through the two outside coats of the bowel, an eighth of an inch from the cut margins; pick up a loop about one-twelfth of an inch in length, according to the method of Lambord, draw the parts together and tie them at each stitch. Continuing thus until I have completely encircled the bowel (see Fig. 3), close the mesentery opening with the same suture, being careful to pass my needles under the small vessels in the peritoneal coat so as not to constrict the blood supply more than necessary.

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* Read before the Nebraska State Medical Association, May 30, 1903.

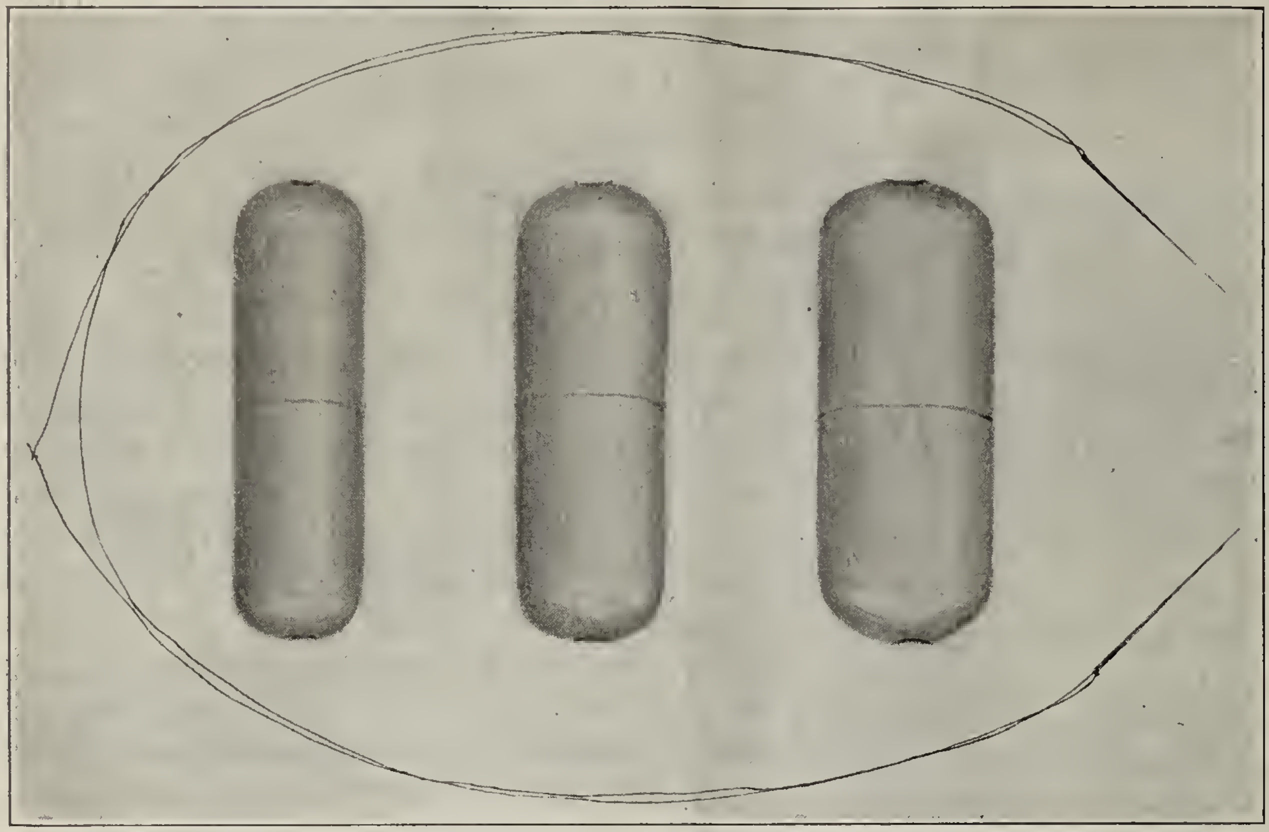

FIG. 1.—Gelatin capsules and doubled suture threaded with two needles, for Hepperlen's intestinal anastomosis.

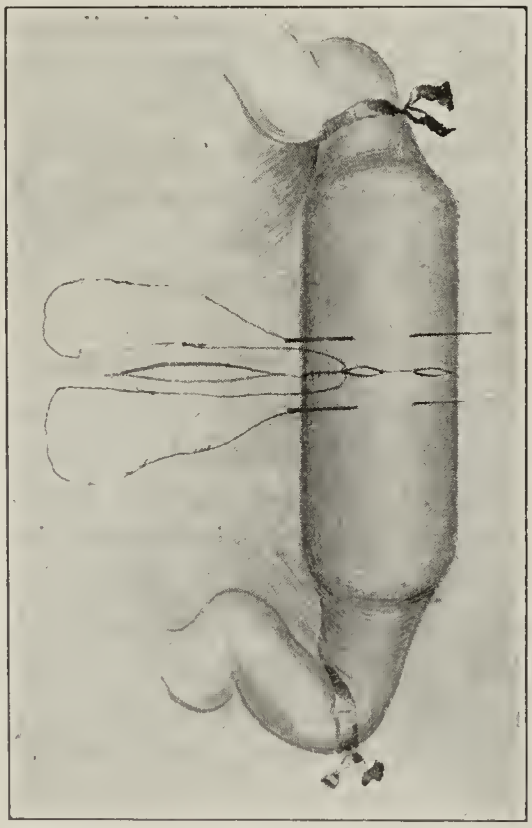

FIG. 2—Interrupted sutures through bowel, over capsule *in situ.*

The advantages I claim for this suture are: First, its simplicity; second, it can be introduced practically, without handling the parts, in about one fourth to one eighth of the time required for any other stitch; and thirdly, when the bowels are sewn together by this method, they are held more firmly than with any other stitch of which I know, for it requires a great pressure to force an opening by water or gas at the point of stitching, and when distending with hydraulic pressure I have had it give way first at places other than the point of suture, which is one of the advantages over the Lambord or mattress suture, as recommended for intestinal anastomosis.

In conclusion, with the aid of the capsule and suture recommended above, an end to end anastomosis may be performed in from five to ten minutes, or as quickly as a Murphy button could be introduced, requiring very little suture material; and when operation is completed, the parts are held so firmly that the escape of the bowel contents is impossible. In addition, it can be readily seen that this same method may be used for any other internal anastomosis.

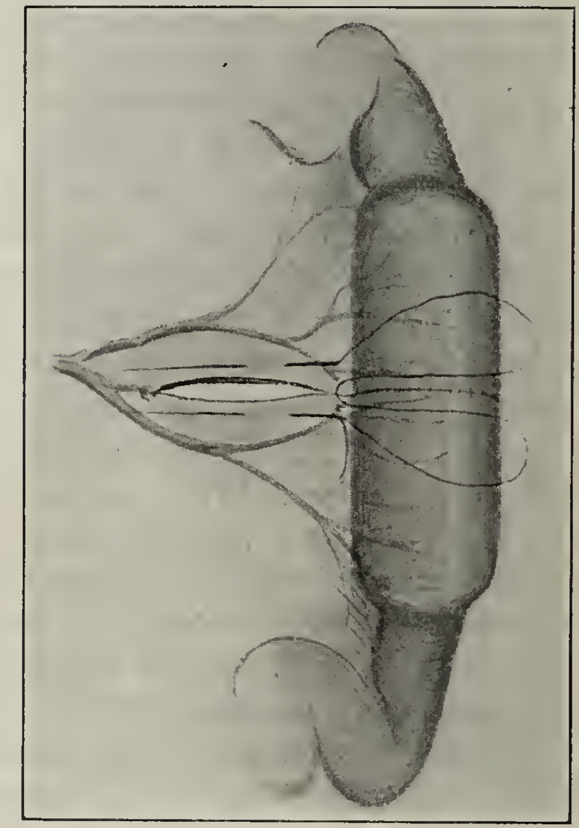

FIG. 3.—Bowel encircled with sutures and mesentery closed with same suture.

TERTIARY SYPHILIS OF THE NOSE AND PHARYNX.*

By W. SCOTT RENNER, M. D.,

BUFFALO, N. Y.

(*Continued from page 452.*)

FIBROID DEGENERATION OF THE NASAL MUCOUS MEMBRANE.

We will now turn to a consideration of the third stage of the disease as it occurs in the pharynx and mouth. Were it not a well-known fact that tertiary lesions occur much less frequently in the mouth and pharynx than the secondary lesions in this region, we, as laryngologists, should be tempted to say that the contrary is true, for the lesions of syphilis concerning which we are consulted are most always tertiary.

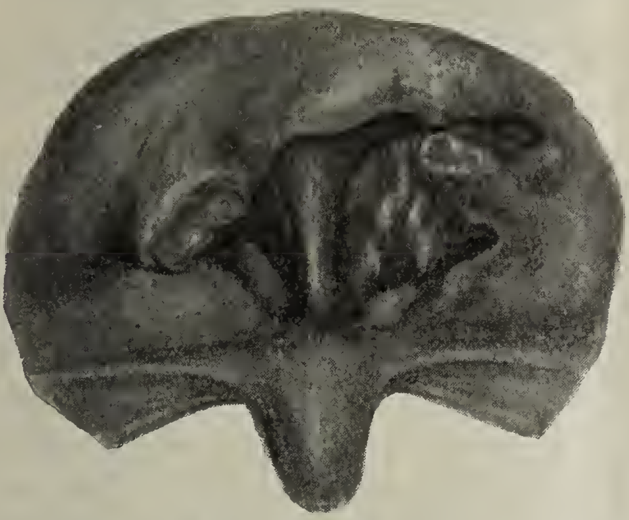

FIG. 9.—Copy of Fig. 3, Tafel XXXII, Gerber's *Atlas*. It represents a tertiary syphilitic ulceration of the naso-pharynx, a gumma of the Eustachian tube broken down.

PHARYNX.

Tertiary lesions of the pharynx are identical in character with those found in the nose, *i. e.*, they occur as superficial gummatous infiltrations, and gummata. Syphilitic granulomata in the naso-pharynx have been described. A favorite situation of gummata is in the plica salpingopharyngea at the mouth of the Eustachian tube. They are seen on the posterior rhinoscopic mirror as smooth, round, yellowish-red tumors, varying in size from a pea to a cherry. It is rare, however, to see them at this stage. They are usually first seen as characteristic crater-like ulcers with deep undermined walls which are rather difficult to make out, on account of the foreshortening of the image on the mirror. Figs. 9 and 10 represent such ulcerations at the mouth of the Eustachian tubes. When these ulcers heal over they are likely to obliterate the cartilaginous part of the Eustachian tube, or membranous closure of the posterior nares may take place. Gumma followed by ulceration may also attack the roof of the nasopharynx, either in the pharyngeal tonsil, or the roof just behind the posterior nares (Figs. 11 and 12). Tertiary lesions may be confined to the nasopharynx, which is rare, or other parts of the nose and pharynx may be affected at the same time, or the disease may be found at the same time in other parts of the body.

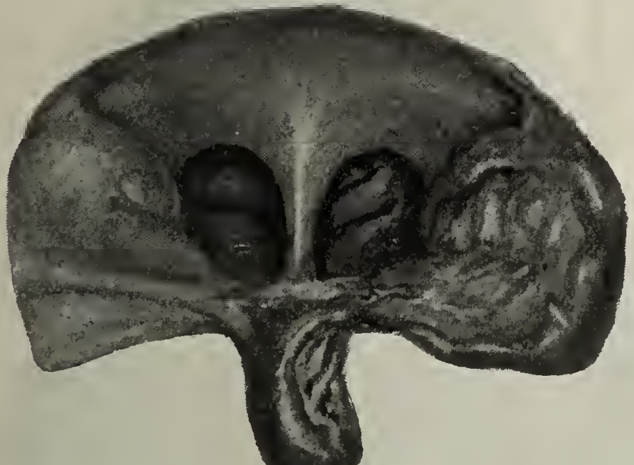

FIG. 10.—Copy of Fig. 4, Tafel XXXII, Gerber's *Atlas*. This also represents a tertiary syphilitic ulceration of the naso-pharynx. The ulceration destroyed the cushion of the Eustachian tube and the posterior surface of the velum palati.

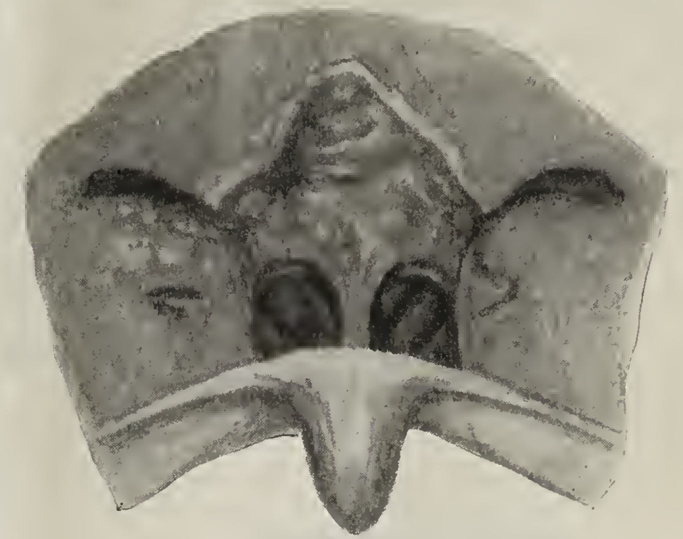

FIG. 11.—Copy of Fig. 7, Tafel XXX, Gerber's *Atlas*. It represents a tertiary syphilitic ulceration of the vault of the naso-pharynx in a servant girl 27 years old. The only other lesion of syphilis was a leucoderma of the neck. She gave no history of infection.

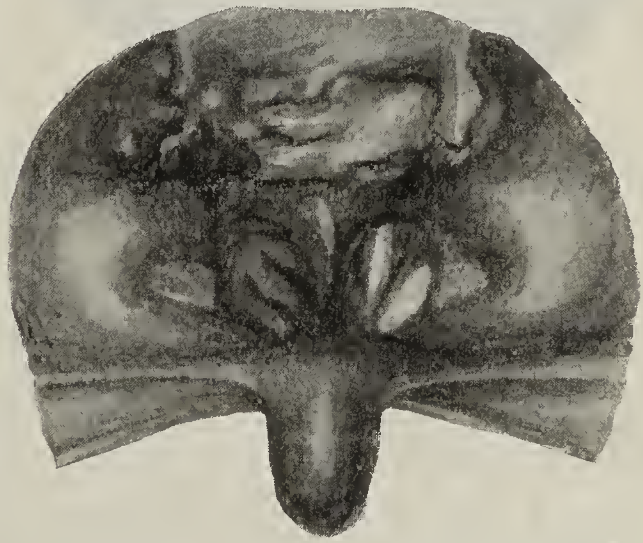

FIG. 12.—Copy of Fig. 9, Gerber's *Atlas*. It represents a tertiary syphilitic ulceration of the naso-pharynx found in a waiter 21 years old.

When a syphilitic infiltration, diffuse or circumscribed, attacks the posterior pharyngeal wall, it is less characteristic than in any other part of the respiratory tract. Sometimes such a gumma or ulcer is found in the median line (Fig. 13). Sometimes a long ridge of gummatous infiltration is found in the angle between the posterior pharyngeal wall and the posterior palatine fold. This ridge resembles the thickening of the posterior pharyngeal wall, known as pharyngitis lateralis; or small spots scattered about the posterior wall may present themselves upon viewing the pharynx not unlike the larger patches found in granular pharyngitis. The true character of these ridges and patches is not known until they ulcerate, which of course never occurs in pharyngitis lateralis of catarrhal origin.

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* Accepted as a candidate thesis for the American Laryngological Association, June, 1903.

Rarely, a gumma of the posterior wall may become so completely softened internally as to resemble a fluctuating tumor or retropharyngeal abscess. In severe neglected cases ulceration here has been known to extend from the mucous membrane to the bone beneath, resulting in caries and necrosis of the cervical vertebræ, even to laying bare of the spinal cord. L. Fischer and Mackenzie saw cases in which pieces of the axis and atlas came away.

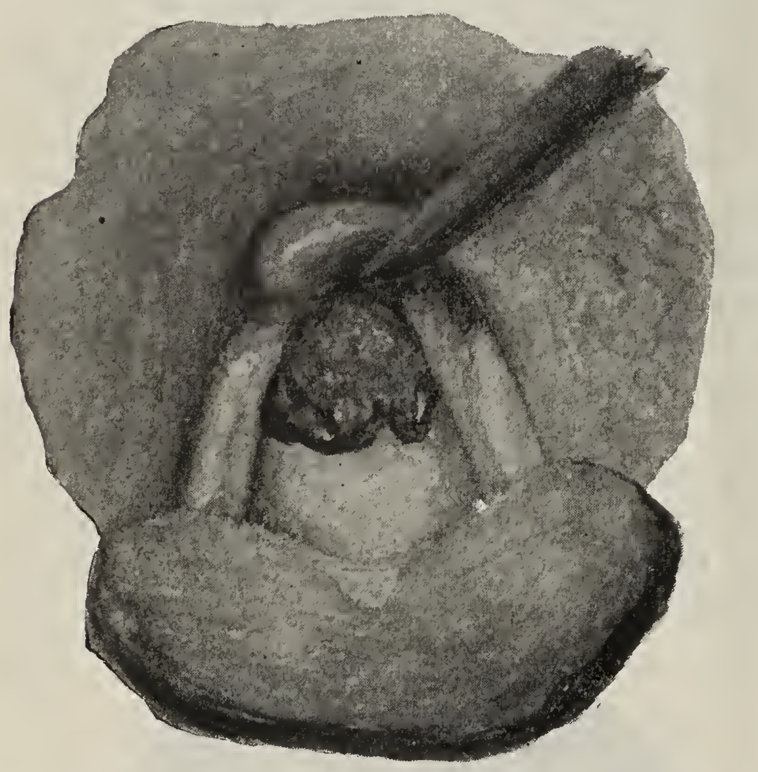

FIG. 13.—Copy of Fig. 1, Tafel XXIII, from Mikulicz and Michelson's *Atlas der Krankheiten der Mund und Rachenhohle*, 1891 It represents a tertiary syphilitic ulceration of the posterior wall of the pharynx.

Gummata of the soft palate and uvula cannot be easily mistaken for any other conditions. The first stage of their development is generally overlooked, for the infiltration usually commences in the mucous membrane of the posterior or pharyngeal surface of the velum. The gumma then enlarges and involves usually the whole thickness of the velum, reaching in this manner its anterior surface, or it commences on the anterior surface of the velum at the junction of the hard and soft palate. It may attack likewise the palatine folds. The neighborhood of a gumma of the soft palate is very hyperæmic. The whole velum and uvula are usually œdematous. If the infiltration is very diffuse, the velum, uvula, and palatine folds are thickened and dark red in color. The infiltration soon breaks down in these gummata. It commences as a small yellow point or streak which rapidly spreads until all the infiltration is changed into an ulcer, which perforates the two surfaces of the palate or uvula. Such a perforation may be much larger than was anticipated, on account of a want of knowledge regarding the extent of the gumma projecting into the nasopharynx from the posterior surface of the soft palate. Sometimes there are several gummata in the soft palate, which break down one after another and perforate the palate with great loss of substance. The velum may be completely destroyed; generally

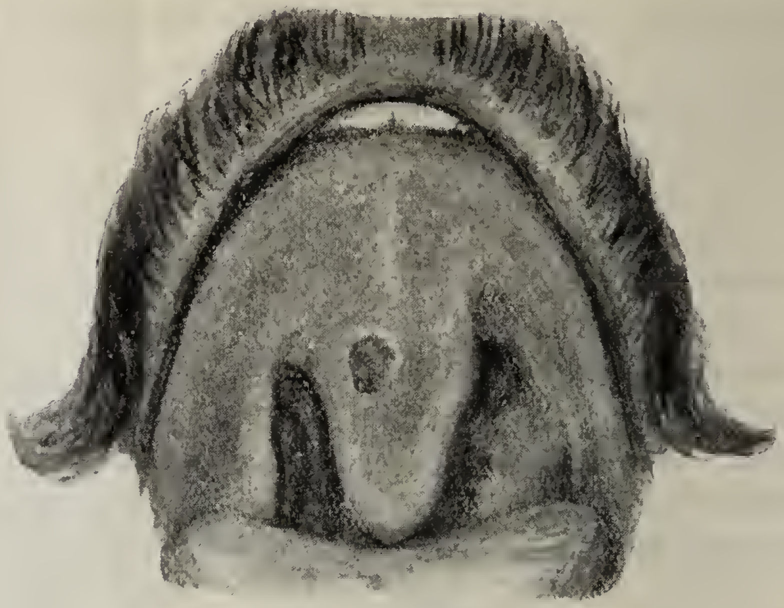

FIG. 14.—Copy of Fig. 1, Tafel XXI, from Mikulicz and Michelson's *Atlas*. It represents infiltration and ulceration of the soft palate, perforating ulcer of the uvula.

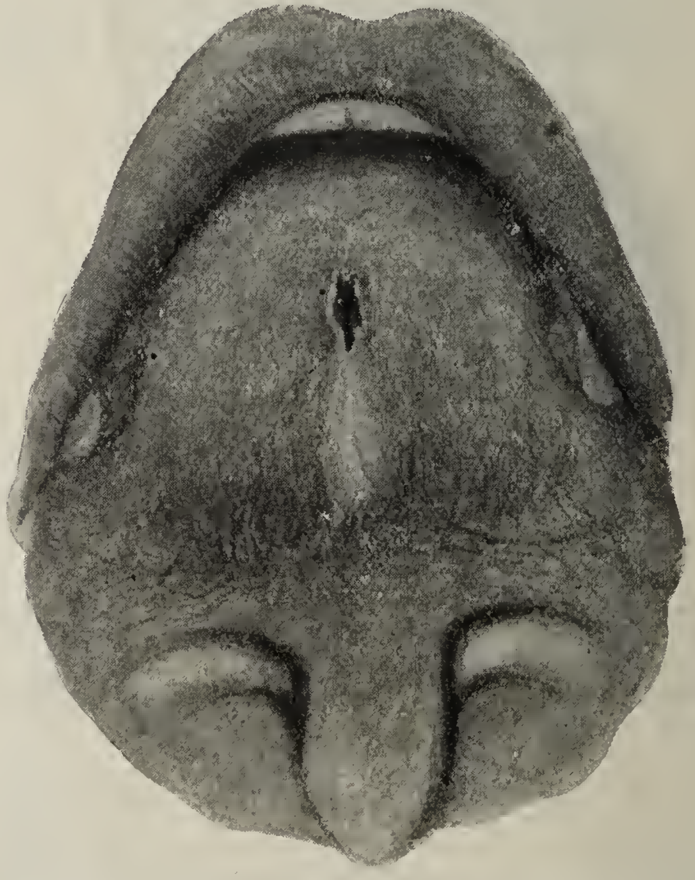

FIG. 15.—Copy of Fig. 5, Tafel XV, of M. & M. *Atlas*. It represents a perforation of the soft palate by a tertiary syphilitic ulceration.

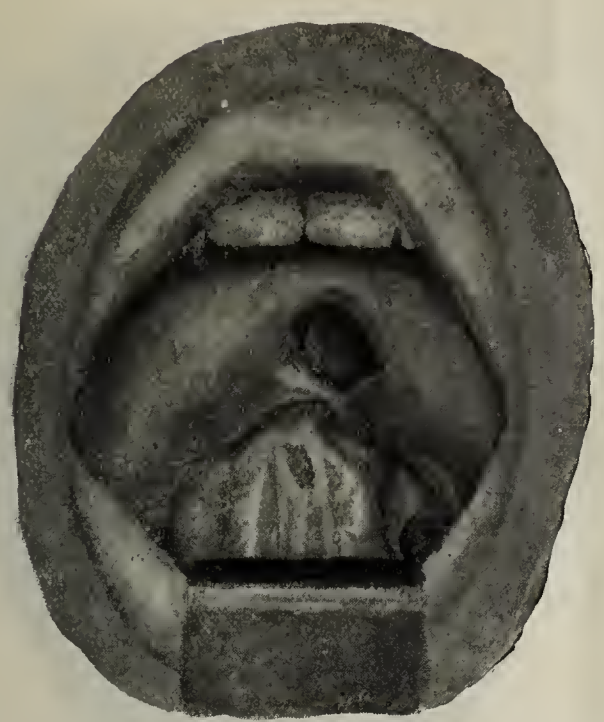

FIG. 16.—Copy of Fig. 6, Gerber's *die Syphilis des Halses und der Nase.* It represents a healed perforation of the palate and ulcer of the posterior wall, in a case of syphilis hereditaria tarda, occurring in a girl twenty-one years old.

only a part of it disappears. When the gumma is at the base of the uvula it may be separated by the ulcerative process or it may remain attached by one or more strands of tissue. Adhesions may take place between the palate and the posterior wall, and so occlusion or partial occlusion of the posterior nares may be caused. Figs. 14 and 15 illustrate the usual appearance of ulcerated gumuta of the soft palate and uvula. Fig. 16 represents the usual appearance of the palate after perforation and healing. Fig. 17 is a reproduction of a broken down gumma of the soft palate under the care of the author.

The healing of deep ulceration is followed by the formation of a white, glistening, star-formed cicatrix, which is characteristic and which, from its contraction, draws on the neighboring tissue and results in various deformities. Owing to the formation of scar tissue and interstitial myositis in what remains of the soft palate, its movements and contractility are lessened and sometimes completely destroyed. Where no adhesion has taken place between the velum and posterior wall it is impossible to shut off the nasopharynx from the oropharyngeal cavity. During the healing process small perforations become smaller and may become completely closed by the cicatricial tissue. Larger perforations become smaller, but still remain large enough to affect the speech.

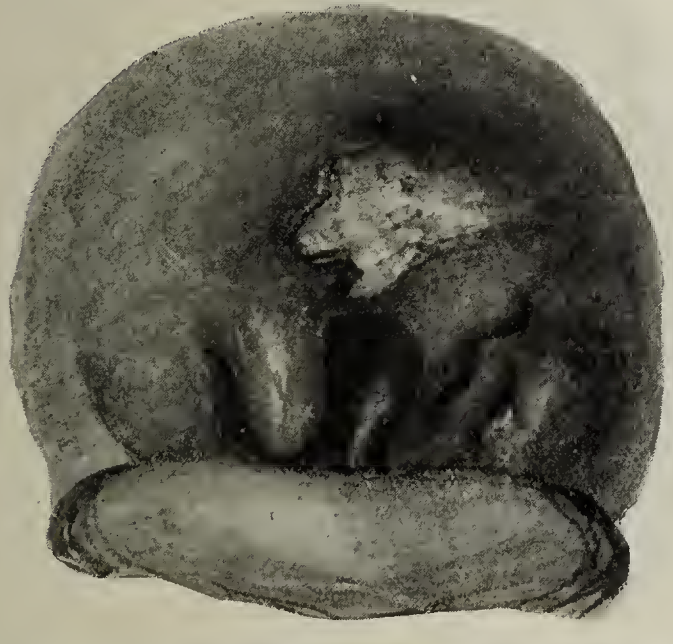

FIG. 17.—Drawing of a tertiary ulceration of the soft palate, occurring in the practice of the author.

When gummata occur in the tonsils they may become so enlarged as to extend across the isthmus of the fauces to the opposite side. If the infiltration is upon the surface of the tonsil that organ appears to be uneven or nodular. Each nodule is represented later on by a crater shaped ulceration. These ulcerations ultimately unite to form one, which gives the tonsil a torn, worm eaten appearance.

Besides the superficial nodular form of gummatous amygdalitis just described, there occurs at times a deep seated circumscribed gumma of the tonsil which from its nature and rapid breaking down might be described as acute gummatous amygdalitis. The patient with this condition has usually fever with a bad odor from the mouth, and when an examination is made a very prominent dark red tonsil is found, the follicles of which are filled with plugs and the surface may be covered with a membranous exudation. All the surrounding parts, such as the soft palate, may be œdematous; this œdema may extend to the glottis. The breaking down of such a gumma results in a deep cavity in the tonsil. Natier (27) collected the histories of fifteen such cases, two of which were operated on for cancer. One of these was operated on through an external incision in the cervical region. The operation was followed by complete recovery and healing of the wound. After six months, however, the tumor reappeared with the same characteristics and in the same place, but spread rapidly over the whole pharynx. It was considered an incurable case, but potassium iodide was given in despair, which cured the condition in three months.

Chancre of the tonsil resembles a gumma of this region very much in many cases, except that there is marked enlargement of the cervical glands on the corresponding side accompanying the chancre. The chancre of course is liable to be mistaken for several days for an ordinary circumtonsillar abscess. I remember vividly to-day the first case of chancre of the tonsil I ever saw. At first I thought that it was a quinsy. When it broke down I felt that I had surely a gumma, until a beautiful secondary rash made its appearance and that impressed upon my mind the importance of suspecting all tonsils which are inflamed and accompanied by cervical enlargement, where the trouble has persisted for more than a couple of weeks. The breaking down of the primary infiltration is as characteristic of the primary sore in the tonsil as it is of the gumma. Of course all tonsillar chancres do not resemble a gumma so much as this one, but their description is foreign to this paper.

A rare form of specific lesion in the pharynx, or rather in the nasopharynx, is the syphiloma or syphilitic granuloma which has already been described at length as occurring in the nose. Krieke (17) described two cases in the nasopharynx. These tumors, according to Krieke, may attain the size of a pigeon's egg. They are grayish-white in color in the nasopharynx; have a smooth surface; and are unusually hard. I should suppose that they might be mistaken in this region for fibromata and other hard tumors of the nasopharynx. They are recognized by their disappearing under antisyphilitic treatment.

The chief symptom of syphilitic infiltration and ulcerations in the pharynx are various degrees of disturbance in swallowing. At first there is little or no difficulty, but as the tumor develops there is a sensation of a foreign body in the throat. This may be accompanied by dryness of the throat or increased secretion. As soon as ulceration makes its appearance in the lower pharynx, swallowing becomes very painful, and the act of deglutition is greatly interfered with. The timbre of the voice becomes nasal or anginose. If the velum is indurated or perforated, food, especially fluid, passes into and through the nose.

Syphilis of the nasopharynx may not interfere with deglutition. The principal symptoms of trouble here, however, are the enormously increased secretion with headache, loss of flesh and cachexia.

THE MOUTH.

Circumscribed and diffuse gummatous infiltration are found in all parts of the mouth. They are seldom found in the mucous membrane of the cheeks and when they do occur it is near the corners of the mouth; they may also be found on the lips. In these locations the infiltration is usually in the form of diffuse hard indurated patches covered with a deposit of gray epithelium. Rarely are the gums and floor of the mouth attacked.

The tongue is the part of the mouth which suffers most frequently from tertiary syphilis, and then usually in men in whom the irritation of alcohol and tobacco contribute considerably to the production or increase of the trouble.

Fournier (28), who wrote an article on tertiary glossitis as long ago as 1877, has divided tertiary syphilis of the tongue into a gummatous and a sclerotic form, and both of these he divides again into superficial mucous and deep parenchymatous forms.

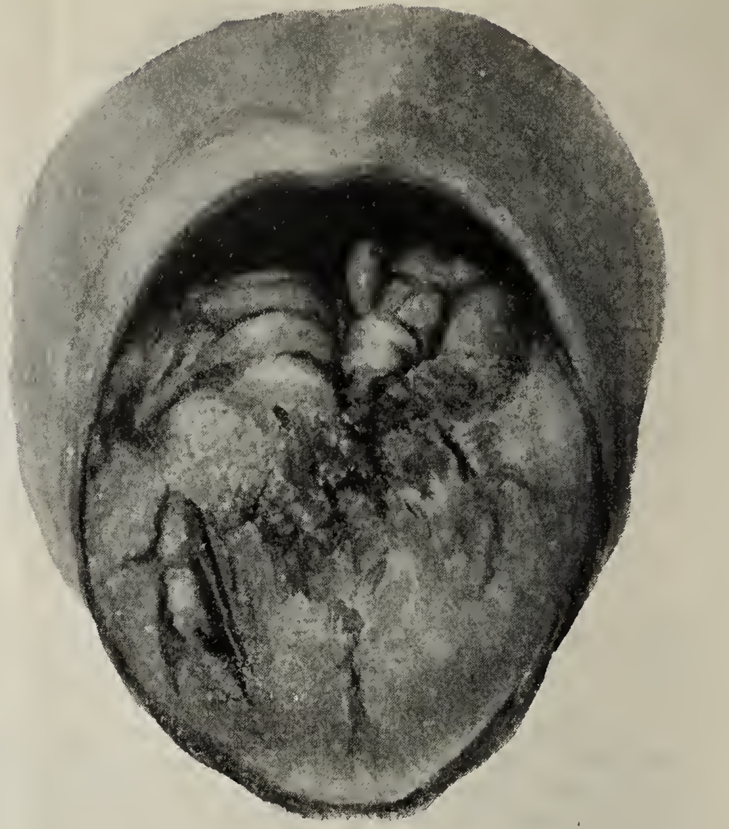

FIG. 18.—Copy of Fig. 2, Tafel XXXIV, in Mikulicz and Michelson's *Atlas*. It represents so-called lupus syphiliticus of the mucous membrane of the tongue, also known as the sclerotic glossitis of Fournier.

The sclerotic forms of glossitis do not break down and ulcerate as do gummata here and elsewhere, but the inflammatory processes are at once transformed by shrinking into sclerotic cicatrices. Gummata of the tongue form either in the mucous membrane of the tongue or in the muscles or interstitial tissue of that organ, and vary in size, when circumscribed, from a pea to an apple. They occur most frequently in the anterior portion of the tongue, but may be found on the edges, in the middle, or on the

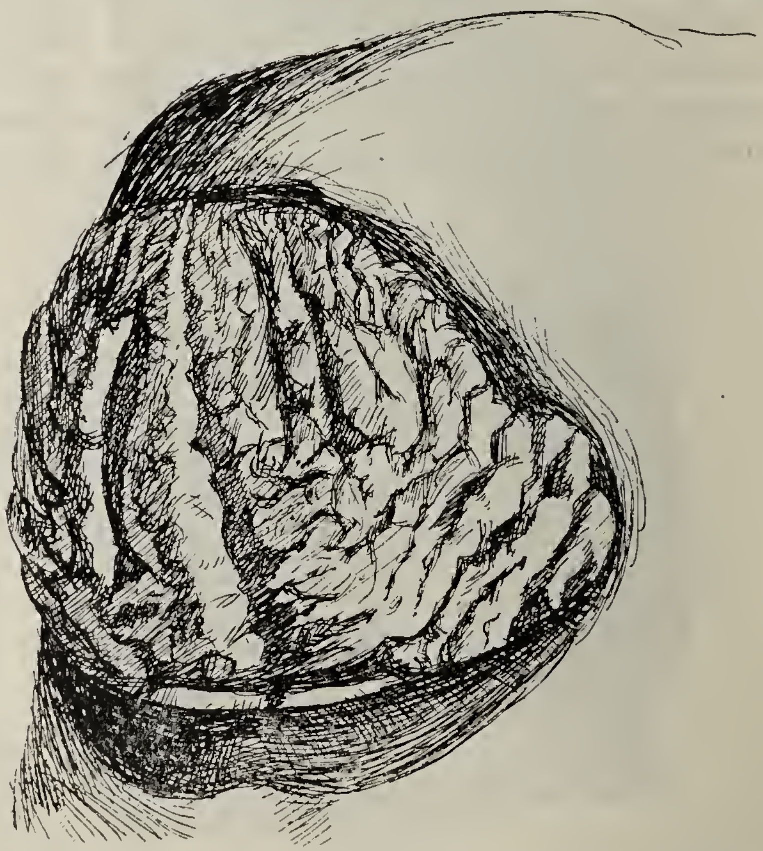

FIG. 19.—Copy of Fig. 2, Tafel XXVII, in Mikulicz and Michelson's *Atlas*. It represents a macroglossia with furrows.

tonsil of the tongue. Dr. G. H. Makuen (31), of Philadelphia, read a paper in 1901 before the American Medical Association, describing an ulcerated gumma confined to the lingual tonsil. This was the only evidence in the case that the patient was suffering from tertiary syphilis. Escat (32) has described in his own practice two cases of gumma of the lingual tonsils with no other manifestation of the disease. Several authors (33) have described gummata of the lingual tonsils, which, however, were accompanied by gummata elsewhere, either in the faucial tonsils or on the edges of the tongue. Escat says that gummata in the lingual tonsil develop slowly and appear after a few months as smooth, claret-colored tumors. As they break down, they are said by Seifert (34) to be difficult to diagnosticate from carcinomata. Sometimes several small and large gummata are found near each other upon the surface of the tongue, or the whole of one side or the whole of the anterior portion of the tongue is a hard gummatous mass. Gummata of the tongue develop as hard, elastic, circumscribed nodes, which involve the mucous membrane or are situated just beneath it or are deep seated. They consist of large or small flat or uneven tumors. When the superficial gummata break down they form characteristic ulcers with undermined borders. But when the ulceration commences deep in the substance of the tongue there may be seen only a tear in the mucous membrane of the tongue. When the borders of this fissure are separated, a deep ulcerated cavity is brought to light. Many gummata have no tendency to break down, and remain for years as hard tumors of the tongue. Recently a case of tertiary syphilis of the tongue came under my observation where a fissure of the tongue led to a deep ulcer on the side of the tongue near the base, where the only symptom besides difficulty in swallowing was severe otalgia. Otalgia has been pointed out as a constant symptom of syphilitic ulceration in this location. This patient was referred to me for treatment of her ear, as she was suffering likewise from chronic deafness.

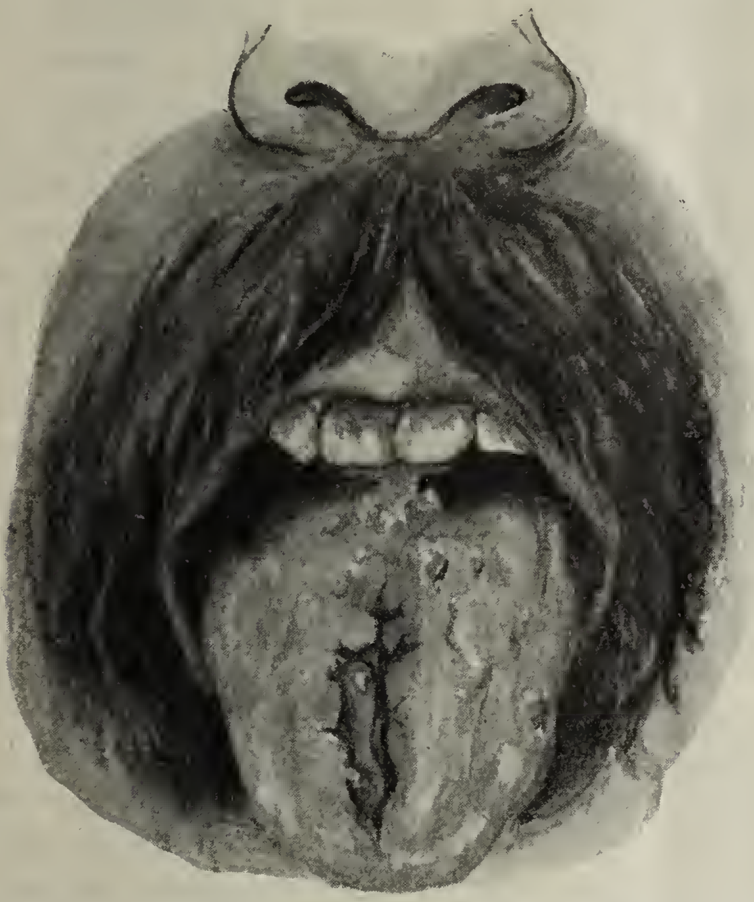

FIG. 20.—Copy of Fig. 3, Tafel XXXIV, in Mikulicz and Michelson's *Atlas*. It is a reproduction of tuberculosis of the tongue.

In the sclerotic form of syphilitic glossitis extremely hard infiltration of the tissue takes place, on the surface, in the mucous membrane, or in the deep parenchyma. This takes place usually on the dorsum of the tongue. The patches of induration upon the surface are raised somewhat above the surrounding tissue of the tongue, are oval in form, and are sharply defined, and their surface is smooth, as if shaven, due to the destruction of the papillæ upon their surface. These spots are closely packed together or are spread out in flat indurated areas.

The first stage of the deep parenchymatous form of sclerotic glossitis is less striking. Here the infiltrations are still covered by a smooth unaltered portion of the tongue. They show the same smooth and deep red mucous membrane as the other form but are not at all, or but slightly, raised. This form is also multiple, as is the other form.

A frequent complication of both forms of sclerotic glossitis are the fissures and erosions which occur, especially on the borders of the tongue, which are usually occasioned by some mechanical influence, such as the rough stump of a tooth or the tartar on the teeth, which comes in contact with the diseased tongue which has lost its natural softness and elasticity. These crevices and fissures may attain great depth and often get into a very painful condition; any movement of the tongue during chewing or speaking being very painful. Fig. 18 shows a large fissure of this nature on the right side of the tongue. This must be distinguished from the condition of the tongue in Fig. 20, which is tuberculous. The tuberculous ulcer of the tongue is not usually on the dorsum but on the under surface of that organ. The use of alcohol and tobacco greatly increases the severity of the painful condition. Although these conditions are greatly aggravated by alcohol and tobacco, yet these fissures may attain great size in cases where neither are used. In both forms the deposit of inflammatory tissue is changed into a form of scar tissue. The character of this, of course, varies with the position of the infiltration. The superficial infiltrations change to more or less broad dense patches on the surface of the tongue over which the mucous membrane extends. The surface, as said before, is deprived of its papillæ and looks pale and atrophic. The deep inflammation, on account of the contraction of the sclerotic tissue, is followed by deep-cut furrows. These usually leave a furrow in the median line which, together with those on each side, form a meshwork resembling the veins in the leaves of a tree. The ultimate result of this is a picture resembling somewhat the congenital furrowed tongue, the so-called lingua plicata. Compare Fig. 18, syphilitic, and Fig. 19, congenital, lingua plicata.

The surface of the folds in the congenital lingua plicata have papillæ, while the furrows are devoid of papillæ. In the sclerotic glossitis of syphilis the papillæ are destroyed and the surface is as smooth as if shaved. The most characteristic condition of the congenital lingua plicata is the regularity and equality of the folds and intervening furrows. This condition extends all over the superior surface of the tongue, even to its tip, which is not the case with the sclerotic syphilitic form.

The hard palate is a favorite location for the formation of gummata. They occur usually in the median line, sometimes more anteriorly, sometimes more posteriorly, but especially on the border line between the hard and soft palate. They are found as one or sometimes more circumscribed livid red spots which press out the mucous membrane in the form of knoblike elevations. In more or less time yellowish-white streaks or points show themselves upon the most prominent parts of these swellings, a sure sign that they are beginning to break down. It is not unusual in a case of syphilitic caries of the floor of the nose to find the rhaphe of the hard palate discolored and thickened with a ridge-like elevation along the rhaphe or suture. Through the breaking down of such a gumma, or on account of syphilitic osteitis or periosteitis, round or long perforations through the whole mucous membrane and bone take place and cause a communication between the mouth and nose, which cause nasal speech and regurgitation of food. The destructive process may end with the perforation of the soft and hard palate, but may extend to the exterior of the nose.

Gummata in the mouth produce but few symptoms before they break down. If they are situated on the tongue, the patient will complain of stiffness of the tongue or difficulty in moving it during speaking and eating. If the tumors are large or numerous, the speech is not understood. If the gumma is in the angle of the mouth, there will be a feeling of stretching and tearing when the mouth is opened. Ulceration is accompanied by pain. This may be but slight, but it becomes severe if the ulcers are on the borders of the tongue, where they are subjected to mechanical irritation from the teeth.

(*To be concluded.*)

SENILE PNEUMONIA; VALUE OF PERSISTENCE IN TREATMENT; CORRECT METHOD OF USING OXYGEN.*

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This woman is brought before you to show the results of treatment, or, rather, to illustrate the value of persistence in the treatment of apparently unpromising cases. You observe that she is quite aged. She does not know just how old she is, but she cannot be much less than seventy years of age, and may be older. She was sent over from the out wards, of which she had been a resident for many years, with a history of cough, shortness of breath, and slight elevation of temperature for two or three days preceding her transfer to the hospital. The pulse, upon admission, was about 100, small, feeble, and yet of comparatively high tension, the arteries being sclerotic. The heart's action was feeble and the sounds correspondingly weak. No murmur was detected. Percussion of the thorax revealed numerous areas of dulness scattered over both lungs, and on auscultation there was heard at some of these bronchial breathing, at others bronchovesicular breathing, and over the chest in general pretty nearly all the râles, moist and dry, that are listed in the text books on physical diagnosis, the subcrepitant râles perhaps predominating. The diagnosis thus offered no difficulty. The class has already perceived that we had to deal with a case of senile bronchopneumonia, an ailment of which the prognosis is never light and rarely favorable. Nevertheless, many aged persons recover from severe attacks of catarrhal pneumonia, and I have even seen them recover from attacks of lobar or croupous pneumonia, a less common complaint at the extremes of life than is the bronchovesicular variety, and probably of less gravity in children as it is of graver import in the old. The degree of severity of a case of pneumonia, whether of the catarrhal or of the croupous variety, does not depend upon characteristics that can be tabulated or stated numerically. This patient's respirations during the worst part of the attack ranged from 30 to 40 in the minute, yet I have seen patients whose attacks were much more severe—though hers was by no means a light one—with respirations that scarcely exceeded 32 during the whole course of the disease; and, on the other hand, I have seen patients with croupous pneumonia whose respirations ranged constantly between 50 and 60, concerning whom I have not felt any special anxiety.

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* A clinical lecture delivered at the Philadelphia Hospital.

You must see the individual sick man. You must note the character of the breathing, the color of the lips, of the face, of the hands and the nails, of the cutaneous surface in general; you must observe the physiognomy of the patient, the facial expression in its various degrees of distress or contentment, or of apathy. You must feel the skin and note its warmth, the state of its secretions, its elasticity, its harshness or its pliability. You must feel the pulse and not only note the rate, the strength, the volume, the tension, the condition of the arterial wall, but also consider these in relation with each other, as well as in relation with the respiration and the state of the skin and the visible membranes, the condition of the patient's intellection, the movements of the alæ of the nostrils, and the height of the temperature. Also one must observe the condition of the abdomen, whether tympanitic or the reverse, and if tympanitic, to what degree; and take into account the action of the bowels, the quantity and quality of the urine, the manner and frequency of micturition. In short, borrowing from our homœopathic friends the good phrase that they misapply, we must note the "totality of the symptoms."

Only by such a complete survey of the actual case, and not upon the mere numerals indicating the rate of pulse or of respiration, or on the height or course of the temperature, can one form a just idea of the severity of an attack or formulate a prognosis, or estimate the results of given therapeutic measures.

It is for this reason that I am but little influenced by statistics in determining upon a line of treatment in a given case. It may be true, as some very eminent teachers assert, that the mortality of pneumonia in its various forms varies but little among patients treated by various methods or left untreated. It may be true, on the other hand, as some very enthusiastic advocates of special forms of treatment affirm, that an unusual number of recoveries follow the routine application of ice bags, the routine administration of creosote carbonate, the routine administration of digitalis in enormous doses, or some other routine measure. It is true that all of these conflicting statements cannot be accepted as accurate, and for my part I am uninfluenced by any of them. The individual patient presents problems in therapeutics which have to be solved according to the data present. He is not a mere integer in a column of statistics, but a living, breathing, pulsing individual, albeit his breathing is embarrassed and his pulse disturbed. The symptoms that he presents are the evidence of the struggle of his life forces with inimical forces. They are biological data that are to be interpreted in biological terms, and the solution is also a biological one. The physician must reinforce the vital energies by such means as experience or science suggest, whether or not they have ever been tried before, though, of course, he can have more confidence in those measure which he has previously applied with success under conditions on the whole similar. Also, the physician must, if he can, recognize the inimical forces at work and seek to combat these. He must also, however, realize the truth of the old maxim of Hippocrates: "Above all, do no harm." Unless his interference is based upon definite grounds of science or experience, and has a definite purpose, it is likely to be harmful. The normal recuperative force is the great dependence of the patient. If this is absent the physician cannot give any substitute. If it is insufficient, he can aid it. If it is aberrant, he can guide it in the right direction. If it is excessive and by its excess invites new danger, he can check and control its manifestations. But he must always seek to discern its nature, its direction, its degree, as also the nature, the direction, and the degree of pathological accidents or morbid tendencies against which he has to guard, and so adapt his therapeutic measures as to protect the patient against known dangers without introducing unknown ones—without interfering with the natural course and tendency of the recuperative processes. In the treatment of this woman no new principle and no new measure were introduced. The case, as I have already said, merely illustrates the value of persistence in the application of well known principles and well known measures under apparently unpromising circumstances. We doubted our patient's recovery on account of her low vitality and of the known dangers of catarrhal pneumonia in the aged. She recovered under careful nursing and the faithful attention of the resident physician, Dr. Wormser. Nourishment was given systematically, and consisted largely of pancreatized milk, chicken broth, and soft boiled egg, given every two or three hours as the patient's digestion and comfort seemed to indicate. Tepid sponging was used as a measure of comfort, not of antipyresis; the kidney and bowel functions were carefully looked after.

Of drugs, I find on consulting the record before me that we used from time to time, in accordance with the indications of the particular moment, singly or in combination, nitroglycerin, digitalis, strychnine, atropine, and alcohol. Previous to this there is a record of a mixture of ammonium chloride and ammonium carbonate, coincidentally with strychnine and whiskey. The alcohol that was used in the later period of the disease was in the form of champagne, a luxury which we owe to the kindness of one of my private patients, a charitable lady of this city, who provided us with a store for use in the fever ward, and while it is possible that any other form of alcohol might have served an equally useful purpose, I am yet satisfied from observation in this case and in many similar cases outside of the hospital, that aged patients needing alcoholic stimulation usually receive better service from champagne. It is less likely to disturb the stomach, and it is usually more readily accepted.

Of other measures it may be noted that saline infusion under the skin was given at one time; a useful practice when the injection is made slowly, and does not exceed eight to twelve ounces at a time.

Hot flaxseed poultices, well-made so as to retain their heat for four hours, were kept about the thorax during the day and at night were replaced by a lamb's wool jacket, for the better part of a week. It is important when poultices are used that they should be well made and should retain their heat for four hours, in order that the patient shall not be continually disturbed to change them. Fever patients need rest, not only sleep at night, but rest during the day; hence the periods for the administration of medicine, of food, and for the use of external applications or other measures, must be carefully regulated to give the maximum of rest and the minimum of disturbance. Such matters should not be left to the nurse, but should be carefully prescribed by the physician, and, as a rule, it is best to write the order, fixing definite hours. It is rarely wise to wake the patient, either for food, for medicine, for bath, or for any other application. Save in exceptional instances, sleep will do more to favor recovery than the agent for whose sake it is interrupted.

At one time in the course of the case oxygen was given by inhalation. Oxygen is a remedy of very great usefulness in pneumonia, typhoid fever, and in septic conditions generally, if it is used properly. The mistake usually made is to wait until the patient is three fourths dead, or perhaps nine tenths dead, and then give him oxygen. Oxygen will not revive the dead. It does not work miracles, but, given to the patient in time, it will very often prevent death in severe cases, and will always give much relief; in cases of moderate severity it tends to render the course milder, the recovery more sure. If you want to give oxygen do not be stingy with it. If you want to produce results you must not only give it in time, but give it freely; a bagful every two or three hours is playing with it. Such a method may ease the mind of the doctor and soothe the distress of the family, but it helps the patient very little. Oxygen must be given freely over long periods, unless the patient is distressed by it, as rarely happens, or unless it is necessary to put the patient to sleep and the oxygen interferes with his sleep. As a rule, it promotes sleep, and I have often seen peaceful sleep continue during its use. Nitrous oxide may be combined with it as a sedative to cough and as a sleep-producer—about 8 parts of oxygen to 2 of nitrogen monoxide—or even 6 of oxygen to 4 of nitrogen monoxide, in cases in which opium, which is usually a dangerous drug in pneumonia, would otherwise be needed. I usually employ the purified gas furnished under high compression in steel cylinders, to which a wash bottle and inhaling terminal are suitably attached. The way to do is to turn on the oxygen and put the end of the inhaling tube either in the patient's nostril or in his mouth, according to circumstances, according to the permeability of the nasal passages, according to the consciousness and strength of the patient. You would not want him to run the risk of swallowing the mouthpiece or biting off a glass tube. I would not use a glass tube, except in the nostril, and either in nostril or mouth an iron or hard rubber terminal is better, so that the patient cannot bite on it and break it. Turn on the oxygen at a convenient rate. You determine this by observation, that is, you watch the flow of bubbles through the water in the bottle. The bottle should never be more than half-filled with water; it should not be two thirds full, because by a sudden spurt in turning the key or through some disarrangement of the apparatus, the oxygen may come very suddenly in too great volume and carry water along with it, choking the patient. There must be a sufficient oxygen space above the level of the water. If the oxygen is allowed to bubble over quietly you can judge by the rapidity of the bubbles as to the rate of flow of the gas. This is a matter of experience, *secundum artem*. I have never counted the number of bubbles in the minute; I simply judge by the eye. In a severe case, let the oxygen run for an hour, or for six or twelve or forty-eight hours if necessary, removing it only when needed to give the patient rest or sleep, to feed the patient, or to carry out other portions of the treatment. After two or three hours of continuous administration of oxygen there will usually be sufficient improvement to warrant its intermission for a couple of hours. In milder cases a half hour's use of the oxygen every second or third hour may suffice. You cannot say, give the patient oxygen for ten minutes at a time every two hours, or give the patient half a bag at a time every three hours, or give him two bags at a time every half hour. Its administration must be entrusted to skilled hands, and the dosage must be regulated according to circumstances, and may thus be great or little, long or short, as the case may require at the moment.

With one further observation, I will dismiss this patient. Here is the clinical chart. You notice the low range of temperature. The prognosis in pneumonia, whether bronchopneumonia or lobar pneumonia, is often directly as in the temperature; that is to say, when the temperature is high the prognosis is high, is good; when the temperature is low, the prognosis is low, is bad. In many febrile diseases we look on high temperature as rather an unpleasant indication; but in pneumonia it indicates good reaction on the part of the patient, and I would rather have a pneumonia patient running along with a temperature of 103° or 104° F. than with a temperature of 100° or 101° F., or, as in this case of senile pneumonia, frequently below 100°. The low temperature range shows want of reaction; particularly is this to be noted in influenza. High temperature cases of influenza and pneumonia usually do well. In low temperature cases of influenza and pneumonia, death frequently occurs. I am satisfied that the high temperature shows good vital reaction, perhaps production of antitoxine, the pneumotoxine seeming to be one of the neutralization of which requires a high temperature or the toxicity of which is reduced by high temperature.

This serves to show the futility—if not, as I believe, the danger—of antipyretic medication. Coal tar products, used to reduce temperature, have killed many patients that the disease might have spared. The practice fortunately is not so common as it was ten years ago, but it is still too common. Indeed, many persons die of pneumonia because their hearts have been weakened by coal tar products given in previous illnesses or self administered for headache.

Benedictine Sanitarium, Poughkeepsie, N. Y.—The medical and surgical staff of the Benedictine Sanitarium, of Kingston, is as follows: The Right Reverend R. L. Burtsell, D. D., of Kingston; president of the staff; Dr. Charles Phelps, of New York city; consulting physicians, Dr. Edward J. Janeway, Dr. Joseph Winters (diseases of children), Dr. Pearce Bailey (neurologist), Dr. Martin Burke, all of New York city; consulting surgeons, Dr. William M. Polk, of New York city; Dr. Albert Vander Veer, of Albany; Dr. Fred S. Dennis, Dr. Charles Phelps, Dr. Samuel Lloyd, Dr. George D. Stewart, Dr. William R. Payn, of New York city (gynæcologist); surgeon in chief, Dr. George Chandler; attending physicians, Dr. E. H. Loughran, Dr. R. R. Thompson; attending surgeon, Dr. E. D. B. Loughran; attending neurologist, Dr. W. C. Sebring.

A STUDY OF THE AFFECTION, "WRITER'S CRAMP."

By GUSTAF NORSTROM, M. D. (Stockholm),
NEW YORK.

Among the manifold group of diseases termed neuroses occurs a great number of affections with variable symptoms and consequently under different aspects. We are easily led to include in this term every nervous affection, whose pathological anatomical origin we are unable to clear up from one cause or another. They are usually met with in nervous people, are troublesome to the patient as well as to the physician, but never result in death. This may account for the fact that the pathologicoanatomical substratum of these affections is so little known. We are apt to term these affections functional disturbances without any organic changes, and we feel satisfied to classify them in this way.

Among these neuroses we meet with an affection called "writer's cramp." It is only since 1830 that this affection has been methodically studied, and that an attempt has been made to trace its origin.

Writing alone was mentioned as a cause. It seemed as if the functional disturbance in question was only produced by this act; if this had been the case, it would have been a serious argument in favor of the central origin of the disease; for even if we limit the work to what is strictly necessary and regard writing as a mechanical, almost automatic art, it nevertheless requires a more active intervention on the part of the sensorium than many other acts do which require delicate movements.

Numerous observations show that spasmodic or paralytic affections are not exclusively produced in writing, and that these affections are capable of seriously impeding several acts which require the simultaneous action of several muscles of the hand, the forearm, the arm, and the shoulder.

Professional dyskinesias, similar to those which I have mentioned, have been described in pianists, violinists, metal workers, and others who have to do rather delicate work as jewelers, tinsmiths, mechanics, telegraphists, photographers, seamstresses, cigar makers, milkers.[1]

An attempt has been made to collect all under the same name and to outline a clinical sketch which would apply to one disease. Authors have successively called it graphospasm, mogigraphia, anapeiratic paralysis, professional dyskinesias, contraction through functional abuse, etc. None of these expressions has found much favor, and now, as formerly, it is most often termed "writer's cramp." The term seems to indicate that a necessary contraction exists and that the affection is only met with in writers; this is, however, as I have already said, not the case.

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[1] Layet, *Hygiène des professions et des industries*. Paris, 1875.

The classification of the symptoms has been more fortunate. Duchenne, of Boulogne, whose ideas are still accepted nearly everywhere in France, admits a spasmodic and a paralytic form.[2] Benedikt adds a third one, the trembling form.

From the moment we were agreed on the symptomatology, the object of all discussions and researches was to find out (1) the nature and origin of the disease; (2) its treatment.

It is still Duchenne who is at the head of one of the schools as regards the origin of the disease. The loss of the coordination of the movements predominates the clinical sketch; as Charles Bell, Heyfelder, and many others had already remarked, no anomaly exists, except in certain acts. Persons affected with the disease in question can use both hands in violent exercising without the slightest inconvenience. Those who observe them at this moment cannot doubt the integrity and coördination of the nervous and the muscular system. The affection only becomes noticeable in a complicated act which requires the activity of numerous muscles of unequal importance and size. It is on this account that Duchenne regards the myogenic origin of spasm as improbable: the preservation of the movements without complex associations and the preservation of the electric contractility seem to show, in his opinion, that the muscles have nothing to do with it. This author has seen the affection occur on both sides successively. Persons who cannot write with the right hand any more on account of contraction of the pronator radii teres and of the muscles of the radial region, succeeded in writing fairly well with the left hand; after some time the left pronator teres also became affected by spasmodic contraction. Duchenne admitted that a centre of coordination of the movements of the hand exists in the brain. Professional dyskenesias corresponded to temporary or permanent changes in this centre.

At all events, the writer's cramp was regarded a disease of the nervous system and of central origin, because this afforded an easy explanation and because no other explanation was at hand. One even went further than Duchenne, when one tried to locate the centre admitted by him and indicate its peculiar qualities. Erb[3] does not deny it, but he describes a mechanism different from the one given by Duchenne. According to the former the voluntary motor impressions pass through definite regions of the gray substance which assume, in consequence of habit, a sort of normal coefficient of conduction; if the excitability of these regions is increased the impressions pass to entity and contractions are produced. If the excitability is diminished, fatigue, slight palsy and spasms of the antagonists are the result. According to Erlenmeyer the existence of centres of motor coordination is beyond any doubt.

We have no intention to pass in review all suppositions and all deductions that have been based on this principal hypothesis. Whether the origin of all this was placed in the brain, the bulb, or in the cervical enlargement of the spinal marrow (medulla oblongata) it was of little importance; the writers' cramp remained an affection of the central nervous system and with this knowledge the therapeutics had to find their way.

From 1873 Professor Rossander, of Stockholm, followed the path opened by Poore.[4] Without disregarding entirely the nervous system, Rossander admitted that the secondary changes must be taken into account, and that the original process must be discovered through careful observations of these changes rather than through previous observations. These secondary changes may even occupy a place of first importance. "We may perhaps find that like large rivers, which originate from insignificant sources, the ultimate train of symptoms which leads to the gray substance, has its origin in a small muscle of the hand, which is of secondary utility." Probably the same lesion—always of paretic nature in his opinion—is not found in all cases, because all the muscles of the hand take part, more or less, in the complicated act which constitutes writing.

Neurologists themselves had passed their opinion with a great deal of reserve. Erb, for instance, admits that lesions of the muscles of the hand, even of the forearm, might in some cases have produced dyskenesia.

The faradaic current had utterly failed in Duchenne's hands. Berger and Eulenburg had tried galvanism without being more successful. They even attempted to invent prothetic apparatus, which would permit of writing.[5] In 1881 Zuber declared that mechanical treatment was real pleasantry, and he knew of no effective method. He said the first requirement was to secure perfect rest for the overworked hand. If the circumstances of the patient allow it, he "ought to stop working. If this be not possible, he must learn how to write with the left hand, and exercising a little care, he may then avoid a secondary affection of this hand." The procedures were not numerous enough to cause any embarrassment as regards their choice; if a dyskenesia prevents a person from writing, let him discontinue it! It does not allow him to follow his profession any longer. If he is a pianist, a watchmaker, a jeweler, etc., he must change his occupation. The therapeutics was summed up in this. It is easy to understand how any medication, which had yielded the least success, was received with favor, almost with enthusiasm. Zuber had spoken of frictions, either alone or combined with medicinal injections; of mechanical irritations of the nervous trunks by means of the fingers (Nervenschütterung); all these means had yielded some success. Rossander's procedure is perhaps not quite as conclusive, because at the same time that he performed massage he used subcutaneous injections of strychnine.

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[2] Duchenne, *Electrisation localisée.*

[3] Erb, in Ziemssen's *Handbuch v. allgem. und spec. Pathologie und Therapie*, Band XII.

[4] Poore. An Analysis of Seventy-five Cases of Writer's Cramp and Impaired Writing Power. *Medico-Chirurgical Transactions*, T. LXI.

[5] See Duchenne, *op. cit.*

Writer's cramp was no longer considered as an exclusively nervous affection. More importance was attached to the muscles. From the moment this notion had gained ground, the time for the application of topic and rational therapeutics was at hand. One of Dr. Romain Vigouroux's articles drew the attention to a method which was better understood and also more complete than those which have been previously mentioned. In his first communication on this subject he mentioned two of Charcot's patients, who have been treated by a schoolmaster in Frankfort, Mr. Wolff, and who had been cured.[6] This work was followed almost at once by an article in which Dr. E. Schott claimed priority. He declared that the procedure in use was employed by his brother, Augustin Schott, and himself, and that Wolff had learnt it from them. It comprised gymnastics and massage. The gymnastics consist of: 1. Passive movements. 2. Active movements, which a second person resists. The massage acts: 1. On the nerves. 2. On the muscles.

We have seen how one successively arrived from the purely empirical and clinical studies of the writer's cramp and painful movements of similar affections at different conceptions on the pathogeny; how only lately notice was taken of the muscular system which was considered as of secondary importance so long as the affection was regarded to be of central origin; we have likewise seen how empiricism had prompted medications which had cured in a sufficient number of cases to attract attention.

I shall now show how I arrived at a more precise idea and appreciation of the matter; how I was induced to compare affections observed in the realm of sensation to those observed in the realm of motion, and how I was led to establish a sort of analogy between writer's cramp and the painful affections of the head.

My attention was attracted by a phenomenon, which I observed first on myself. To massage deposits of real muscular indurations requires constant exercise and forced motion of the muscles of the thenar eminence. Masseurs who are novices, get very tired soon. In order to acquire sufficient strength for long sittings it requires a great deal of practice. Many years ago, when the muscles of my thumb were far from being as developed as they are at present, fatigue manifested itself by phenomena, which reminded me very much of those of the writer's cramp. When I desired to write after a prolonged séance, I was sure of being prevented from it by a trembling of the thumb and the forefinger, very much like that which Benedikt connected with the tremulant form of writer's cramp. At the same time there were swelling and pain on a line with the thenar eminence and in the course of the long flexor of the thumb. When, on the other hand, I massaged with the whole hand, I felt nothing like it, no matter how long the séance lasted. The trembling lasted a quarter of an hour and even longer and then disappeared. Later on, when I got used to it, I no longer experienced anything like this.

An exaggerated muscular exercise can then produce temporary spasmodic agraphy; this cramp succeeds an irritative process of the muscles that are called into play. It remains for us to find out whether something similar is not produced in apparently spontaneous cases and whether instead of an accidental tumefaction, accompanied by pain, there are not in the course of one or several muscles chronic myositic deposits which behave like those which we have seen in the nape and in the neck, and which, as I have shown in a special work, are the most frequent cause of headache.[7]

In October, 1883, I had the opportunity of observing the very fact to confirm my ideas on this subject. The patient, an English lady and a renowned pianist, was affected with the spastic form of dyskenesia. This affection, which had existed some five years, had begun on the right side and extended gradually, after two years, to the left one. She had been treated by several European neurologists. One of her countrymen had called it neurasthenia, and for several months the continuous current was unsuccessfully applied. She had lately also been treated, although without any result, by the method of Schott. When she applied at my office in Paris, I had already treated several patients by Schott's method, and I was determined to examine more carefully than I had done previously the muscles of the forearm and of the hand to see whether I could not find some deposits of myositis. I found not less than fourteen in the arms, forearms, and hands; those on the right side (being of older date) were on the average bigger and harder than those on the left. There were some nodules in the anterior brachial, in the long and short supinator and in the long flexor of the thumb; the dorsal and palmar interossei muscles were tumefied and sensitive to pressure; indurations were even found in the belly of the deltoideus and the big pectoral muscles on both sides. This was an excellent case for examination,[8] but not very easy for treatment. The affection was an inveterate one and of such extent that really rare perseverance was necessary on the part of the physician and the patient in order to remove the indurated areas. Then, again, if I did succeed in restoring the muscles and the articulations affected (there was a small effusion in the joints of the thumb and the forefinger with the metacarpal bones) to their normal state, we should be in an excellent condition to discuss the connection of dyskinesia and the objective muscular lesions. If the primary and chief complaint was cured after the removal of these deposits, there would be abundant reason to believe that the latter were a secondary affection and that myositis was at the bottom of all.

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[6] Romain Vigouroux. *Progrès médical,* 1862, No. 3.

[7] *Chronic Headache and Its Treatment by Massage.* New York. 1903.

For more than two months I gave daily sittings, which lasted for at least half an hour, before I had caused their complete disappearance. At the end of this time nothing of these different indurated areas remained; the most minute examination of the formerly affected regions did not reveal the slightest remnant of the muscular inflammations. For about a fortnight the patient was able to play for rather a long time without getting any cramps; some weeks after the treatment was over she was able to write as long as she pleased without becoming attacked by spasms, fatigue or trembling. (Before the treatment the cramps were produced in writing as well as in playing).

This was then positive proof to me, first, that disseminated or symmetrical deposits of chronic myositis of the hand, the forearm, and the arm might be followed by the classical symptom complex by authors called writer's cramp, pianist's cramp, etc.; second, that when myositis is cured, dyskinesia disappears. Having ascertained this, I could now understand the success I had obtained the year previous in applying Schott's method.[9]

I do not mean to say that all writer's cramps are secondary to chronic myositis; that all of them are cured by massage. There are sometimes cases in which no deposits are found, in spite of the most careful examination; there are others, although exceptional, which we cannot cure by massaging the detailed deposits. Outside of the patient I mentioned, I treated forty-six others; this makes forty-seven cases. In thirty-four I found muscular inflammations, and in thirteen I did not find anything. In these thirteen cases I nevertheless performed general massage of the arm. In some of them, whom I treated for some weeks, I obtained a slight result; in the others I did not obtain anything. I, therefore, did not believe that much could be expected from massage, when nothing tangible could be detected in the muscles. We are not always successful, even in cases most favorable, as is shown by the two following cases:

In November, 1888, I massaged an old notary of Paris, of a very nervous temperament, who for twenty years was suffering from writer's cramp. His affection was so bad that for several years he was obliged to exclusively use an American writing machine. I found deposits of myositis in several muscles of the arm, in the large pectoral muscle and in the shoulder; effusion into the sheath of the long flexor of the thumb, on a level with the thenar eminence; tumefaction of the dorsal and lumbrical interossei muscles. I performed massage for two months without interruption. The muscular inflammations disappeared; the arm became much stronger than before; the pain extending over the whole arm (probably of rheumatic origin), of which he complained, when I saw him for the first time, was gone; but the dyskinesia persisted. In another patient, whose vocation obliged him to write, I found myositis of the arm, forearm, and the hand. I massaged him for seven weeks, but the result was very little encouraging. The cramp was one of seven years' standing; the patient had got extremely nervous and restless, because he was obliged to work in order to earn a living for his family.

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[8] These deposits do not present any special difficulty in being detected even by a novice, when they have arrived at the latest stage of the disease, termed induration. It is not so when they are not so advanced. In the latter case great development of the tactile sense of the thumb, acquired only by practice, is always required in order to reveal them.

[9] It seems to me that in cases which were treated with profit by us after Schott's method, we had to deal with muscular inflammations, probably only slight ones; but not knowing the part they play in the production of writer's cramp, they were not recognized. In performing frictions on the muscles of the arm with the thumb, we never failed to exert, without knowing it, a favorable influence on the deposits of myositis and at the same time on the disease we are now studying.

In these two cases, as in some others of the same nature, I was able to explain my relative failure.

Besides the above named cases, where nothing tangible could be discovered[10] and which were, as we have already mentioned, entirely beyond our treatment, one meets from time to time, although more exceptionally, cases in which the muscular alterations—as in the two cases just reported—are complicated by a great excitement of the whole nervous system. Most of these patients, treated by me, were of nervous disposition before they acquired dyskinesia, while others —almost all professional writers—had become so, a neurotic disposition preexisting, from the day the former condition developed. The anxiety produced by the prospect of an infirmity, which would prevent them from gaining their livelihood, had no doubt contributed to the seriousness of their condition. This state always makes the prognosis worse, because of the extreme reflex irritability which follows it.

I have already given an account of writer's cramp in my *Traité du massage* (Paris, 1891, 670 pages). Since that time I have treated a rather important number of persons affected with writer's cramp. This has strengthened my opinion on the real nature of this disease.

But why do not all those, whose muscles of the arm are the seat of chronic muscular inflammations, develop sooner or later symptoms of writer's cramp? It is because a certain degree of reflex irritability must be added to the local condition already existing, and fortunately this is not often the case.

I am only half surprised at the tendency of some cases to relapse. Myositis of the upper extremity which gives rise to motor cramps, as well as those met with in other regions, have, no doubt, their cause in a rheumatic substratum, and under influence of this diathesis they may be sometimes reproduced, particularly if a focus of these deposits remains behind.

Like other lesions of myositis, they are here often multiple, and sometimes it can happen, too, that the other arm, usually the left one, is taken at the same time, although in a more or less degree. I sometimes found simultaneously myositis of the neck,[11] the trunk and the legs and other affections, which one is used to attribute to chronic rheumatism, as, for instance, effusions into the synovial membranes, arthritis in the carpometacarpal and metacarpophalangeal articulations. The general medication, as usually employed in chronic rheumatism, and particularly thermal treatment, is then very useful, but less as an adjuvant to the local treatment than to prevent relapses.

In the majority of my cases the patients presented the tremulant form in a more or less pronounced degree.

The only treatment applicable in the affection mentioned is massage. This latter must be applied to the muscular inflammations, which are the most frequent cause of the ailment. All other forms of the disease are treated in the same way.

The manipulations which are necessary are effleurage and proper frictions. I shall not stop to discuss the object of each of them. The *modus faciendi* has already been described in the above named work, and I cannot here go into any details.

It is now to be hoped that in future a thorough examination in these affections will be able to detect in a great many cases the presence of peripheral changes of the kind we have just spoken of. Proceeding in this way, we may, no doubt, be able to explain the pathogenesis of writer's cramp, which until a few years ago was entirely involved in obscurity. A successful treatment may then be instituted in the majority of cases of writer's cramp.

Finally, permit me to give the history of two very interesting cases:

CASE I.—Mr. M., thirty-six years old, business man, for three years (since 1884) suffered from writer's cramp. This affection developed gradually. It was considerably increased after great nervous excitement, which he experienced some years ago. He was not able to tend to his business for some time. Formerly he wrote well and quickly; now he is obliged to resort to a typewriter. He cannot play the piano, nor do any fencing; when he has held a foil for five minutes it drops out of his hand. Treatment with electricity (galvanism) continued for 4½ months; then hydrotherapy. General nervous excitement diminished, but the local conditions persist. Injections of strychnine into the arm without any effect. The patient can write rather fairly well for three or four minutes, but before long he experiences a painful sensation of fatigue in the articulation of the hand, which soon extends along the arm to the shoulder. The pen oscillates in the direction of flexion and supination. Clonic contractions of the pronator radii teres, which are distinctly visible on the surface of the arm. The writing is difficult to read; if he writes for some time it becomes quite illegible. First dorsal interosseus swollen and sensitive to pressure along its entire length. Along the palmaris longus muscle, marked induration of the size of a small almond; another one along the common extensor, which presents the consistency of rather a hard cord. The long supinator and the anterior radial are sensitive to pressure, and are the seat of more or less extensive muscular inflammations. Deposits on the humeral insertion of the deltoid; very violent pain on pressure on a level with the pectoralis major.

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[10] These may belong to that form of writer's cramp in which the real cause is probably a disturbance of the coordination of the movements.

[11] This circumstance may explain why it often happens that when one has learned how to write with the sound hand, the latter before long participates in the affection in its turn.

Was recommended to me by Professor Charcot, and I saw him in my office in March, 1887.

Massage. After two months of treatment no deposits of myositis. The patient is able to write as long as he likes, and devotes himself again to piano playing, which he had been obliged to give up too. I received information through a friend of his more than four years later that the cure still persisted.

Case II.—M. T., forty-four years old, violinist, suffers from indistinct pain in both arms for the last fourteen years. Thermoresinous baths, season at Aix, without any permanent results. This man, who is a real artist, is very much affected by his condition, especially since he has not been able to use his violin properly for several years. As time goes on the difficulty increases. It consists in fatigue, which affects the hand holding the bow, and this pain is soon attended by painful tremor of the thumb, forefinger, and the middle finger. Discords are produced, tones are delayed, the notes not well brought out, because the fingers of the left hand can no longer touch the strings with precision. He has consulted several well known nerve specialists in Paris. None of them discovered any local cause. For four months treated with electricity (galvanism and intermittent current) without any results. Influenced by this almost hopeless condition of his affection, the patient has become highly irritable, suffering from sleeplessness and constant agitation, etc. When I saw him for the first time in the middle of September, 1889, this is what I found:

Right arm.—First and second dorsal interossei muscles swollen, especially the last one; great sensitiveness to pressure. Slight effusion into the first intermetacarpal articulation. Nothing in the lumbricoides muscles. Swelling on a level with the opponens pollicis. On palpation seems a little more resistant than normally. At the dorsal surfaces, slight effusion into the sheath of the tendom of the long extensor of the thumb. This can be traced to the upper articulation of the corresponding metacarpal bone. Marked induration near the insertion of the long supinator to the external condyle; another area, less resistant, of the size of an almond in the common extensor. Some effusion into the acromioclavicular articulation, which is very sensitive to the touch.

Left arm.—The adductor and the short flexor of the thumb are sensitive to pressure; the sensitiveness is especially pronounced, in the neighborhood of the corresponding carpometacarpal articulations. The muscles are the seat of some resistance. Deposits on the internal surface of the arm on a level with the lower attachment of the deltoid, along its posterior border. Swelling and sensitiveness on pressure along the upper border of the trapezius.

Massage.—After four weeks evident amelioration; the treatment is then interrupted, because of my leaving Ragatz for Paris. The patient declares his hand to be stronger and more nimble. Treatment is resumed in October. After six weeks the deposits of induration, the tumefactions and the small effusions have disappeared; the patient has regained his former dexterity. April, 1892, his condition was the same.

To these cases I must add another one reported by Professor Henschen, the noted neurologist at the University of Stockholm.[12] This case, as well as those just reported, contribute, it seems to me, greatly to a better understanding of the pathological anatomical changes in writers' cramp.

Case III.—Bookkeeper Petersen had a typical form of graphospasm. He was fifty-six years old, and, as bookkeeper all his life, had been chiefly occupied with writing in the counting room during most of the day, thus supporting himself and his family. Ten years ago the first signs of writer's cramp showed themselves; which being recently much more pronounced, caused him to consult a physician. At the present time he can write but a few words, which have the appearance common in such cases. The letters were written by a trembling hand. When the patient's arm and chest are exposed, one can perceive with satisfactory accuracy the causes of his defective script.

As soon as the patient takes up his pen and would begin to write, we observe that the penholder is spasmodically seized by the thumb and forefinger and pressed against the paper, from which frequently it cannot be removed without much difficulty. At the moment the patient tries to write, the hand and pen are thrown into an oscillatory movement of pronation and supination, and a flexion takes place at the wrist at the same time. Simultaneously a clonic spasm is observable in the supinator longus, whose contractions on the outside of the arm are quite noticeable, and there are tremors in the pronator teres. By encircling the patient's arm with the hand, "in the thumb grip," one can plainly feel these movements, and ascertain moreover that the flexors, especially the flexor carpi radialis, and the extensors, especially those of the thumb and forefinger, participate in the clonic spasms, though in no very marked degree.

The muscles of the upper arm, meanwhile, are quiet and not tense. On the other hand, the pectoralis major is set into a lively muscle play which shows itself externally in the skin. Closer investigation shows that the hinder portion of the deltoid participates in the cramp. Such, in brief, were the general conditions of the case.

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[12] Professor Henschen, although holding the same views in regard to the pathogenesis of writer's cramp as the author of this article, goes a step further. He regards the chronic muscular inflammations as almost exclusively the sole cause of the affection above mentioned. (*Proceedings of Upsala Association of Physicians.*)

In the local examination which followed, by means of careful palpation and proper comparison of the muscles of the right arm with those of the left, the following points were observed:

The adductor pollicis muscle of the right hand was acutely painful and at the same time swollen and thickened to a high degree, and gave that peculiar feeling of resistance, which to the expert masseur so surely betokens the most characteristic symptom of a diseased muscle. The interosseus dorsalis primus muscle was painful and swollen, chiefly at its under, peripheral end. The interosseus dorsalis secundus was slightly painful at a corresponding point; but there was next to nothing observable as to the other two interossei. The thenar muscles were slightly painful.

On the arm, the supinator longus, which is also swollen, is more painful than the others, along the whole belly of the muscle. Similarly the two extensores carpi radialis muscles are painful; and in addition we find a cordlike induration upon them and the extensor communis also. Upon the extensor side, the origins of the extensors of the thumb and forefinger are sensitive and present an abnormal feeling of resistance.

Upon the flexor side painfulness and induration showed themselves in the angle between the supinator longus and the pronator teres (supinator brevis).

The origins of the supinator longus and extensor carpi radialis longus are noticeably sensitive; and there is moderate pain along the course of the brachial nerves; and a painful induration along the lower border of the under edge of the deltoid muscle.

The whole of the pectoralis major shows painful and swollen spots along the course of its muscular fibres; and there is some painfulness in the lower portion of the deltoid also. Massage, cure.

RECTOCOLONIC LAVAGE, WITH DESCRIPTION OF NEW AND IMPROVED TUBES.

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A procedure as simple as the administration of a low, or even a high, enema may seem too trivial a matter for serious discussion. It is our belief, however, that we can, with profit to our patients, discuss subjects even less important than an enema.

During fifteen years of an active general practice and four years of special work in the diseases of the colon and rectum, it has frequently occurred that when an order has been given to either a nurse, some member of the family, or even to a physician, to administer a high enema, the reported result was poor; no result whatever was obtained, the water would not run at all, or it came back scarcely colored, the patient being unable to retain it. You will say at once that the tube had doubled on itself and the distal end returned toward the anus, the water running in and out without affecting more than three or four inches of the rectum. Where the water will not run at all, it is easy to decide that the tube is shut off by being doubled sharply on itself. The result of this is that the patient does not get the benefit of the clearing of the large intestine which he needs and which we expected; and the failures in this regard, if undiscovered, or if it is taken for granted that because no result was obtained the colon was empty, will be responsible for the death of some patients and for much unnecessary suffering in others, as well as for needless worry to the physician in charge.

What is the trouble? Why is it that the tube bends on itself and in some cases it is almost impossible to give a satisfactory high enema? Of course, this refers to cases normal so far as the local parts are concerned, not to strictured or cancerous rectums.

There are three sets of causes for the unsatisfactory high enema: First, the person giving the enema may not know how to do it, having had very little experience, and possessing no knowledge of the anatomy of the parts with which he is dealing. This is true of most of the laity and of too many nurses, trained as well as "experienced." They are told to give the enema and it is taken for granted that every one knows how to do such a simple thing and that they could not help doing it properly. In the training schools very little, if any, of the technique is taught in lectures or by instruction given at the bedside.

Second, the rectum and anus themselves present difficulties in their anatomical structure as well as in their pathological conditions. The valves of Houston and folds of the mucous membrane may catch the end of the tube and cause doubling or prevent its passage. Any diseased condition of the anal canal which gives rise to pain, a tight sphincter that grasps the tube, stricture, cancer, or any growth projecting into the lower intestine, will make difficult the giving of an enema, especially if the tube is old, thin-walled, and soft. Dislocations of the uterus, the wearing of pessaries or other foreign bodies in the vagina, also obstruct.

Third, the most frequent causes are found in the tubes themselves. It was this that led me to give the matter special attenion and is the excuse for having a rectal tube made that overcomes the difficulties mentioned. It is seldom now that a case is found which gives trouble in passing the new tube its full length into the sigmoid.

Harm is often done to the anal canal during the administration of a low enema, either by one's self or another, because the direction of the canal is not understood and followed. The metallic and hard rubber tips nearly all have a sharp lip at the junction of the outer surface with the opening through it, and it is very easy to scratch or injure the delicate mucous membrane of the anal canal while passing them, thus often laying a foundation for ulcers and fissures, the consequences of which are known to all who do rectal work to any extent.

In order to avoid this, patients should be advised that when necessary to take an enema they should use a soft rubber rectal tube of the pattern shown in Fig. 1, except that it need not be more than six or eight inches in length.

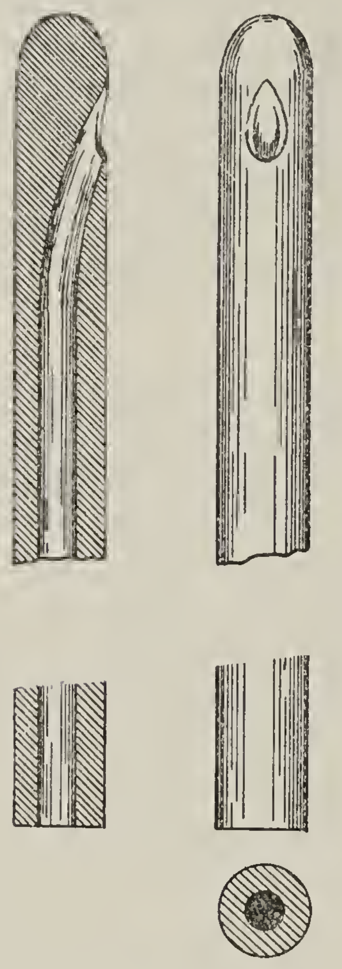

FIG. 1.

On the market we find soft rubber rectal tubes that are open on the end and others that have one or two openings on the sides near the end, with a round tip. The tube open at the end nearly always has a comparatively sharp lip which catches on the tissues and folds of the intestine, sometimes scraping and hurting the patient, as well as helping to double the tube, particularly when it is a little old and soft. The walls of the tube are thin and the opening is large. This tube can easily be kept clean, and in this respect is much better than the ordinary stock tube with the closed end, which is really a pocket that collects and retains fæcal and other foul matter to infect our patients. The opening in the side weakens the resisting power of the tube, and two openings only make it weaker. After oily substances have been applied for lubricating purposes a few times, the rubber in these thin-walled tubes becomes so soft that it is almost impossible for them to be passed without their doubling, even by an expert.

The objections to these types of rectal tubes may be summed up as follows: First, the large lumen, necessitating a thin wall, which makes it too limber to maintain its direction; second, the sharp lip on open end tubes that catches on folds of mucous membrane while being passed; third, the pocket in the closed-end tubes that easily becomes foul and cannot be kept aseptic.

Fig. 1 shows the tube designed to overcome the faults in the old style tubes. The design of the solid end male catheter was used as a first guide, and for this no originality is claimed, except its application to rectal tubes. The end is rounded carefully, so that the tendency will be to ride easily over the rectal folds, the walls are thick and the lumen small, the walls being twice as thick as those of the ordinary tube and the bore only one-half as large; the distal opening is on the side, and the end solid, so that there is no place where foul matter can collect. It can easily be cleaned and kept so. It is made of the best rubber and is very soft and pliable, so that it is difficult to double it upon itself. On account of the extra thickness of the rubber, lubricating on the outside and oily substances injected through have

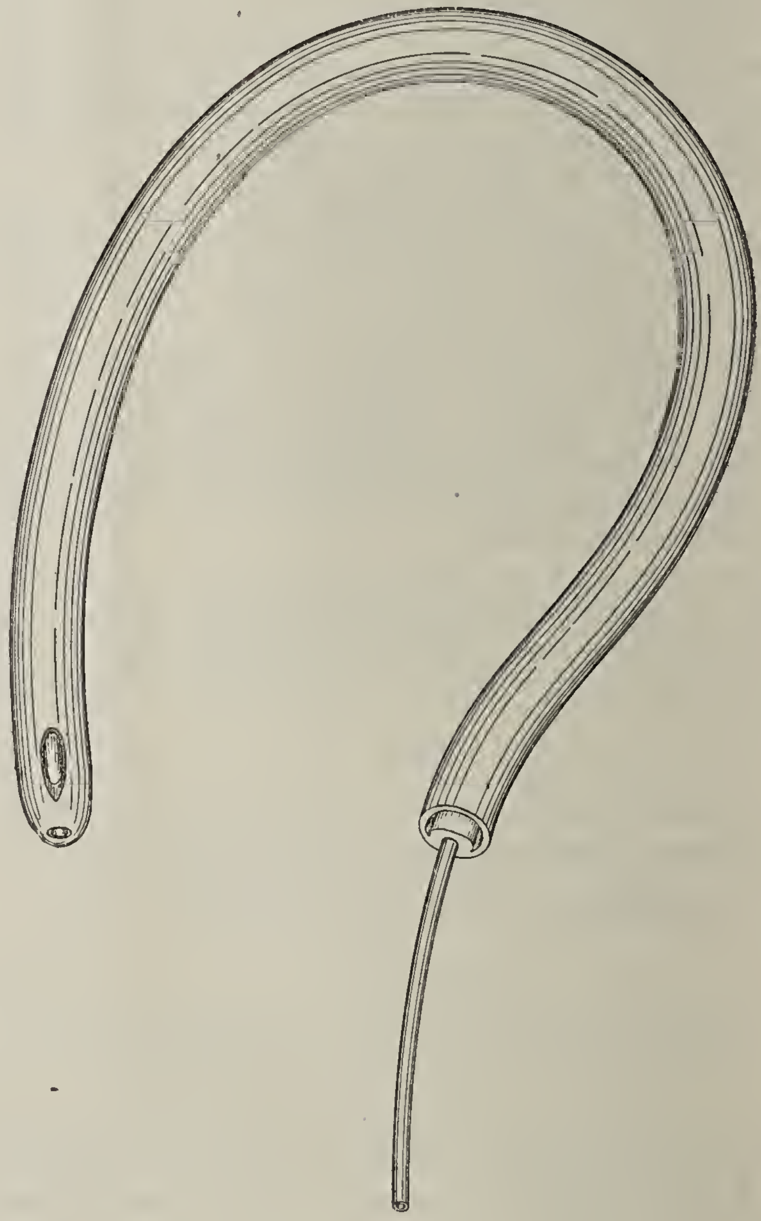

FIG. 2.

a very much slower effect on it, consequently the tube lasts longer than the old style tubes. The ordinary sized tube will be used most often, e.g., No. 25, English.

There are cases wherein it seems almost impossible to make any tube of ordinary size pass the folds so that medical applications can be projected into the sigmoid and colon. To overcome this difficulty a bougie is offered, which is shown in Fig. 2.

This is three-quarters of an inch in diameter, from twelve to fifteen inches long, and has a small lumen three-sixteenths of an inch in diameter. It is made very soft with carefully rounded end, so that it rides easily over the folds of mucous membrane. In case of difficulty in passing either of these tubes, the well-known method of allowing a little water to run through will overcome it, and we need almost never fail. Sometimes, however, a case will be found where the tube will pass through the rectum, but will not go into the sigmoid on account of the narrowing of its entrance. Our only way to get a tube into the sigmoid in such instances is to pass a proctoscope up to the point of narrowing, withdraw the obturator, and guide the tube directly into the sigmoid, which is done without difficulty.

Those tubes are superior to the old style tubes in cases of impaction in the sigmoid and colon. With the extra body of rubber they can be passed by the side of the impaction or be made to penetrate it a little at a time, and with a moderate force of water they will help to break up the fæcal mass.

In the treatment of diseases of the colon and rectum it is often to the advantage of our patients if some practical instrument can be utilized for purposes of irrigation. I show herewith a longitudinal section, a cross section, and a full drawing of a rectocolonic irrigator, made in a single piece of soft rubber. This can be made in any length up to thirty inches. It is very soft and pliable in order to follow easily the lower part of the gut without injuring it; the end is carefully rounded, so that it will not catch in the folds of mucous membrane; the distal outlet and inlet are made on a curve, and the end is solid without a pocket, or "dead end," in order that it may be easily and perfectly cleaned. Being of soft rubber it will not break, and water of a higher temperature can be used than through one made of metal or hard rubber (Fig. 3).

This tube will irrigate the rectum and the lower part of the colon, the lower six inches as well as around the sigmoid flexure. The small tube extending from the inlet is merely to keep the inlet tube from being fouled while in use, and need not be made on the tube, but, instead, a small metallic or glass tube can be inserted. A piece of small rubber tubing connects the irrigator with the reservoir holding the irrigating solution.

One of the serious objections that patients have made to the metallic and hard rubber rectal irrigators in general use is that the sphincter shuts down on the fenestrated openings on each side, both when introduced and withdrawn, and they often complain bitterly of the hurt, some patients having absolutely refused to continue treatments with them. This is entirely avoided in the tube here illustrated, as it is passed without pain, and patients can easily use it for themselves (Fig. 4).

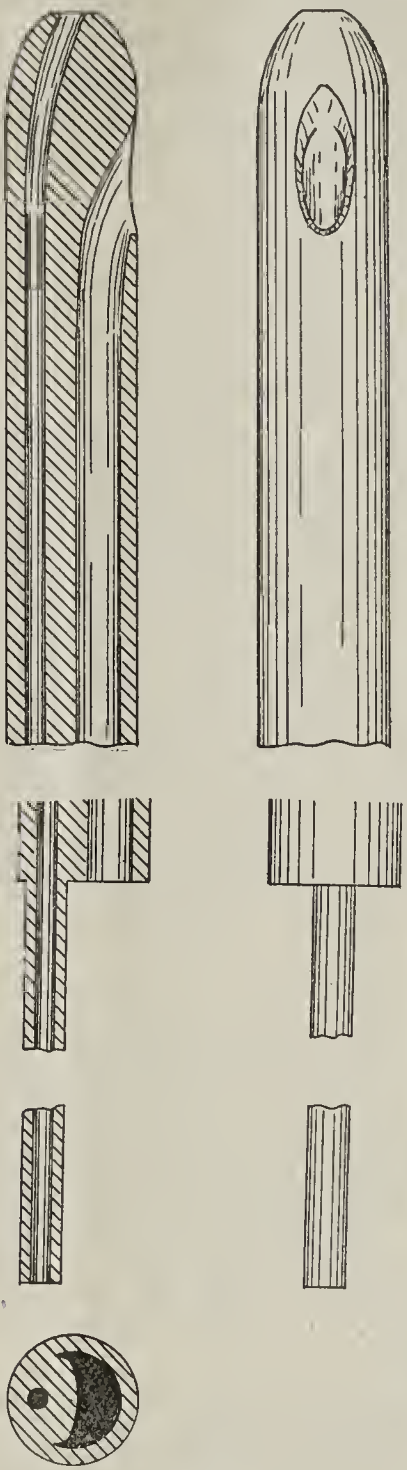

Fig. 3.

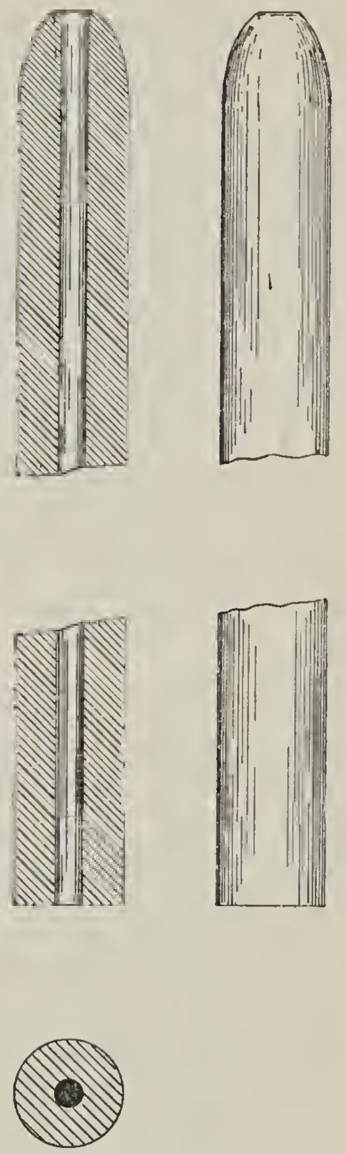

Fig. 4.

A metallic sigmoid irrigator is not favored, because of greater liability to rupture the wall of the gut when it is weakened by ulceration or any degeneration. It is without a return flow and has no advantage as an irrigator over an ordinary soft rubber rectal tube.

If tubes made after these patterns prove of assistance to physicians in overcoming any of the difficulties that they have met with, the object of this paper will have been attained.

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THE NEW BIOLOGIC TEST FOR HUMAN BLOOD, WITH A REPORT OF ITS EMPLOYMENT IN A RECENT MURDER CASE.

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(Concluded from page 440.)

The Medicolegal Tests for Human Blood Employed in a Recent Murder Case.

State of Delaware vs. Elmer Collins.

On the morning of April 12, 1902, a woman, the wife of a young farmer, Elmer Collins, residing near Laurel, Del., was found murdered in the barn. She was lying on her right side with the face somewhat buried in the ground, and with one foot projecting over the doorsill. Her skull was fractured in the occipital and parietal regions and the throat cut below the cricoid cartilage, two attempts at cutting having been made, and the wound concealed by a fascinator which was tied around the neck. The husband was accused of the crime and appeared as the defendant in the case.

The trial, which was the most extensive ever held in the old Court House at Georgetown, presented many dramatic situations, psychological studies, and points of medicolegal interest; but, as the defendant was acquitted on the ground of a "reasonable doubt," a discussion of the more interesting medicolegal points brought out in this case would not be justifiable, now that he is legally an innocent man.

The theory of the State was that the woman was murdered in the corncrib and then dragged to the adjoining barn. Evidences in support of this theory consisted in the bloodstained floor and part of the partition in the corncrib, the presence of raveling from her dress beneath a projecting nail on the doorsill of the barn, the ends of the threads pointing inward and the position of the woman with her instep resting over the doorsill. The defense was forced to admit this theory to be correct, only asserting that somebody other than the husband committed the deed. In view of this admission, and in view of the fact that the presence of blood in the corncrib was not accounted for by the defendant, who stated that he had not seen that blood there before, we are justified in assuming that the theory of the State, at least as to the place where the murder was committed, was substantially correct. This theory was founded on the presence in the corncrib of supposed human blood, the identification of which was made by the writer.

Several pieces of board, chicken manure, and chips of wood spotted with what looked like blood, were submitted to me for examination. No indications were furnished as to the place or places from which these objects were obtained. Only after the examination was complete and the results communicated to the attorney general, did the writer learn that some of the pieces were taken from the flooring and partition of the corncrib, others from the chicken house, the chicken manure from the garden, and again others from the stable.

The following tests were made:

1. The nature of the stains was determined by the guaiacum and hæmin tests. As these are well known, there would be no need of describing either of them, were it not that a slight but useful modification in the technique of the guaiacum test was introduced by the writer. The test as modified is as follows:

The alcoholic solution of guaiacum is freshly prepared by dropping a few pieces of the gum into a beaker containing some 95 per cent. alcohol. In about five to ten minutes the alcohol will have dissolved enough of the gum for the purpose. A good sized piece of white filter paper is then moistened with the solution. A drop or two of distilled water is placed over the suspected stain and gently rubbed by means of a platinum needle. A loopful of the solution of the stain is then placed on the guaiac filter paper, and turpentine that has been aerated for thirty minutes poured over the resulting spot. In the presence of the slightest trace of blood, the spot formed by the suspected solution will gradually turn blue. By the use of the filter paper, the reaction is rendered distinct and unmistakable, and, as has been shown in this case, can be demonstrated to a jury much more satisfactorily than by the ordinary methods. A number of other substances which oxidize guaiacum were tried with this method, but in no instance could the reaction be mistaken for the characteristic spot resulting from blood. In the case of iron and other oxidizers the blue spot appears at once and gradually fades, whilst in the case of blood the spot turns blue slowly and persists. Moreover, other oxidizers turn the guaiacum blue before the addition of turpentine. I am convinced by the results of experiments that the guaiacum test, performed as outlined above, is as delicate and certain as any test for blood.

2. Microscopical examination. This examination was made in the usual manner. The most

satisfactory menstruum was found to be Ranvier's iodized serum (potassium iodide, 2 parts; saturated watery solution of iodine, 100 parts). The reason for this preference is that the iodine stains starch and vegetable cells as well as spores of molds which may closely resemble blood corpuscles. The measurement of red blood corpuscles in very old stains is not satisfactory. The entire disintegration of the clot and the separation of individual corpuscles in sufficient numbers for accurate results are difficult and sometimes impossible. The corpuscles, when separated out, are not fixed and stationary, and the slightest movement prevents accurate measurement. Besides, for medicolegal purposes, the adverse opinion as to the value of the method, expressed by such eminent authorities as Vibert (53), Wormley, Mason (54), Ewell (55), and Chapman (56), completely undermines the medicolegal status of this method. The only real value of the microscopical examination of the blood is in distinguishing mammalian from avian blood, and in our case the microscope enabled us to exclude with absolute certainty some bloodstains which were made by bird's blood, thus indicating that the murder was not committed in the chicken house as was at first suspected.

3. The biological or serum test. To apply this test three rabbits were treated with human blood obtained from the placenta. Several physicians were supplied with sterile, wide mouth bottles, and instructed to slip in the placental end of the cord as soon as severed and allow the blood to run into the bottle. Usually from half an ounce to two ounces of blood were obtained each time. The bottles were placed in the refrigerator and the serum drawn off on the following day. At first, 5 c. c. of the serum were injected into each animal. Three days later 8 c. c. were injected, followed by 10 c. c. five days later, and this dose was repeated until six injections had been made altogether. On two occasions the blood which had been kept in the refrigerator for a week was used without any ill results. Except for a slight elevation of the temperature and a general indisposition following the first two injections, the animals showed no bad effect from the treatment. At the expiration of one week after the last injection, one of the rabbits was bled to death by severing the jugulars, and about 25 c. c. of blood obtained in a small Erlenmeyer flask. The blood clotted rapidly and firmly, and about 15 c. c. of perfectly clear serum were obtained on the following day. This serum was tested on human blood, but no specific reaction was obtained. The mixture of the solution of blood and antiserum remained perfectly clear for ten hours, when a slight cloudiness appeared. Quite discouraged by these unlooked for results, I wrote to Dr. Patek and Dr. Bennet, who had employed this method in a medicolegal case with satisfactory results. These gentlemen could not explain my failure and sent me about 2 c. c. of antiserum which they had obtained a month previously. This antiserum I tested on human blood and obtained a marked specific reaction in two hours. An inquiry directed to Professor Flexner elicited the reply that he could offer no explanation for my failure. Fearing that perhaps the amount of blood injected was not sufficient to produce a strong antiserum, I injected into one of the remaining rabbits two more doses, 10 c. c. each, of placental blood at intervals of five days. Ten days after the last injection I opened the right femoral artery between two loosely held ligatures, and by means of a small glass cannula obtained about 5 c. c. of blood. The vessel was then ligated and the wound closed. No ill results followed this operation. The serum obtained from this rabbit's blood was tested as before, and found to possess marked precipitating properties, giving the specific reaction with human blood, highly diluted, within thirty minutes. This antiserum was used for the medicolegal test according to the following method: One drachm long homœopathic vials were obtained. A portion of each bloodstain was scraped off into an Erlenmeyer flask and normal salt solution added. The flask was agitated at frequent intervals until the solution became perceptibly colored. It was then filtered twice and enough salt solution added to the filtrate to make the red tint barely perceptible. The vials were then filled, leaving just room enough for the antiserum, of which two drops were added to each vial. The vials were stoppered and placed in the incubator at 37° C. At the end of every five minutes for thirty minutes, and every half hour for two hours, the mixtures of blood and antiserum were inspected by transmitted light and against a black background. If no reaction was obtained within that time the results were considered negative. The following stains were tested:

1. Stain on an ear of corn, stain six months old.
2. Stain on a large piece of board, mixed with sand and dirt, stain six months old.
3. Stain on a small square piece of board, length of time unknown.
4. Chicken manure.
5. Stain on a piece of rough board.
6. Stain on a hoe, mixed with sand and lime.
7. Stain on a chip of bark.
8. Stain on a block of wood.

9. Fresh human blood.
10. Human blood on filter paper, several weeks old.
11. Fresh chicken blood on filter paper.
12. Calf's blood on paper, stain two weeks old.
13. Horse's bloodserum several weeks old.
14. Rabbit's blood on filter paper.
15. Stain on quilt with which the murdered woman was covered, stain six months old.

Nos. 1, 2, 5, 9, 10, and 15, showed a distinct clouding within thirty minutes, the precipitate gradually subsiding to the bottom. All other solutions remained perfectly clear for twelve hours, when a slight clouding appeared. The tests were repeated with another portion of rabbit's serum obtained several days later from the left femoral artery of the same rabbit, with identical results. The objects, Nos. 1, 2, and 5, as was subsequently learned, were obtained from the corncrib; Nos. 3, 7, and 8, from the chicken house; and the manure from a tomato patch in the garden. (The microscopical examination of stain No. 3 showed nucleated red corpuscles.)

These findings formed the basis for the theory that the woman was killed in the corncrib and then removed to the barn, a theory which seemed to be supported by other evidence. It is thus seen that, by means of the serum test, all blood stains which we had reason to believe were not made by human blood were excluded with a degree of certainty not attainable by any other known method.

On the witness stand I made the statement that this new test was superior to any other for the identification of human blood and if positive rendered the presence of human blood highly probable. I was not willing to state that the presence of human blood in this case was established "beyond a reasonable doubt," for the reason that this was my first experience with the test, and I did not feel that I was ready to assume the moral responsibility. I felt confident, however, that all things equal, this test furnished more reliable evidence of the presence of human blood than could have been obtained from the most exact measurement of corpuscles, and as to the latter, the warmest advocates of the method claimed only a "consistency with a theory." From a perusal of the rather voluminous literature and my own experiments, I am now convinced of the specific nature of the serum test. Whatever discrepancies may be discovered in the observations of various authors, they can well be ascribed to faulty technique. In this test, as in the Widal test, both dilution and time should be taken into consideration. Given a high dilution (a barely perceptible tint of the solution) and a short time (half an hour to two hours), the appearance of distinct clouding is conclusive evidence that the blood is homologous with that used for immunization. The lower the dilution and the longer the time required to produce the specific reaction the less likelihood is there that the blood is that sought. Under these circumstances the serum test should be accorded the same position in forensic medicine as that given to other expert evidence susceptible of scientific demonstration.

The court was willing to accept the new serum test as superior to the older method of measuring the corpuscles, and the jury was charged accordingly. The defense was also willing to accept the new test as reliable, being guided, I believe, by the opinion of authorities whom they consulted.

CONCLUSIONS.

1. Human blood can be distinguished from that of other animals, except, perhaps, monkeys, by means of antiserum.
2. Antiserum may be obtained by immunizing rabbits against human blood.
3. For immunization, it is most convenient to employ the blood obtained from human placenta, which can be secured aseptically without much difficulty.
4. From 6 to 8 injections, 8-10 c. c. each, should be made at intervals of three to five days, and the serum secured at least a week after the last injection.
5. At the end of the immunization period it is well to test the potency of the antiserum by securing a small quantity of blood from the ear vein or any of the deepseated vessels.
6. To obtain the serum from rabbits for testing purposes, it is not necessary to sacrifice the animal, as sufficient serum can be secured from any of the large veins or arteries, the femoral being the most accessible.
7. Care should be taken to have all solutions perfectly clear and the blood sufficiently dilute. The antiserum should be used pure.
8. Control tests on blood from different domestic animals should invariably be made.
9. With all the precautions observed, a distinct clouding within thirty minutes and a precipitate within two hours is certain evidence that the blood is human.
10. In medicolegal cases the tests should be repeated at least twice, so as to exclude any possible error.

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LETTER FROM PARIS.

Vaccination.—"Race Suicide."—School Physicians' Functions in France.—Marmorek's Theory of the Tuberculin Reaction.—Tuberculosis in the Army.—Spanish Medical Students in Paris.—Increased Consumption of Horseflesh.

PARIS, *February* 13, 1904.

Hitherto vaccination has not been compulsory in France; a new law, however, which will become operative on April 7th of this year, requires every resident in France, native or alien, to be vaccinated during the first year of life, revaccinated at the eleventh year, and again at the twenty-first year. A new knife cuts deep, for I know of no other compulsory vaccination law that affords the three-ply protection that the Frenchman contemplates. Moreover, any Eddyite or Dowieite or other *lusus naturæ* will do well not to visit France when this law takes effect, for, should compliance be refused, their deportation will ensue instanter. For which, doubtless, educated Frenchmen will give thanks to *le bon Dieu!*

The question of race suicide is an important one, and Roosevelt's preachment is strangely similar to the homilies which Jacques Prudhomme has frequently to listen to from the lips of those in high places. The solicitude of the government, therefore, when placed *in loco parentis* is interesting. Institutions for the care of children are carefully supervised, and school hygiene is a subject very widely considered.

For a long time every large school in France has had a physician of its own, and his functions are general as well as specific. It is now proposed, and Dr. Legendre is one of the chief advocates, that the school physicians' duties be very largely extended, and in fact that the plans for future schools be submitted to physicians before being carried out. Dr. Legendre proposes that special rooms be set aside for those students who may suffer from contagious diseases. The physician, moreover, should look into all such diseases as are of parasitic origin; adenoids, eye, and ear troubles, scoliosis, dental decay, and various nervous diseases should also be observed. The hours of study and the causes of backwardness are among other things which the school physician is not called upon to consider with sufficient frequency.

Medical Paris is very much interested in the latest developments of Marmorek's experiments with tuberculin. As a result of these experiments, the familiar febrile reaction would seem to be accounted for, not, as hitherto supposed, by its action upon the tuberculous tissue, but by its action upon the tubercle bacilli themselves. This action is such that for a time the tubercle bacilli secrete an entirely different toxine, which is responsible for the febrile action. In experimenting upon guinea pigs Marmorek's injection of tuberculin followed within a few minutes the inoculation of the animals with tubercle bacilli and the characteristic febrile reaction invariably ensued. A peculiar circumstance, however, is that twenty hours after the inoculation there is *no* tuberculin reaction, and Marmorek accounts for this by the ingenious theory that by that time the bacilli have been taken up by the phagocytes. Later, however, when the bacilli have annulled the phagocytic action, the reaction occurs again. Other circumstances more recondite indicate that the theory has more than mere plausibility to commend it.

No unsophisticated child of Uncle Sam can realize what the word " Army " (with a capital A) conveys to the European mind. The army is a sempiternal verity, and in the national household has all the importance of a rich uncle, so that, were military medicine *not* important, a gorgeous unusualness would attach to the circumstance. The movements of large bodies of men under inadequate medical supervision is bound to be a menace to the health of civilians by the road, and recent Gallic experience is confirmatory. The medical members of the French Parliament assert, and De Lavarenne agrees with them, that the ætiological nucleus of many a consumptive group in France is a returned soldier. Many recruits taken from the open air, says De Lavarenne, and immured in barracks, develop a latent tuberculosis during the first year of military service, and so are not only liable to infect other healthy recruits, but on returning to menace the health of their homes.

A circumstance very often preessential to a correspondent's *bien aise* is that he shall not see what Authority desires to obscure; but now that De Lavarenne avers that thirty seconds was the average time devoted to the medical examination of each recruit at the last examination for the Seine department, all the knowing ones hasten to agree with him. With such an examination (?) it is not surprising that consumptives should be enlisted, and that the genii of the Great White Plague should often walk with the rank and file. These things should interest all good Americans who credit the popular quip anent " all good Americans " and Paris. Unless present precautions are increased, some future historian may refer to this *doux pays* of my sojourn as " The Land of the Hectic Flush."

There is a book, and written therein are many details of the travels of a Spanish student for the infinite diversion of those who read. Ah! Rare *Gil Blas!* But the book is old, and the *tempora* as well as the *mores* have changed, and I would not mention it at all, but that last week at the *bal Bullier* liquid Castilian soothed my ears, for a large number of Spanish medical students have been, visiting Paris, living in the *Quartier Latin*, and dining at the Students' Cooperative Restaurant. One of those committees for which the Paris students are famous met the Spanish delegation. Scientific ardor was everywhere manifest, and, as I have hinted, the *bal Bullier* was thoroughly inspected, not to speak of several delightful cafés on the " Boul' Mich." *T'en as un œil.*

The use of horse flesh is increasing, and thirty thousand horses a year are used for food. Having eaten horse flesh I cannot agree with those who urge its palatability. Besides being less palatable than beef, it is darker and coarser in fibre. It has grown in popularity, however, and the retail price is increasing. The butchers purchase worn out horses for fifty dollars apiece, and after a few weeks in pasture, the animals are slaughtered. As a consequence, there is in certain parts of the country a scarcity of horses for farm work. Of this horse meat diet one may say what the *boulevardier* said of radium, " *C'est très Curie-ux.*"

LETTER FROM TORONTO.

Ontario Medical Association.—Death Rate.—The New Secretary of the Provincial Board of Health.—The Taxation of Physicians in Ontario.—A Hospital for Toronto University Medical Department.—The Investigation of School Hygiene.

Toronto, *February* 15, 1904.

The next annual meeting of the Ontario Medical Association will be held here on the 14th, 15th, and 16th of June, under the presidency of Dr. James F. W. Ross, of Toronto. The general secretary is Dr. Charles P. Lusk, 95 Bloor Street, West, Toronto.

According to the statistics for the month of January, 1904, this city experienced in that month its heaviest mortality. There were 412 deaths, which was seventy in excess of the same month last year. A very large proportion of those who died were old people. Sixty-five cases of pneumonia terminated fatally, and 178 persons died over fifty years of age. Of these, six were over ninety years, 31 over eighty, 39 over seventy, 61 over sixty, and 41 over fifty. There were 26 deaths from tuberculosis and 21 from diphtheria. During the month there were 415 births and 280 marriages. This city is remarkably free from typhoid, only two cases having been reported in January. This is put down to the fact that Toronto has the finest and purest water in America.

The Provincial board of health has a new secretary. Dr. Peter H. Bryce, who for so many years filled that office with great acceptance to the Ontario medical profession, has resigned, and has entered the service of the federal government at Ottawa, as medical inspector of immigration. He will have charge of all medical officers of ports of entry and, in addition, will supervise the medical arrangements for Indians. His successor in the Ontario board of health is Dr. Charles A. Hodgetts, who has been connected with the board for a number of years, having been appointed, in 1900, to the position of chief medical inspector for the Province. Dr. Hodgetts will discharge the duties of both offices and, in addition, will act as registrar general of vital statistics.

The Ontario government is contemplating making a radical change in the Ontario Assessment Act at the present session of the Legislature. Income tax is to be abolished and a "business tax" substituted therefor. Physicians are to be placed in a class that will have to pay this tax on fifty per cent. of the assessed value of their property, or of the property occupied by them in case it is rented. This is altogether irrespective of the regular assessment upon the property owned by physicians. As this Act without doubt discriminates against physicians, an agitation is now under way for its modification, so as to make it equitable in comparison with other professions. A mass meeting of the profession in Toronto was held on the afternoon of February 11th, to devise ways for convincing the government that it is unfair to tax the profession of medicine by any such discriminating legislation.

A hospital in connection with the medical department of Toronto University is a scheme now under serious consideration by those in connection with that faculty. When it is thoroughly under way, it is proposed that it shall have accommodation for all classes of medicine and surgery. The treatment of patients in all cases would be under the observation of the medical students, who now amount to over six hundred. It is stated that what is wanted is an institution similar to the Royal Victoria Hospital, at McGill University, which was founded by Lord Mountstephen, and if some public-spirited citizen of Toronto would come forward with a handsome donation, the scheme would soon be well under way. Another proposal, which will probably materialize in the near future, is one to erect a small building adjacent to the present medical buildings for open clinics, where the students could receive the benefit of seeing and watching these patients at their own doors.

The Honorable, the Minister of Education for the Province of Ontario, recently called a medical conference in this city, as the first step in an investigation of school hygiene by the Provincial board of health. One result will in all likelihood be the formation of a medical section, to take part in the annual meeting of the Ontario Teachers' Association, which meets each year in Toronto. Papers were contributed by Dr. P. H. Bryce, Dr. Charles A. Hodgetts, and Dr. Charles Sheard, the M. O. H. of Toronto. Dr. Hodgetts advocated compulsory drill for school boys as the basis for men trained for the militia.

Therapeutical Notes.

Furunculosis.—Brocq, according to *Presse médicale* for February 10, 1904, prescribes the following internally:

℞ Sulphur ....20 centigrammes (3 grains);
Sodium bicarbonate..30 centigrammes (4½ grains);
Cascara ....25 centigrammes (3¾ grains).

M. For one capsule; take one or two daily.

Anal Fissure.—*Journal de médecine de Paris* for February 14, 1904, recommends:

℞ Extract of belladonna......4 grammes (1 drachm);
Populinated lard..........8 grammes (2 drachms);
Cacao butter.......enough to make 15 suppositories.

M. One at night; suspend on occurrence of mydriasis.

Facial Impetigo.—*Clinica moderna* for February 10, 1904, quoting *Medico pratico*, gives:

℞ Yellow mercury oxide..............30 centigrammes (4½ grains);
Zinc oxide } of each.......5 grammes (75 grains);
Pure starch }
Lanolin ....5 grammes (75 grains);
Petrolatum ....10 grammes (1/3 ounce).

M. To be used as required.

Injections in Tuberculosis.—*Clinica moderna* for February 10, 1904, quoting *Medico pratico*, gives the following as efficacious and not very painful:

℞ Pure iodine................½ gramme (7½ grains);
Potassium iodide...........5 grammes (75 grains);
Crystallized guaiacol.......10 grammes (1/3 ounce);
Pure glycerin............40 grammes (1 1/3 ounces).

M. For hypodermic use.

For incipient tuberculous arthritis, the following is given:

℞ Creosote ....1½ grammes (22½ grains);
Iodoform ....4 grammes (1 drachm);
Alcohol ....5 grammes (75 minims);
Sterilized olive oil..........20 grammes (2/3 ounce).

M. For injection into affected joint.

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NEW YORK, SATURDAY, MARCH 12, 1904.

OUR SUBSCRIBERS' DISCUSSIONS.

The attention of our subscribers is drawn to the fact that we have opened Discussion No. XXX, viz.: What are your achievements in improvising surgical instruments and apparatus? Answers will be received until April 2nd.

THE MEDICAL CORPS OF THE ARMY.

The army, which for many years prior to the Spanish war had been limited by law to twenty-five thousand men, was by the act of February 2, 1901, reorganized on a basis of one hundred thousand. The regular Medical Corps, which had numbered one hundred and ninety-two, was increased to three hundred and twenty, a number quite inadequate for the medical service of the new organization. The proportion of officers in the higher grades of colonel and lieutenant colonel was at the same time much reduced, so that the prospect of promotion was greatly impaired. When this became widely known the number of desirable candidates rapidly diminished and resignations multiplied, so that in three years the vacancies created by that act have not been filled. It is needless to say that the surgeon general's advice as to the needs of his department was not considered in this reorganization of 1901.

It is to correct these defects and in addition to provide a satisfactory means of expansion to meet war conditions and special exigencies in time of peace that a bill to increase the efficiency of the Medical Corps of the army has been recently introduced into both houses of Congress. This has been very carefully prepared in the office of the surgeon general, and was considered by the General Staff and approved by that body with only one important alteration, a reduction in the number of officers of the grades of colonel and lieutenant colonel. On the evening of his last day in office Secretary Root gave his approval to the bill in an endorsement written with his characteristic lucidity and forcefulness. He did not agree, however, with the General Staff as to the wisdom and justice of their alteration, and referred back to them that particular question for reconsideration. The full text of his endorsement follows:

> I heartily approve this bill in principle. I consider that it will be greatly to the benefit of the service to abandon the employment of contract surgeons and substitute in their place regular commissioned officers. I do not think the number to which it is proposed to increase the Medical Corps is at all excessive. It seems to me that the presentation of the case by the surgeon general in regard to the necessities of skilled administration of the medical service in time of war is conclusive. It will be easy in time of war to secure an adequate number of physicians competent to treat the sick and wounded, but it will be impossible to secure medical men competent to conduct the administration of the great and complicated medical service unless they are specially trained in time of peace. The lack of a sufficient number of such trained officers in the past has caused untold suffering and the sacrfice of many thousands of valuable lives. It is our present duty to see to it that such a condition shall never exist again. I believe that that can be accomplished only by following the course which has now been indicated by the surgeon general, and approved by the General Staff.
>
> Upon the single question of the relative proportion of majors, lieutenant colonels, and colonels which should properly be accorded to the Medical Corps, the surgeon general wishes to ask reconsideration by the General Staff. That single question, with the assent of the Chief of Staff, will accordingly be relegated to the General Staff for further consideration. Upon all other questions I approve the bill in detail.

The General Staff still adhered to their recommendation that the number of colonels and lieutenant colonels be reduced from twenty of each grade, as recommended by the surgeon general, to twelve colonels and eighteen lieutenant colonels, but the new Secretary of War, Judge Taft, disapproved of this reduction, saying: "The surgeon general's report shows a complete workable system which the amendment by the General Staff truncates and destroys the symmetry of. Then, too, the prospect of promotion which the increased number in the higher grades offers to those who enter the service seems to be absolutely essential to procuring good material for the Medical Corps." The secretary therefore approved the full number of forty officers of these grades asked for by the surgeon general, but, by way of deference to the opinion of the General Staff, reduced the colonels to sixteen and increased the lieutenant colonels to twenty-four, a compromise to which the surgeon general agreed.

The following tabular statement gives the present organization and that provided by the bill:

	Present.	Proposed.
Colonels	8	16
Lieutenant Colonels	12	24
Majors	60	110
Captains and Lieutenants	240	300

This will provide a number of surgeons nearly sufficient for the medical service of the army under peace conditions, and will give a flow of promotion approximately equal to that enjoyed by the Medical Corps of the navy and by the Army Medical Corps prior to 1901. Examinations for promotion are to be extended to all grades up to colonel, instead of being limited to lieutenants and captains, as at present. Failure to pass these will be followed in the two lower grades by discharge from the service with a year's pay. In the two higher grades, of which the duties are administrative rather than professional, the penalty of failure will be debarment from promotion. The old and cumbrous grade titles assistant surgeon general, deputy surgeon general, surgeon, and assistant surgeon will be replaced by colonel, Medical Corps; captain, Medical Corps, etc., as has been recently done in the English service. The contract surgeons, whose anomalous and undignified status has been discussed heretofore in these columns, will be replaced by a Medical Reserve Corps, the members of which shall be commissioned by the President as first lieutenants, and shall have when called into active duty all the authority, rights, and privileges of commissioned officers of like grade in the Medical Corps of the army, except promotion. Their pay will be that of lieutenants of the Medical Corps, with increase for length of service. Officers of the Medical Reserve Corps will not be placed on active duty, except upon their own application, and may accept commissions in the militia and the volunteer troops of the United States. Provision is also made for them to attend the Army Medical School at Washington. It is the desire of the War Department that appointments in the Medical Reserve Corps be sought by a constant succession of capable young physicians who have not yet established themselves in practice, and who, after a few years' experience in the military service, will leave active service for civil practice, retaining, however, their commissions and constituting an eligible list of trained men, available for duty and for appointment to volunteer commissions with higher rank in time of war. Our army is in time of peace the representative and nucleus of the national defense, and the Medical Department is in the same way the special representative of the medical profession. This bill should accordingly claim the personal interest and active support of all members of the medical profession.

EYE STRAIN AND NERVOUS DERANGEMENTS.

A few weeks ago the physicians of New York and its neighborhood received a booklet and typewritten letter from an optician, calling attention to the earnest words of physicians who had studied the intimate association between eyestrain and nervous derangements, and requesting that when such interdependent trouble was suspected, the patients might be sent to him for "mutually helpful cooperation between us." In the letter he says, "It may interest you to know that there are now more than 450 physicians who recommend to us their patients when eye strain is suspected." If this statement is admitted to be true, it suggests the question, Why do so many physicians send their patients for a medical consultation to an optician who advances nothing but his assertion in evidence of his competency as a consultant? Perhaps it is just to assume that these physicians believe the examination of the eyes for glasses to be entirely mechanical rather than medical, that the plea of the specialist to have such patients sent to him for consultation is tainted with self interest, and that they are doing as they would wish to be done by, when they send their patients to opticians to have their eyes examined. If they can go into a store and pick out satisfactory reading glasses for themselves with or without the aid of the proprietor, this feeling is naturally strengthened, unless they remember that there is much difference between a physiologically healthy eye, the near point of which has receded as the result of increasing age, and an eye which, on account of some abnormity, has originated a series of pathological symptoms. When a train of nervous symptoms has been occasioned by the faulty refraction of one or both eyes, the physiological condition of the eyes themselves is apt to become so perverted that the determination of the exact refractive condition is very difficult, and the most expert specialist not infrequently finds it necessary to ask the patient to make repeated visits, so as to enable him to do this accurately. This would not be the case if eyes could be fitted with glasses as easily as a camera can be fitted with a lens, because then the problem to be solved would be a purely mechanical one, capable of solution without medical training. Neither would there be any difference of opinion in regard to the proper glasses to be worn when the eyes had been examined by equally competent men; yet such differences are ment with. In the examination of every organ in the body, the findings of different men depend to a great extent on the accuracy of observation, care, and patience, and the time occupied in each examination. Disagreements of greater or less degree would be expected, or at least would not be a source of surprise, if it was necessary to make a permanent record of the size, shape, and position of each vegetation on the aortic valve, or an accurate description of lesions accessible to the senses of sight and feeling, before treatment could be commenced. Such disagreements sometimes appear when two or more ophthalmologists make permanent records, when prescribing glasses, of what each believes to be the exact deviation from the normal anatomical condition after all adventitious symptoms due to perverted physiological action have been excluded. Such disagreements are evidence of the difficulties to be met with in these cases, and it is not reasonable to suppose that such errors can be avoided by entrusting the examinations to persons who are not supposed to know anything about the physiology of the eye. It certainly seems more reasonable to have the eyes examined and put in order, if necessary, by a competent physician when it is suspected that a certain train of nervous symptoms may be due to some ocular defect, than to entrust them to the care of a man whose chief aim is to sell a pair of glasses.

HYGIENIC DEGENERACY.

At intervals certain pessimists regale their fellow mortals with pictures of the degeneracy of the human race due to the survival of the unfit who, but for hygienic intervention or the life-saving capacity of medicine, would have died. Of course it cannot be denied that the bare survival of weaklings lowers the average of the vitality of the race—that is, for the time being. Some of the pessimists in question are so much disturbed at this state of things that they recommend legislation to prevent procreation on the part of the puny ones whose delicate lives have been saved by the intervention of art. But all this worry is, in our opinion, unnecessary.

We are fortified in our opinion by two considerations. The first of them is that in a fair percentage of cases persons who have been merely kept alive by medical care beget offspring as vigorous as the average. Many a pale and frail man and woman, creatures almost always ailing, are the parents of great, sturdy boys who are the leaders in university athletics, as well as of blooming girls well calculated to become the mothers of children who will prove valuable assets to the community. All this is a manifestation of Nature's constant struggle for the recovery of lost perfection—a struggle in which she far oftener succeeds than fails, if not at the first trial, almost certainly in the end. This is a natural tendency which we do very wrong to overlook or underestimate. It is as much a part of the *vis medicatrix naturæ* as is the force making for recovery in most cases of sickness.

The second consideration that sustains our hopefulness is the frequency with which medical aid not only saves the lives of the puny, but in addition leads them on to ultimate vigor in their own persons. Many a moderately rhachitic infant—one that, to look at, one would consider hardly "worth raising"—has by our art been converted into a youth quite capable of great and sustained exertion of either a physical or a mental sort. Surely these reclaimed weaklings are good for much more than to count in the census; they are notable additions to the world's available workers.

We generally find the ways of Nature better than any that we can substitute for them. Let us listen more to her and less to the faddist. By so doing we shall at least feel that we are following a guide sustained by the results of past ages rather than one swayed and dominated by a single idea—one reasonably sure to be founded on nothing more substantial than plausibility.

THE PROBLEMS OF THE HOSPITALS.

The New York *Times*, of recent issue, in an interesting and intelligent editorial upon this subject, discusses a variety of important considerations, though it omits one which is of great and pressing importance to the profession at large, namely, the relations to the hospitals of the physicians who do not enjoy the advantages which accrue from connection with such institutions.

In almost any community quite the larger part of the profession is included in this list; in a great city it includes an overwhelming majority of the profession. Hospitals are primarily intended for the very poor; no one will object to or deny this statement. They ought to have all that skill and wisdom and humanity can furnish for their necessities. They ought not to have the luxurious surroundings of some of our hospitals.

Charity which is dispensed in such a way is misplaced, and furnishes too great a contrast to the homes which have been given up for the time, but for which the hospital must again be exchanged as soon as the return of health will permit it.

We should not lose sight of the perspective from the different social standpoints, and when such hospitals confront us with their annual deficit and seek increased allowance from the public funds and augmented assistance from the benevolent, it might be well to call attention to certain incongruities in their management and surroundings.

Hospitals may be intended for the rich. There is no reason why the rich should not have hospitals if they want them, as there is no reason why they may not have luxurious hotels, and it is but just to say that some of our hospitals require that their comforts and elegance shall be paid for on the same magnificent scale as is customary with our palatial hotels. Hospitals are not intended for the dispensing of charity to those who are in comfortable circumstances, who can obtain the necessities of life and some of its luxuries, but who deliberately evade the expenses and obligations which sickness entails, because the dispensary or hospital does not shut its doors against them. It is vastly more convenient for them to avoid the disurbance of their households by throwing the entire responsibility upon a hospital, and it is far more economical. For a few dollars a week they can obtain board, nurse, doctor, and medicines, and in some of our hospitals can stay as long as they choose at that price. We will admit that if a surgical operation of any magnitude is to be performed, it is often preferable that it be performed in a hospital. The chances of recovery are often greater in the hospital, and for the class of people referred to, the burden of expense might be greater than they would feel justified in assuming. It is a fact, however, that serious operations are constantly being performed in the homes of those who are in moderate circumstances, with good results, without excessive expense, and with the consciousness to those who are most concerned that they have courageously and properly sustained the trials which came to them without becoming objects of charity. We will also admit that there are certain medical cases which can be better treated in a hospital, under constant medical surveillance, irrespective of the financial ability of the patient.

The idea, which seems to obtain in some quarters, that doctors are anxious to place their patients in hospitals whenever an operation is to be performed or an illness assumes a serious aspect, is certainly erroneous. With the sharp competition which prevails almost universally at the present time, and the meagre rewards for medical service, there are few who would take this course, abandoning the control of their patients, perhaps indefinitely, unless they were thoroughly convinced that it was the only course which would conduce to the patient's welfare. The cause of the average doctor at the present time is one which should appeal strongly to his brethren who are more favorably circumstanced.

The editorial in question recommends a reorganization of the hospitals for the purpose of securing to the poor the services and accommodations which are now being absorbed to a considerable degree by those who are not properly entitled to such charity. The plea for the poor is well taken, but such a reorganization should be just as earnestly desired on behalf of the doctors, who are in the field for the purpose of getting a living by caring for the sick and injured, and who ought to be in charge of many of those who are now in hospitals. It is a good time for our brethren who have hospital appointments to cooperate with those to whom the administration of the hospitals is entrusted, and see that the legitimate objects of the hospital are carried out. It will also promote and encourage *solidarity* in the profession, and in that particular the profession may well follow the lead of the more enlightened labor organizations.

Andrew F. Currier.

COLUMBIA UNIVERSITY AND THE NEW YORK COLLEGE OF PHARMACY.

The trustees of Columbia University voted, at their meeting last Monday, to incorporate the College of Pharmacy of the city of New York in the university on terms similar to those by which Barnard and Teachers' College became a part of Columbia several years ago. This action cannot but be regarded as a very important one, both for the university and for the College of Pharmacy. For the university it means the inclusion of one more profession resting upon a scientific foundation within the scope of the university ideals and university influence; while for the College of Pharmacy it means an intellectual association and cooperation which must prove of the utmost value, as making directly for the elevation of the standard of pharmaceutical education generally, and enriching the course of instruction under university auspices and university guidance.

COMPARATIVE PATHOLOGY AND THE ÆTIOLOGY OF DISEASE.

In an interesting article by Bashford and Murray, in the *Lancet* for February 13th, reference is made to the fact that malignant growths have been found in all the domesticated animals and in many other vertebrates, their clinical, pathological, anatomical, and microscopical character being identical with those found in man. This observation is, of course, not new. But they further point out that the great diversity of the conditions of life of all these animals must be taken into consideration in the search for the essential factors of cancer, which, in their opinion, must be sought in the potentialities inherent in the body cells. Comparative pathology has had its due in the investigation of tuberculosis; it would be well if it were kept more in mind in the investigation of other diseases; then many fanciful ætiologies, based upon a review of the limited conditions affecting the human species, would be strangled in their birth. The assiduous investigator, for instance, who, as the result of extensive observations, thought he had found the cause of cancer in the excessive consumption of swine flesh in various forms would have been given pause by the knowledge that cancer occurs in cattle. He might get over its existence among Jews by suggesting that they were not all strict practisers of their principles; but such an argument would not avail him in the case of graminivorous animals.

"REFRACTING OPTICIANS."

Our Transatlantic Cousins are seemingly afflicted by this threatened pest as well as ourselves. We learn that Dr. D. C. Lloyd Owen, who is consulting surgeon to the Birmingham and Midland Eye Hospital and honorary ophthalmic surgeon to the General Hospital, Birmingham, has felt it incumbent upon him to resign his membership in the Spectacle Makers' Company, because that guild has taken upon itself to institute an examination and issue a certificate in sight-testing. The "refractory optician," like the Colorado beetle, is clearly *inimicus humani generis.*

MR. RABY'S LOST OPPORTUNITY.

The death of Mr. Noah Raby, of Eatontown, N. C., at New Brunswick, N. J., is a sad item of recent news. Mr. Raby, according to his statement made a short time ago, was one hundred and thirty-six years of age. He had been a constant user of liquor and tobacco for one hundred and twenty years. We wish to impress upon the profession that such habits, sooner or later, will do their deadly work. But for the insidious sapping of his vitality by these lethal agents, Mr. Raby might still have been with us and, what is more important, would have served as a triumphant argument for "antis" of every description.

THE STRENUOUS LIFE.

According to the *Medical Press,* for February 3rd, a notice has recently been published in Berlin calling for a German dentist for the Emperor of Korea, on a two years' engagement, at a monthly salary of 300 yen, etc. His duties consist of a consultation once a week at the palace, and private practice is allowed. Considering the present grave state of affairs in Korea, this is obviously a case of *chorea gravidarum* (rerum).

News Items.

Society Meetings for the Coming Week:

Monday, *March 14th.*—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medicohistorical Society (private); New York Ophthalmological Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence; Gynæcological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private).

Tuesday, *March 15th.*—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

Wednesday, *March 16th.*—New York Academy of Medicine (Section in Genitourinary Diseases); Woman's Medical Association (New York Academy of Medicine); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); New York Society of Dermatology and Genitourinary Surgery (private).

Thursday, *March 17th.*—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

Friday, *March 18th.*—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Postgraduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynæcological Society; Manhattan Medical and Surgical Society (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending March 5, 1904:

	Week end'g Feb. 27.		Week end'g Mar. 5.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	1,239	18	1,435	30
Diphtheria and croup	368	57	408	41
Scarlet fever	452	32	551	27
Smallpox	..	..	1	..
Chickenpox	112	..	136	..
Tuberculosis	419	180	405	188
Typhoid fever	40	10	27	8
Cerebrospinal meningitis	..	..	..	11
Totals	2,630	297	2,963	305

Dr. Robert H. McConnell has been appointed visiting physician to the French Hospital, at Thirty-fourth Street and Ninth Avenue.

The Medical Staff of Bellevue Hospital will be increased by four physicians, the City Board of Estimate having made an appropriation of $20,159 for that purpose and to increase the salaries of members of the hospital staff.

The New York Eye and Ear Infirmary is keeping open the Platt Pavilion for the free treatment of cases already under care. New patients cannot be admitted. A number of small gifts have enabled the institution to accomplish this much.

The Bellevue Training School for Nurses has bought, for about $50,000, property on East Twenty-fifth Street, where a six or seven story building will be erected to be used as a training school and nurses' home. The old structures on Twenty-sixth Street will be used in connection with the new building.

Eastern Medical Society Opens Clubrooms.—The Eastern Medical Society of New York city formally opened its library and clubrooms in Clinton Hall on the evening of March 1st. Dr. Abraham Jacobi and Justice Julius M. Mayer made short congratulatory addresses. A concert and collation followed the addresses.

The Orthopædic Dispensary and Hospital, at 126 East Fifty-ninth Street, requires some $17,000 in order to clear up its indebtedness, and makes an appeal for contributions, recalling the fact that there is now a State tax upon legacies to hospitals, so that of a legacy of $5,000 intended to endow a bed in perpetuity only $4,750 goes to the hospital.

The Medical Association of the Greater City of New York will hold a stated meeting at the Academy of Medicine on Monday evening, March 14th, at 8.30. Programme: Observations on Dilatation of the Stomach and on Gastroptosis, by Dr. Robert Coleman Kemp; discussion by Dr. William H. Thompson, Dr. Max Einhorn, Dr. George R. Lockwood, Dr. Achilles Rose, Dr. Robert H. Dawbarn, Dr. George E. Brewer, and Dr. Sinclair Tousey. P. Brynberg Porter, M. D., recording secretary, 150 West Eighty-fourth Street.

New York Academy of Medicine, 17, 19, and 21 West Forty-third Street.—The Section in Medicine will meet Tuesday evening, March 15th, at 8.15 o'clock. Order: Presentation of Cases and Specimens: Trichinosis, by Dr. William B. Noyes. Clinical Reports: Two Cases of Cerebrospinal Meningitis Cured by Intraspinal Injection of Lysol, by Dr. Morris Menges. Papers: (a) Feeding in Tuberculosis, by Dr. John B. Huber; (b) On the Sanitary Surveillance of Tuberculosis in New York City, illustrated by exhibits prepared for the St. Louis Exposition, by Dr. Hermann M. Biggs. Discussion of Papers: Charles Henry Lewis, M. D., chairman, 51 West Fifty-eighth Street. E. E. Smith, M. D., secretary, 26 East Twenty-ninth Street.

The Lying-In Hospital.—In the month of February the Lying-In Hospital, at Seventeenth Street and Second Avenue, had 496 applicants, 181 of whom were admitted and cared for in the hospital wards. The number of children born in the hospital was 139. For the same period in the outdoor department 286 persons applied for assistance and 216 were treated in their own homes. The number of medical visits was 1,006. The resources of the hospital are severely taxed at present, and a large percentage of worthy applicants are turned away for lack of means. Provisions are made for treating 90 patients, 100 beds being vacant on account of the society not having sufficient means to maintain them. On this account the hospital management decided to use for the ensuing year only one ward floor, which contains 62 beds, but it was found impossible to restrict patients to this number and additional accommodation was furnished in order that all cases of peculiar distress and hardship should not be turned away.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g Mar. 5.		Week end'g Feb. 27.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	33	6	26	12
Diphtheria	62	13	54	11
Scarlet fever	89	8	77	7
Typhoid fever	195	19	148	23
Consumption	..	64	..	80
Cerebrospinal fever	..	..	..	..

The German Hospital of Philadelphia has benefited to the extent of $300.00 by the will of the late Emilie Schalinsky.

The Kensington Hospital for Women, of Philadelphia, was the seat of a small fire last week, which was quickly controlled.

The Quarantine upon St. Luke's Hospital of Philadelphia, on account of smallpox which occurred in that institution, has been discontinued.

Philadelphia Hospital.—The recent allegations against this institution, that insane inmates had been maltreated, have been found to be without justification or grounds, by the coroner of Philadelphia.

An Organized Raid against a southeastern section of Philadelphia, which is virulently infected by smallpox, was made last week by the Philadelphia health officials. They vaccinated all who were found to require it, which resulted in 600 vaccinations in one day.

The Jefferson Medical College Hospital, under construction, promises to be one of the best built and equipped institutions of its kind. It is located at the corner of Tenth and Sansom Streets, and is in direct communication with the Jefferson Medical College.

Smallpox in Philadelphia is again increasing, after two comparatively quiescent weeks. Great difficulty is occasionally encountered in vaccinating the negro settlements, and not infrequently police assistance is required in order to vaccinate those exposed, in infected quarters.

Philadelphia Obstetrical Society.—At a meeting, held on March 3rd, the following papers were read: When to Ligate the Cord, by Dr. Alexander Heron Davisson; The Treatment of Prolapse of the Funis, by Dr. W. Reynolds Wilson; Puerperal Neuritis, by Dr. W. R. Nicholson.

Typhoid Fever in Philadelphia is continuing to increase. One hundred and ninety-five new cases were reported for last week, during which sixty cases were reported in twenty-four hours. Most of the cases are reported from West Philadelphia. The board of health is trying to impress the residents with the necessity for boiling water.

The Inspection of the Philadelphia House of Correction, recently conducted by a commission, consisting of Dr. A. C. Abbot, chief of the bureau of health, and Dr. William M. Angney, police surgeon, resulted in a report to the effect that no important sanitary defects were found, although the structure was somewhat antiquated. Attention, however, was called to the bad water supply, some of which is derived for the institution from the polluted Pennypack Creek.

Improvements by Red Cross Society.—At a meeting held in Philadelphia steps were taken by the Red Cross Society to have auxiliary branches established, composed of citizens, who will receive instruction from competent physicians, so as to enable them to give intelligent assistance to the sick and injured pending the arrival of medical attendance or a hospital conveyance. Efforts will also be made to establish volunteer ambulance service in rural districts.

GENERAL

Statement of Mortality in Chicago, Ill., for the Week Ending March 5, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on estimated midyear populations of 1,950,000 for 1904 and of 1,820,000 for 1903:

	March 5, 1904.	Feb. 27, 1904.	March 6, 1903.
Total deaths, all causes	625	674	595
Annual death rate per 1,000	16.75	18.02	16.45
Important causes of death—			
Acute intestinal diseases	27	28	19
Apoplexy	8	17	18
Bright's disease	33	37	21
Bronchitis	30	37	37
Consumption	54	69	62
Cancer	14	32	18
Convulsions	17	11	20
Diphtheria	5	5	8
Heart disease	51	60	48
Influenza	5	9	14
Measles	0	0	4
Heart diseases	51	60	48
Pneumonia	165	151	130
Scarlet fever	3	9	6
Smallpox	0	0	4
Suicide	7	10	10
Typhoid fever	13	10	11
Violence (other than suicide)	31	36	20
Whooping cough	1	0	8

Pneumonia in New York and Chicago.—The following table shows the total deaths from all causes, the deaths from consumption and from pneumonia and the proportions of these latter deaths to total deaths, in New York and in Chicago thus far during the current pneumonia season—November 1, 1903, to March 5, 1904, inclusive:

	New York.	Chicago.
Total deaths, all causes	26,195	10,179
Pneumonia deaths	5,506	2,186
Consumption deaths	2,908	970
Proportion per cent. of all deaths—		
From pneumonia	21.0	21.4
Consumption	11.1	9.5

During the week of March 5th, the total deaths reported in Chicago were 625; from consumption, 54, or 8.6 per cent. of total; from pneumonia, 165, or 26.4 per cent. of total. In New York, total deaths reported, 1,800; from consumption, 188, or 10.4 per cent. of total; from pneumonia, 460, or 25.5 per cent. of total.

The Alton, Mo., Medical Society, at its meeting on February 12th, elected the following officers: President, Dr. Waldo Fisher; vice-president, Dr. G. E. Wilkinson; recording secretary, Dr. Frederick Joesling; corresponding secretary, Dr. Homer W. Davis; treasurer, Dr. H. R. Lemen.

Watertown, N. Y., Typhoid Epidemic.—Dr. George A. Soper, of New York, has arrived in Watertown to take charge of the typhoid fever epidemic, having been appointed State inspector by the health department, so as to have the jurisdiction of the Black River watershed outside the city.

Dr. Albert Vander Veer, of Albany, had a severe fall on February 28th and sustained a Colles's fracture of the right arm.

Dr. Joseph Roby has been appointed deputy health officer of Rochester, at a salary of $100.00 per month.

Minnesota State Board of Health.—Dr. J. B. McGaughey, of Winona, has been appointed a member of this body to succeed the late president, Dr. Franklin Staples.

Asbury Hospital, Asbury Park, N. J.—Dr. F. A. Dunsmoore has resigned as chief of staff of this institution, and Dr. J. Warren Little will fill the position *pro tempore.*

The Augustana Hospital, of Chicago, will receive about $20,000 by the will of Thomas D. Lowther, which will distribute an estate of $300,000 among various Chicago institutions.

Memphis and Shelby Co., Tenn., Medical Society.—At the regular meeting of this society on March 1st, the following officers were elected: President, Dr. Edward Williams; vice-president, Dr. J. L. Andrews; secretary, Dr. J. L. Barton.

New York State Hospital for Tuberculosis.—Dr. John H. Pryor, to whose efforts the founding of this institution at Ray Brook, Essex county, N. Y., is mainly due, has been appointed superintendent. The salary is $3,500 per annum, to be increased probably next year to $4,500, with maintenance.

The Boston Floating Hospital has issued an illustrated report of its work during 1903. Two hundred and ten cases were treated and 351 were denied admission for lack of room. Special mention is made of the food department, in charge of Dr. C. E. Buck. Nearly $20,000 have been raised for the new boat fund.

Chicago School Inspectors.—Medical inspection of the pupils of the Chicago public schools has been provided by the board of education, which has appointed twelve physicians to act as inspectors at a salary of $50.00 a month. Teachers will keep account of the general health of their pupils and report to the inspectors any child whose condition seems to be below par.

Louisville Academy of Medicine.—The annual meeting of the Louisville Academy of Medicine, on February 27th, resulted in the election of the following officers: President, Dr. O. E. Bloch; vice-president, Dr. B. F. Zimmerman; secretary, George Robertson; treasurer, Gavin Fulton. Dr. Thomas Butler read a paper on Blood Examinations from a Surgical Standpoint.

The Tri-State Medical Association of the Carolinas and Virginia, at its annual meeting in Danville, Va., on February 25th, elected the following officers: President, Dr. W. L. Robinson, of Danville, Va.; vice-presidents, Dr. Southgate Leigh, of Norfolk, Va.; Dr. H. A. Royster, of Raleigh, N. C.; Dr. Defoix Wilson, of Spartanburg, S. C.; secretary and treasurer, Dr. S. E. Hughes, of Laurens, S. C.

Consumption Declared Contagious in Nebraska.—The State Board of Health of Nebraska on March 1st promulgated a rule requiring physicians to report promptly for purposes of quarantine, when deemed necessary, all cases of consumption. Any physician, landlord, or householder who fails to comply is subject to a fine of $100. Consumption is thus formally included in the list of contagious diseases.

Danger from Typhoid Fever in Michigan.—A warning to citizens and villages having a general water supply has been issued by the Michigan State Board of Health in its bulletin for February 27, 1904, which indicates that typhoid fever was much more prevalent than the average for the corresponding month in the ten preceding years. Of the reports received more than twice the average proportion stated the presence of the disease. A contamination of the water supply would account for the unusual prevalence of this disease. In winter that does not usually occur in country districts, the contents of privies being frozen so they cannot reach into wells. The unusual reports of typhoid fever came from cities having a general water supply. The inference is that these places are using water from a polluted reservoir, river, or lake, and it is earnestly suggested that the local authorities should promptly notify the citizens to boil the drinking water. It is hoped that the recent fatal experience at Butler, Pa., may not be duplicated in Michigan. Henry B. Baker, M. D., secretary.

Mercy Hospital, of Denver, Col.—Appointments on the medical and surgical staffs of this institution for the ensuing year are as follows:

Medicine—Dr. E. P. Hershey, Dr. J. N. Hall, Dr. M. Kleiner, Dr. C. E. Cooper, Dr. F. W. Kenney, Dr. C. B. Van Zandt; alternates, Dr. A. Zederbaum, Dr. C. B. James, Dr. B. S. Galloway; consultants, Dr. Arnold Stedman, Dr. P. V. Carlin, Dr. H. Sewall, Dr. C. P. Conroy. Surgery—Dr. A. H. Williams, Dr. S. B. Childs, Dr. E. A. Scherrer, Dr. L. H. Kemble, Dr. S. D. Van Meter, Dr. C. Jaeger; alternates, Dr. C. H. McLean, Dr. T. E. Prewitt, Dr. Morris Kahn; consultants, Dr. Leonard Freeman, Dr. J. W. O'Connor, Dr. C. A. Powers. Gynæcology—Dr. C. K. Fleming; alternates, Dr. C. L. Wheaton, Dr. A. H. Harris, Dr. G. M. Edwards; consultants, Dr. William S. Bagot, Dr. T. H. Hawkins Orthopædic surgery—Dr. J. N. Vroom, Dr. A. Silverstein, Dr. H. C. Harvey; consultant, Dr. G. B. Packard. Obstetrics—Dr. T. M. Burns, Dr. J. M. Perkins, Dr. J. C. Hutchison. Neurology—Dr. S. D. Hopkins, Dr. A. McGugan, Dr. G. E. Moleen; consultant, Dr. E. Delehanty. Pædiatrics—Dr. L. B. Brasher, Dr. C. A. Graham. Ophthalmology and otology—Dr. Edward Jackson, Dr. John Chase, Dr. D. H. Coover, Dr. E. W. Stevens, Dr. William L. Hess. Pathology—Dr. J. A. Wilder; alternate, Dr. Philip Hillkowitz. Laryngology—Dr. Robert Levy, Dr. L. B. Lockhard, Dr. William K. Robinson. Dermatology—Dr. J. M. Blaine, Dr. John Henry, Dr. W. H. Davis. Bacteriology—Dr. William C. Mitchell. House physician—Dr. Raymond Mosher. The staff then elected the following as officers: President, Dr. E. P. Hershey; secretary, Dr. F. W. Kenney. Executive board: Dr. E. P. Hershey, Dr. C. E. Cooper, Dr. S. B. Childs, Dr. F. W. Kenney.

The Louisiana State Board of Health has sent a commission, consisting of Dr. Edmond Souchon, Dr. W. G. Owen, and Dr. A. Nolte, to confer with the Mexican health authorities, on the subject of establishing satisfactory quarantine restrictions. The commission was accompanied by delegates representing Alabama, Texas, and Mississippi. An inspection was made of Vera Cruz and Tampico on the gulf, also of the cities where yellow fever prevailed last year. A conference was held with the Mexican Supreme Board of Health, at the City of Mexico. The president, Dr. E. Liceage, explained in detail the measures of sanitation which would shortly be instituted in the Mexican ports on the gulf. The proposition was made to the Mexican board that they allow medical inspectors representing the Southern States to be stationed in various Mexican cities. This was taken under consideration by the Mexican Supreme Board of Health, but so far no reply has been returned.

To Purify the Mails.—Advertisements of a vulgar or objectionable nature that have been given the freedom of the mails will from this time forth come under the ban of the post office department and no medical circulars or letters which are held to be objectionable will be transmitted as in the past. Section 3893 of the revised statutes provides for this action on the part of the authorities and imposes a fine of not more than $5,000 or imprisonment for not more than five years, or both, in the discretion of the court, for violations. In the section are included all prints of a vulgar or obscene nature and all sorts of printed matter coming under that classification. Medical advertisements that have any of the features named will also come under the rule, and already many papers containing such matter have been excluded from the mails. It is the intention of the department to devote every energy to the purification of the mails in this respect and to that end the postmasters all over the country are receiving orders that will enable them to work in accord with that intention.

St. Joseph's Hospital, Denver, Col.—Plans have been drawn and work will soon be begun on the immediate erection of a new five story addition to St. Joseph's Hospital. Special provision will be made in the new wing for the extension of the already excellent surgical facilities, and the larger portion of the fourth floor of the addition will be devoted to one of the largest and best equipped operating rooms in the country. The new wing will face on the alley toward the Gilpin Street side of the block, bounded by Humboldt, Franklin, Eighteenth and Nineteenth Avenues, and will run parallel with the present south wing of the hospital. The main operating room will greatly exceed in dimensions the room in use at present, and will compare favorably with the largest in the country. Adjoining will be a smaller but no less thoroughly equipped septic operating room, an apartment for the administration of anæsthetics, a sterilizing room for the cleansing of instruments, and other appurtenances. Private baths, locker rooms, instrument cases, private rooms for the use of the operating physicians and dressing room will occupy the remainder of the fourth floor. The operating rooms in use at the present time will be retained and used in conjunction with the new room. The third floor will probably be devoted to a large surgical ward, and about fifty private rooms for patients will be provided. The lower floors will accommodate many patients awaiting either medical or surgical treatment, and h top floor will be set apart for nurses' dormitories.

The Rotch Hospital, of Boston, Mass., an institution for the care of sick babies, is planning to erect a building of fifty beds in Longwood, near the new medical school buildings of Harvard University. Contributions may be sent to Mrs. E. P. Motley, 97 Beacon Street, or to Mrs. Charles E. Harrington, 57 Orchard Street, Jamaica Plain.

An Act to Establish a Laboratory for the Study of the Criminal, Pauper and Defective Classes.—The following act has been introduced by Mr. Barnes, read twice and ordered printed, and when printed to be committed to the committee on finance:

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. There is hereby established in the office of the State commission of prisons a laboratory for the study of the abnormal classes, and the work shall include not only laboratory investigations, but also the collection of sociological and pathological data, especially such as may be found in institutions for the criminal, pauper and defective classes and generally in hospitals and schools. The labor and work shall be under the charge of a director who shall be appointed by the governor and receive a salary of three thousand dollars per annum. Such director shall, on or before January first, in each year, make a report to the attorney-general covering his work and the result of his investigations for the preceding year, which report, or any part thereof, the attorney-general may cause to be published as a part of his annual report.

§ 2. The sum of five thousand dollars, or so much thereof as may be necessary, is hereby appropriated out of any money in the treasury, not otherwise appropriated, for the proper equipment of and carrying on the work of the laboratory hereby established.

§ 3. This act shall take effect immediately.

Treasury Department, Bureau of Public Health and Marine Hospital Service, Washington, D. C.—

A board of officers will be convened to meet at the Bureau of Public Health and Marine Hospital Service, 3 B Street, S. E., Washington, D. C., Monday, April 4, 1904, at 10 o'clock a. m., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health and Marine Hospital Service.

Candidates must be between twenty-two and thirty years of age, graduates of a reputable medical college, and must furnish testimonials from responsible persons as to their professional and moral character.

The following is the usual order of the examinations: 1, Physical. 2, Oral. 3, Written. 4, Clinical.

In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate.

The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery, and hygiene.

The oral examination includes subjects of preliminary education, history, literature, and natural sciences.

The clinical examination is conducted at a hospital, and when practicable, candidates are required to perform surgical operations on a cadaver.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur.

Upon appointment the young officers are, as a rule, first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco.

After five years' service assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon.

Promotion to the grade of surgeon is made according to seniority, and after due examination as vacancies occur in that grade.

Assistant surgeons receive sixteen hundred dollars; passed assistant surgeon, two thousand dollars; and surgeons, twenty-five hundred dollars a year. When quarters are not provided, commutation at the rate of thirty, forty, and fifty dollars a month, according to grade, is allowed.

All grades above that of assistant surgeon receive longevity pay, ten per cent. in addition to the regular salary for every five years' service up to forty per cent. after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses.

For further information, or for invitation to appear before the board of examiners, address

SURGEON GENERAL,
Public Health and Marine Hospital Service,
Washington, D. C.

The Medical Society of the State of New York.—The following bills affecting the society, both introduced by Mr. McCabe, have been read twice and by unanimous consent the rule was suspended and said bills ordered to a third reading and printed.

An Act to amend chapter ninety-four of the laws of eighteen hundred and thirteen, entitled "An Act to incorporate medical societies, for the purpose of regulating the practice of physic and surgery in this State."

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section fourteen of chapter ninety-four of the laws of eighteen hundred and thirteen, entitled "An act to incorporate medical societies, for the purpose of regulating the practice of physic and surgery in this State," is hereby amended so as to read as follows:

§ 14. It shall be lawful for the Medical Society of the State of New York and the respective county medical societies to adopt constitutions and by-laws relative to the admission and expulsion of members and the regulation of their affairs; provided that the constitutions and by-laws of county medical societies shall not be contrary to or inconsistent with the constitution and by-laws of the Medical Society of the State of New York, except that each county medical society shall have full and unrestricted power of disposition and control over its real and personal property.

§ 2. Section five and section seven of chapter ninety-four of the laws of eighteen hundred and thirteen, passed April tenth, eighteen hundred and thirteen, are hereby repealed.

§ 3. This act shall take effect immediately.

Also an Act to amend chapter three hundred and seventy-nine of the laws of eighteen hundred and eighty-five, entitled "An act regarding membership in the Medical Society of the State of New York."

Section 1. Section one of chapter three hundred and seventy-nine of the laws of eighteen hundred and eighty-five, entitled "An act regarding membership in the Medical Society of the State of New York," is hereby amended so as to read as follows:

§ 1. The Medical Society of the State of New York shall have full power to elect such members as may be provided for by the constitution and by-laws of said Medical Society, said Medical Society being hereby empowered to fix and determine the qualifications and conditions of membership therein, and to regulate and control its own membership.

§ 2. Section two of said act is hereby amended so as to read as follows:

§ 2. All acts and parts of acts, whether general or special, inconsistent with this act, are hereby repealed.

§ 3. This act shall take effect immediately.

American Medico-Psychological Association.—As heretofore announced the American Medico-Psychological Association will hold its next annual meeting in St. Louis, May 30th to June 3rd, inclusive, under the presidency of Dr. A. E. Macdonald, of New York. The local committee has wisely decided to hold morning sessions only. Under these circumstances the allurements of the Exposition ought not to detract from the scientific value of the meeting or distract the attention of members. Special railroad rates will doubtless be obtainable, and hotel accommodations at reasonable prices (Planters Hotel) have been provided for. The addresses of welcome will be given by A. M. Dockery, Governor of Missouri, by the Honorable Rolla Wells, Mayor of the city of St. Louis, and on the part of the medical profession of Missouri by Dr. William G. Moore, president of the State Medical Association. The annual address will be delivered by Dr. C. G. Chaddock, of St. Louis. Papers have been promised as follows: Amnesia Clinically and Diagnostically Considered, by Charles H. Hughes, M. D., of St. Louis, Mo.; A Plea for the Voluntary Admission of Certain Types of Insanity in Institutions for the Insane, by James Russell, M. D., of Hamilton, Ont.; A Consideration of the General Conditions Associated with Insanity and Their Connotation Statistically and Otherwise, by H. A. Tomlinson, M. D., of St. Peter, Minn.; Tuberculous Meningitis in the Adult, by Frank P. Norbury, M. D., of Jacksonville, Ill.; A Case of Sleep Talking, by D. R. Burrell, M. D., of Canandaigua, N. Y.; The German Psychiatric Clinics, by E. N. Brush, M. D., of Towson, Md.; Surgical Work Among the Insane, by A. T. Hobbs, M. D., of Guelph, Ont.; The Alcoholic Psychoses, by Henry P. Frost, M. D., of Buffalo, N. Y.; The Mental Conditions Occurring in Cretinism, by Edward E. Mayer, M. D., of Pittsburgh, Pa.; Are the Insane Responsible for Criminal Acts? by John Punton, M. D., of Kansas City, Mo. Papers of which the titles cannot now be announced, have been promised, or provisionally promised, by Byron M. Caples, M. D., of Waukesha, Wis.; James H. McBride, M. D., of Pasadena, Cal.; Richard H. Hutchings, M. D., of Ogdensburg, N. Y.; William Mabon, M. D., of New York, N. Y.; B. M. Worsham, M. D., of Austin, Tex.; Charles K. Mills, M. D., of Philadelphia, Pa.; E. Stanley Abbot, M. D., of Waverley, Mass.; Charles W. Pilgrim, M. D., of Poughkeepsie, N. Y.; Charles G. Wagner, M. D., of Binghamton, N. Y.; C. R. Woodson, M. D., of St. Joseph, Mo.; Dwight S. Moore, M. D., of Jamestown, N. D.; G. H. Hill, M. D., of Des Moines, Ia.; W. P. Manton, M. D., of Detroit, Mich.; William A. White, M. D., of Washington, D. C.; Richard Dewey, M. D., of Wauwatosa, Wis.; George C. Crandall, M. D., of St. Louis, Mo.; C. P. Bancroft, M. D., of Concord, N. H. The secretary will be indebted to members for additional titles for the later programme. Forms for application for membership were mailed recently and additional blanks will be furnished on request. Attention is called to the article from the constitution (amended at the last meeting) relative to the admission of new members. C. B. Burr, secretary, Flint, Mich.

Pith of Current Literature.

ZENTRALBLATT FUER GYNAEKOLOGIE.

January 30, 1904.

1. Extrauterine Pregnancy Carried to Term, By ADAM CZYZEWICZ.
2. Disadvantages of Ventral Fixation, By G. W. MALY.
3. Isolated Rupture of the Sphincter Ani Intra Partum, By W. ROSENFELD.

1. **Full Term Extrauterine Pregnancy.**——Czyzewicz reports the case of a multipara who entered the hospital about four months pregnant. The combined examination disclosed a slightly enlarged uterus with an abdominal tumor over which placental murmurs and fœtal heart sounds could be heard. At a time corresponding to a full term pregnancy, the uterus began to contract as though in labor, and the child was alive. By laparatomy, the living child was removed, its sac lying free in the abdomen. The placenta had attachments all over the lower part of the abdomen and freeing it resulted in tremendous hæmorrhage which could only partially be controlled by tamponing and by ligature of the broad ligaments. The woman died of acute anæmia. The pregnancy appeared to have developed from the right ovary. The child continued to live. It had a talipes equinovarus and its frontal and occipital bones were pressed under the parietals due to prolonged pressure upon the pelvic bones.

2. **Disadvantages of Ventral Fixation.**—Maly narrates the histories of two women upon whom a ventral fixation had been performed. In one, subsequent pregnancy developed a ventral hernia and later copious hæmorrhages followed. The second patient had to be subjected to version and extraction in labor. Maly, in speaking of the relative merits of ventral fixation and the Alexander operation, says that the objection to the latter on the ground that it may be productive of a hernia, is poorly taken, since, if the operation is properly performed, it constitutes, like the Bassini operation, a radical cure for hernia. The other objection to the Alexander operation, that it compels a ligament, already unduly stretched, to support the uterus, he answers by affirming that the uterus can be better supported by its natural ligaments, even though they have been somewhat stretched, than by artificial adhesions, as is the case when the operation of ventral fixation has been performed.

February 6, 1904.

1. Vagitus Uterinus, By C. J. BUCURA.
2. Vagitus Uterinus, By A. SIPPEL.
3. Review of Winckel's *Handbook of Midwifery*, By DOEDERLEIN.
4. Eclampsia and Vaginal Cæsarean Section, By WESTPHAL.

1. **Vagitus Uterinus.**—Bucura considers the physiological elements in those cases in which the child cries in utero and is subsequently born alive. He reports a case of this kind and says that the cry is evoked by a reflex stimulation of the skin of the child by the hand or by an instrument. He brings forth ingenious arguments to prove the possibility of intrauterine crying.

2. **Vagitus Uterinus.**—Sippel takes issue with Thorn who maintains that the vagitus uterinus is not a cry of the fœtus but is due to a vibrating fold or membrane in the vagina upon the entrance of air. Sippel maintains that the cases reported by good observers are too numerous not to be accepted. The laws of Nature, he remarks, are wonderful in their operation, and the fœtus in utero is no exception.

4. **Eclampsia and Vaginal Cæsarean Section.**—Westphal says that the two dangers of this form of operation are infection and secondary hæmorrhage. As to the first element, the danger of infection is no greater than that involved by the introduction of a colpeurynter and the vagina, especially in poor surroundings, is almost impossible to sterilize. The danger of hæmorrhage can be avoided by tamponing the uterus, as suggested by Dührssen, who introduced the method.

BERLINER KLINISCHE WOCHENSCHRIFT

February 1, 1904.

1. Cytodiagnostic Examination of Cerebrospinal Fluid, By E. MEYER.
2. Perityphlitis, Peritonitis, Meteorism, By A. OPPENHEIM.
3. Increase of Secretion of Nursing Mothers, By T. ZLOCISTI.
4. Prognosis of Malignant Growths of the Chorioid, By J. HIRSCHBERG.

1. **Cytodiagnosis.**—Meyer reviews the literature of the subject and reports on thirty-five examinations of his own. In fourteen cases, eleven of which were undoubtedly instances of paralysis, and the remaining three suspicious cases of spinal disease, a decided lymphocytosis was found on examination of the cerebrospinal fluid; and in four other cases, a leucocytosis was present. In seventeen cases of so called functional disease of the spinal cord, no lymphocytosis was demonstrable. The lymphocytosis is evidently proof of organic disease, as has been shown by previous writers on the subject. The clinical diagnosis must, however, always reinforce the examination of the cerebrospinal fluid.

2. **Perityphlitis.**—Oppenheim gives the clinical histories of a number of cases which show the importance of differentiating the localization of meteorism. Meteorism of the stomach without peritonitis can be fatal. The author emphasizes the diagnostic and prognostic value of a leucocyte count, and the diagnostic importance of the disappearance of hepatic dulness in cases of intraabdominal inflammation.

4. **Malignant Growths of the Chorioid.**—Hirschberg has collected and reviewed the cases of other operators, all of whom have had worse results than he in the treatment of these neoplasms. Hirschberg finds that after the third decade of life malignant growths of the chorioid become more frequent than earlier. In twenty-five per cent. of all cases death resulted from metastasis, but the mortality of the operation itself is nil. In about half of his cases, a cure resulted from operation. The author favors operation of these cases as early as possible.

SEMAINE MEDICALE.

January 27, 1904.

1. Vital Coloration of Tissues and Bacteria to Increase the Penetration and Favor the Curative Action of Chemical Rays, By Robert Odier.
2. Sigmoiditis and Perisigmoiditis, By F. Lejars.

1. **Coloration of Tissues.**—Odier has experimented with methylene blue, which must be chemically pure, with thional, and gentian violet, on embryos and in cases of erysipelas and furunculosis. His results were excellent except in one case of the former where a microscopical examination disclosed a bacillus not susceptible of coloration by methylene blue. After coloration, he used an arc lamp as source of light. Odier thinks the effects of Finsen's light will be greatly increased by preliminary injection of blue stains into the diseased area. Care must be taken not to supersaturate the cells. The addition of one per cent. of cocaine to the solution causes the stain to fix better. Odier's theory is that the blue stain renders the tissues more permeable to light, particularly to blue and violet rays and therefore more susceptible to their chemical action.

2. **Sigmoiditis and Perisigmoiditis.**—Lejars states that these conditions are commoner than supposed, the former, generally due to a fæcal tumor, being liable to be mistaken for parametritis or oophoritis. Free purgation usually relieves all symptoms including fever. Perisigmoiditis exists also as well as other localized suppurations in the large intestine and the appendix is not the only offender. All forms should be borne in mind when making a diagnosis.

LYON MEDICAL.

February 7, 1904.

Facial Hemispasm; True and Hysteric, By Lannois and Porot.

Facial Hemispasm.—Lannois and Porot, in distinguishing the true from the false, state that the attacks of the true are always unilateral; involve only the muscles supplied by the seventh nerve; are clonic in character or form a series of clonic spasms sometimes so prolonged as to cause tetany of the muscles; are uncontrollable by the will, persisting even during sleep; and resemble no normal expression of the physiognomy. The hysteric form is functional in nature, amenable to suggestion, disappears during sleep, and is found in hysteric and childish subjects. True hemispasm often involves seriously the hearing on the affected side, and is never accompanied by pain at the actual moment of attack. The cause of true spasm is apparently a central lesion of some kind and it not infrequently follows injuries to the fifth pair endings. Violent neuralgia or toothache often appears in the previous history.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

January 3, 1904.

1. Fatal Poisoning Due to Hydatid Cysts of the Liver and Diffusion Into the Peritonæum, By A. Salomoni, and La Spada.
2. Contribution to the Diagnosis of Typhoid Fever, By A. Germani.
3. Appendicular Pain in the Pneumonia of Children, By Adolfo Prandi.
4. Salivation in Stenoses of the Nose, By Luigi Rugani.
5. Some Considerations Concerning the Hand in the Laws Regarding Injured Persons, By Carlo Momo.

1. **Poisoning Due to Hydatids.**—Salomoni and La Spada describe a case of hydatid cysts of the liver which is noteworthy on account of the fatal intoxication which followed the rupture of the cysts into the peritonæum. The patient was a man about thirty years of age, and was admitted suffering from collapse and orthopnœa as the result of a sudden effusion of fluid into the abdominal cavity. It was too late for laparotomy, and the patient died on the following morning. The necropsy showed a large amount of yellowish turbid fluid in the abdomen, derived from a ruptured and ulcerated cyst or series of cysts which had destroyed almost the entire right lobe of the liver. The cyst contained a number of daughter cysts and a quantity of fluid. Recent studies have demonstrated that the liquid of the hydatid cysts may assume, under conditions which are still unknown, certain very marked toxic properties, and that when this occurs even small amounts when effused into the peritonæum can give rise to serious symptoms or even death. On the other hand, the rupture of a cyst and the dissemination of the parasite in the abdomen are not ordinarily accompanied by appreciable disturbances.

2. **Diazoreaction in Typhoid Fever.**—Germani reports seventeen cases of typhoid fever which he studied especially with reference to the diazoreaction. This test was positive in all the cases reported, and the author considers this reaction as a very valuable diagnostic method. Although opinions differ as to whether the diazoreaction occurs in other diseases, or in healthy persons, all observers are agreed that it occurs almost without exception in typhoid fever. The diazoreaction has a marked value in the study and differentiation of intestinal affections accompanied by fever. The author found that in a number of these in which typhoid fever was suspected the reaction gave a clue to the true nature of the affection. The author found that there is no well defined relation between the administration of intestinal antiseptics and the occurrence of the reaction. In view of the frequent employment of such antiseptics in typhoid fever this is very important. Civiadalli and Bonorani found that salol was capable of impeding the reaction in virtue of its interference with the formation of diazotic substances. Other authors have denied this. As regards the interpretation of Ehrlich's reaction the last word has not yet been spoken. Some have stated that there is a connection between the occurrence of the reaction and the presence of the bacillus with its toxine, but this cannot be accepted in view of the fact that the reaction occurs in pneumonia and in tuberculosis. Geissler says that the reaction is the result of the destruction of white blood cells, but although a diminished number of cells is quite frequently encountered in typhoid fever and is a valuable sign in many cases, this fact cannot be strictly connected with Ehrlich's reaction, because the latter occurs in pneumonia and

in tuberculosis, where there is a marked leucocytosis. The study of the leucopenia of typhoid fever in the cases reported shows that a diminution took place chiefly at the expense of the multinuclears, while the uninuclears were increased, although not so markedly as some authors have stated. In convalescence the leucocytic formula is inverted, and returns to the normal. The leucopenia is not in proportion with the severity of the disease. In fact, in the only fatal case in the series the diminution in the number of leucocytes was not marked.

3. **Appendicular Pain in Pneumonia in Children.**—Prandi reports two cases of pneumonia in children in whom there were distinct local symptoms of appendicitis, including a point of maximum tenderness corresponding with that of McBurney. The children were both six years of age, and the appendicular symptoms occurred at the beginning of the disease, so that at first a diagnosis of the appendicitis was made. A symptomatic treatment was begun and on the following day a slight cough attracted attention to the lungs, in which pneumonia was found. Prandi calls attention to efficacy of the manipulation advised by Guinou in such cases: Deep but very gentle pressure with the palm of the hand is made over the inferior right quadrant of the abdomen, when it is found that the pain disappears. Prandi found that when he pressed only over the McBurney's point the pain seemed to be increased, but when the pressure was extended to a large area of the abdomen the pain was very much diminished, although it did not disappear entirely. He regards this as an important aid in the diagnosis of appendicitis. In addition, there is in pneumonia absence of tumor, heat, and tension in the abdominal wall over the site of the appendix. Prandi thinks that the abdominal symptoms in these cases of pneumonia are due to the simple intestinal disturbances so common in children, and to the fact that children are so apt to refer all pain to the abdomen.

4. **Salivation in Nasal Obstruction.**—Rugani produced artificial nasal obstruction in a dog by curetting the nasal mucosa on the right side and by suturing the right nostril. The dog was kept under the influence of morphine in order to prevent it from forcibly destroying the obstruction. The adhesion of the walls was incomplete, but a few days after the operation an abundant salivation appeared, together with congestion of the conjunctiva, and lacrimation. This salivation continued with slight diminution until the death of the animal. The experiment is of interest on account of the observation of a number of rhinologists, that there is an increase of saliva in patients with nasal obstruction in the shape of hypertrophic rhinitis, adenoids, etc. In the present experiment the salivation was probably reflex, due to irritation of the mucosa, through the presence of cicatrices and granulations affecting the terminals of the trigeminus. From these, through its branches to the facial nerves, and from the latter to the corda tympani, the irritation affected the salivary secretion.

ROUSSKY VRATCH

December 20, 1903.

1. On the Teaching of Surgical Diagnosis. The Problems and Aims Thereof. An Introductory Lecture, By A. A. ABRAZHANOFF.
2. Ficker's New Method of Serum Diagnosis in Typhoid Fever, By G. N. KAZARINOFF.

2. **A New Serum Reaction for Typhoid Fever.**—Kazarinoff says that the great disadvantage of the Widal reaction is that it is not accessible to a great many practical physicians, because it requires a laboratory equipment. Any method which is based on the same principles as that of Gruber-Widal, but which is more accessible to the general practitioner, is therefore of value. M. Ficker, of Berlin, has conceived the idea of preparing emulsions of dead typhoid bacilli for use in private practice in performing the Widal reaction. This emulsion keeps quite well for nine months, if allowed to stand in the dark in well closed bottles, which are shaken from time to time. The exact method of preparing this emulsion is not yet known to the general profession, but will be published by the discoverer as soon as the emulsion shall have been tested sufficiently by a number of prominent clinicians in Germany. The method of obtaining a reaction with this preparation is as follows:

One tenth c. c. of the blood serum of the patient under examination is mixed with nine tenths c. c. of a 0.7 per cent. solution of sodium chloride in a test tube. Three test tubes with narrow closed ends and stoppered with corks are next taken for the experiment. Into the first tube one tenth c. c. of the mixture is poured and is diluted with nine tenths c. c. of the well mixed emulsion. Into the second, two tenths c. c. are placed and diluted with eight tenths c. c. of emulsion. Thus, the first tube will contain a dilution of 1 : 100, and the second tube, a dilution of 1 : 200. A third tube is filled with one c. c. of the emulsion without dilution, for the purpose of controlling the result. The reaction takes place after the tubes have been allowed to stand in the dark for from ten to twelve hours. If the reaction is positive, the first and second tubes show a clearing up of their contents and the narrow ends show a precipitate, while the tube with the pure emulsion remains cloudy. Kazarinoff studied the reaction of Ficker parallel with the Gruber-Widal reaction in a series of patients. He found that the new reaction completely corresponded to the old, and that the Ficker reaction did not occur in any other conditions than typhoid fever. Ficker's reaction appeared in several instances one day later than the Widal. Though many more observations are needed, the author highly recommends Ficker's method for use wherever there are no bacteriological laboratory facilities available.

MEDICAL RECORD.

March 5, 1904.

1. The Treatment of Gunshot Wounds by British Surgeons During the War of the Revolution, 1775-1783, By STEPHEN SMITH.
2. The Rationale of the Natural Arrest of Consumption; a Study Explaining the Effect of Sea Voyages, Out-

door Life, Etc., on the Disease, with Suggestions as to Ideal Treatment, By W. B. McLaughlin.
3. Running Ear, By A. C. Bardes.
4. Neuralgia Due to Dental Irritation, By William J. Lederer.
5. The Physiology of Hunger, By Dr. Axel Emil Gibson.

2. **The Natural Arrest of Consumption.**—McLaughlin believes that if secondary infection did not occur, the majority of tuberculous patients would recover, or at least would have their disease in a latent condition. It is the secondary infection that leads to ulceration and the spread of the disease. It is, therefore, of the utmost importance that consumptives should live in as sterile an atmosphere as possible, and that every precaution should be taken to keep them and their surroundings sterile.

3. **Running Ear.**—Bardes reviews the most frequent causes of chronic aural discharges. The pathology, and to some extent the symptomatology, of chronic otitis media is considered. Treatment, to be successful, must accomplish three things: (1) Strict cleanliness; (2) free drainage; (3) stimulation of the diseased area. All obstructions in the nose and throat should be attended to before the treatment of the ear is begun. Syringing all suppurating ears is now justly condemned. If cleanliness, drainage, and astringent and stimulating applications fail to give relief, there are two operative measures that may be resorted to: (1) Removal of the necrosed ossicles and all diseased tissue within the middle ear. (2) If this fails the Stacke operation should be resorted to.

4. **Neuralgia Due to Dental Irritation.**—Lederer reviews the various diseased conditions of the teeth that are capable of giving rise to neuralgia. He reports one case of cervicobrachial neuralgia which was due to a pulpitis of the second lower molar.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 5, 1904.

1. The Present Status of the Medical Expert, By Algernon T. Bristow.
2. Chronic Adhesive Sclerosing Peritonitis, or Plastic Peritoneal Sclerosis, By Horace G. Wetherill.
3. A Study of Gout, By James D. Morgan.
4. A Study of a Case of Green Urine, Resulting from the Administration of Methylene Blue in a Proprietary Remedy, By James M. Cooper.
5. A Report of Ten Cases of Pneumothorax Occurring in Pulmonary Tuberculosis, By J. W. Trask.
6. Headache from Non-Suppurative Inflammation of the Accessory Sinuses of the Nose, By Charles M. Robertson.
7. Hospital Experience Necessary for Licensure—A Suggestion in Medical Education, By Lawrence E. Holmes.
8. The Plastic Surgery in the University Maternity for the Year 1903, By Barton Cooke Hirst.

2. **Plastic Peritoneal Sclerosis.**—Wetherill reports at length one case of this affection. He notes ten chief points of interest brought out by the case. Of these ten points we quote the first three: "(1) The rareness of the disease. (2) The failure to generally recognize and to fully describe it on this continent, though it has been long and well known abroad. (3) The pathognomonic sign—inability to unite a shrinking peritonæum once divided during the course of an operation, which, so far as I am aware, I am the first to observe and describe."

3. **Gout.**—Morgan discusses the differences in the deformities of the joints produced by gout, acute rheumatism, and arthritis deformans. He asserts that mistakes in diagnosis are not infrequently made. At times radiographs will serve to clear up an otherwise doubtful condition.

6. **Headache.**—Robertson reports two cases, in order to show that swelling of the middle tubinated bodies, by blocking the passages to the accessory sinuses, is capable of giving rise to headache. Such a condition is not rare, it gives rise to all the symptoms of empyema except discharge, but all the objective signs of empyema are wanting.

BOSTON MEDICAL AND SURGICAL JOURNAL.

February 18, 1904.

1. Slipping or Recurrent Dislocation of the Patella. With the Report of Eleven Cases, By Joel E. Goldthwait.
2. Scientific Aspects of Moderate Drinking, By Francis Gano Benedict.
3. The Use of Obstetric Forceps, By Warren R. Gilman.

1. **Recurrent Dislocation of the Patella.**—Goldthwait asserts that this condition is seen almost entirely in girls or women, and is due, in large part, to the fact that the line of pull of the quadriceps extensor muscle is not straight, this feature being increased in its effect by an unnaturally long patella tendon, knock knee or an imperfectly developed articular surface at the end of the femur. Eleven cases of this condition, seven operative with thirteen operations, and four non-operative, are reported by the author, and the observations made in connection with the treatment of these cases is the basis of the paper. The author has observed that the condition is often accompanied by flat foot and he believes that if the flat feet are corrected and the general tone of the patient improved, in a certain proportion of cases a cure will result. If an operation is indicated the chief point to be borne in mind is the straightening of the line of the pull of the anterior thigh muscles. This is best accomplished by transplanting the outer half of the patellæ tendon so that it is attached well to the inside of the tubercle of the tibia. If the tendon is too long it can be shortened at the same time the attachment is made.

2. **Moderate Drinking.** — Benedict accepts Anstie's limit (the equivalent of not more than one ounce and a half of absolute alcohol in twenty-four hours) as the criterion for moderate drinking. He reviews at length the opinions of men in different occupations on the subject of moderate drinking, and concludes that from all points of view the practice is to be condemned as uniformly injurious.

3. **The Use of Obstetrical Forceps.**—Gilman does not consider the indications for the application of forceps. He discusses only the best methods

of applying the blades in different positions of the head. With regard to high forceps operations, the author believes that if the head floats above the brim or the largest diameter of the head does not come through the superior straits, then, in the hands of most men, version, when possible, will give the best results.

MEDICAL NEWS.

March 5, 1904.

1. The Pathological Anatomy of Shiga Bacillus Infection of the Intestines in Infants, By John Howland.
2. The Utilization of the Lower Lip in Rhinoplasty. A New Procedure, By Carl Beck.
3. A Simple and Inexpensive Rheostat to Use with the Electric Light Current, By David T. Marshall.
4. Traumatic Pyeloparanephric Cyst, By Bern B. Gallaudet.
5. Ergot in Alcoholism, Morphinism, and the General Class of Drug Habit Cases, By Alfred T. Livingston.
6. Suture of the Omentum to the Parietal Peritonæum (Epiplopexy) for Ascites, By Joseph H. Branham.

1. **The Bacillus of Shiga.**—Howland asserts that the ætiological importance of the Shiga bacillus is now universally admitted. Two types of this organism have been differentiated: (1) The true Shiga (not fermenting mannite), and, (2) the Harris, or Flexner-Manila (fermenting mannite). It is this last type of the organism that the author has found in his 32 cases. Clinically, the cases of dysentery produced by the organism can be divided into a number of groups. For each of such groups the author reports a typical case. In different cases the pathological and histological findings differ greatly and the author is of the opinion that some of the lesions found at autopsy are due to secondary infection. The author concludes: "If we endeavor to sum up the case as is here made out for the Shiga bacillus we shall have to say, as it seems to me, that there are comprised under the lesions associated with it all grades and types of diarrhœal disease as distinguished by clinical symptoms and pathological findings and that it can be affirmed that no particular type is distinguished from the others by a special ætiological origin."

5. **Ergot in Alcoholism and Morphinism.**—Livingston denies that there is such a thing as a specific disease one of whose symptoms is a craving for some form of drug. Therefore, if a drug habit can once be broken, the craving will not return except it be artificially stimulated. The author has had remakable success in treating drug habits by hypodermic injections of ergot. He details a general plan of treatment that he affirms will give brilliant results. Among others he makes the following assertion: "One fact in my experience with ergot in treating the habit cases is worth mentioning, viz., that in no case after the first forty-eight hours have I ever had a request from the subject for his drug or a substitute, nor have I seen in any case any evidence of such desire."

6. **Epiplopexy.**—Branham's case shows the following points of interest: (1) The presence of vascular adhesion showing the effort of nature to form collateral circulation; (2) the subsequent occurrence of pleural effusion with no ascites points strongly to good collateral circulation for the portal system, and (3) the marked improvement in the patient's general condition shows better functioning of the liver and intestinal organs after the operation.

AMERICAN MEDICINE.

March 5, 1904.

1. Recent Researches in Radioactivity and Electricity. Their Bearing on Radiotherapy. Legal Status, By J. Sherman Wight.
2. A Case of Acute Leucæmia, with Death Due to Rupture of the Spleen, By Joseph L. Miller, and Julius Hess.
3. Diphtheria of the Vagina with Secondary Involvement of the Mouth, Rectum, and Skin, By Thomas W. Salmon.
4. The Diagnosis and Treatment of Congenital Misplacement of the Hip in Infancy, By Albert H. Freiberg.
5. An Original Operation for Complete Laceration of the Female Perinæum, By C. E. Ristine.
6. Enuresis, By George E. Beilby.
7. Six Months' Work in a Dispensary for Diseases of the Lungs, By Thomas H. A. Stites.

2. **Acute Leucæmia.**—Miller and Hess report their case of acute leucæmia in detail and then review the literature of the subject. The disease is probably more frequent than is generally supposed. Fraenkel met it once in every 2,620 cases of disease that came under his observation. The chief diagnostic points are the hæmorrhagic tendency, rapid anæmia, fever, ulceration in the mouth, moderate glandular and splenic enlargement with the characteristic blood findings; and of all these the blood changes are most important and must be relied upon for the diagnosis. On account of the moderate leucocytosis which may exist in patients presenting the above symptoms-complex, stained specimens should be made and a differential count will soon determine a marked disturbance of the normal proportion of various cells present or the appearance of myelocytes in large numbers if a leucæmia exists. So far all forms of treatment have proved ineffective. At times a remission in all the symptoms will occur. Ordinarily the duration of the disease is from 4 days to 16 weeks.

3. **Diphtheria.**—Salmon's case of diphtheria of the vagina, rectum, mouth, and skin occurred in a woman fifty-five years old. The patient did not recover although antitoxine was given liberally. Diphtheria of the genital tract is fairly rare. The author gives abstracts of all the cases so far placed on record. The mortality from this form of diphtheria does not differ materially from that of the usual forms.

6. **Enuresis.**—Beilby as the result of three years' observation in the State Industrial School, concludes that in institutions, at least, enuresis is directly due to masturbation in about 90 per cent. of all cases. He has had under observation 75 cases of enuresis. The total school population has been from 800 to 900 pupils between the ages of ten and twenty-one years. Treatment in these cases is usually attended with good results, if the condition is not of too long standing. It should be directed along two lines: First, by appealing to the moral sense and warning the child of the dangers of evil prac-

tices. Second, by improving the physical condition and attempting to relieve the congestive or irritative condition of the lumbar cord. Circumcision was performed in these cases, almost as a routine, not because there was a phimosis, but for its mental impression.

BRITISH MEDICAL JOURNAL.

February 20, 1904.

1. Remarks on Hourglass Stomach, By B. G. A. Moynihan.
2. Congenital Narrowness of the Pyloric Orifice a Cause of Chronic Gastric Disease in the Adult, Illustrated by Seven Cases Successfully Treated by Operation, By A. E. Maylard.
3. The Subsequent History of Eighteen Patients Upon Whom Gastric Operations Had Been Performed, By C. M. Moullin.
4. Five Consecutive Cases of Perforated Gastric Ulcer Treated by Excision, By S. White.
5. Aseptic Surgery in Theory and Practice. (Lettsomian Lectures, II), By C. B. Lockwood.
6. The Treatment of Appendix Abscess in the Rectovesical Pouch, By E. Owen.
7. The Diminishing Birth Rate and What Is Involved in It, By J. W. Taylor.

1. **Hourglass Stomach.**—Moynihan describes hourglass stomach as that condition in which the stomach is divided into two portions by a constriction at any point between the cardiac and pyloric orifices. As a rule the constriction is near the middle of the organ, or near the pylorus. The isthmus may be indurated or a simple soft tube. Usually the greater curvature is pulled up toward the lesser. The condition is usually stated to be more often congenital than acquired, but the author is convinced that there is no proof whatever of the existence of an hourglass stomach due to a congenital deformity. The causes of the acquired form are: 1. Perigastric adhesions, arising from many causes—commonly ulcer of the stomach or gallstone diseases. 2. Chronic ulcer, causing hourglass stomach either by a gradual deepening of the ulcer with formation of adhesions, or by the contraction and induration due to its healing. Constantly recurring attacks of spasm and the resultant muscular hypertrophy must also play a part. 3. Malignant disease. The symptoms of hourglass stomach may be classified as follows: 1. Woelfler's first sign—the loss of a certain quantity of fluid on washing out the stomach—i. e., passed from the cardiac to the pyloric pouch. 2. Woelfler's second sign—a rush of foul fluid after the stomach has apparently been washed out clean—i. e., regurgitation from the pyloric pouch. 3. Paradoxical dilation—persistence of succussion splash after the stomach has apparently been emptied. 4. Bulging of the left side of the stomach first on distention of the stomach, with subsequent bulging of the right side. 5. A bubbling, forcing, sizzling sound heard after distention. 6. Difference in resonance before and after distention. 7. Presence of a visible sulcus between the two pouches. 8. Transillumination of the cardiac pouch alone on gastrodiaphany. 9. Bulging caused by distention of the deglutable rubber bag of Turck and Hemmeter limited to cardiac pouch.

In conclusion the author reports eighteen cases of hourglass stomach, with the results of operation. As there is often pyloric stenosis simple gastroplasty may be insufficient, and may have to be combined with gastroenterostomy from the pyloric pouch.

2. **Congenital Pyloric Stenosis.**—Maylard reports seven cases of chronic gastric disease in the adult, due to congenital narrowness of the pylorus, and successfully treated by operation. He sums up his remarks as follows: 1. That there exists a considerable class of patients in young adult life who owe their chronic gastric trouble to a congenital narrowness of the pyloric orifice. 2. That this "narrowness" is due in many cases to an undue development of the pyloric valve lessening the calibre of the orifice to anything between the normal of 12 to 15 mm., and 2 or 3 mm. 3. That the proper treatment is gastrojejunostomy performed with due regard to the normal disposition of the parts after operation.

3. **After History of Gastric Cases.**—Moullin reports the subsequent history of 18 patients upon whom gastric operations had been performed. Among the facts ascertained were the following: Hæmorrhage from erosive ulcers of the stomach may and does recur after operation; recurrent ulceration may follow gastroenterostomy in the same way. If adhesions are left after operation the patient is always liable to suffer from pain after eating. This is less liable to follow gastrojejunostomy, than after excision of the ulcer. Simple division of adhesions is of little use; they should always be excised.

LANCET.

February 20, 1904.

1. The Aftereffects of Head Injuries. (Hunterian Lecture, No. 1), By T. C. English.
2. The Psychic Side of Therapeutics, By J. F. Woods.
3. On the Diminishing Death Rate and What is Involved In It, By J. W. Taylor.
4. The Use of Antistreptococcic Serum in the Treatment of Scarlet Fever and of Diphtheria, By F. P. Mackie.
5. Notes on a Case of Backward Dislocation of the Head of the Humerus Caused by Muscular Action, By C. W. M. Moullin, and A. Keith.
6. Seventy Cases of Lobar Pneumonia: An Analysis of the Clinical Features and Post Mortem Changes, By F. S. Dawe, and E. C. Austin.
7. Cancer in Australia: a Comparison with Other Countries, Together with a Specific Treatment for the Prevention and Arrest of the Disease. (Concluded from February 13, 1904), By G. C. Adams.
8. Cæcal Concretions, By A. Forsyth.
9. Notes on the Ætiology of Lupus and on Cases Treated by the X Rays and Finsen Light, By F. H. Jacob.

1. **Head Injuries.**—English, with a view of investigating the after effects of head injuries, has collected the notes of 300 such cases, which he classifies as follows: 1. 100 consecutive cases of fracture of the skull, seen one year or more after injury; 2. 100 consecutive cases of concussion, contusion, or laceration, seen after the same interval; 3. 100 miscellaneous cases. Of the first two classes 79 showed no aftereffects, 92 showed slight effects, and only 29 showed marked after effects. Some de-

gree of mental impairment, though rarely enough to be classed as insanity, occurs in ten per cent. of the patients. Twelve of the patients had died, but in only one was death the direct result of the head injury. The average interval between the date of the accident and the return to work after simple concussion was four and one half weeks, after cerebral contusion nine and one half weeks, and after a fracture of the skull or cerebral laceration thirteen weeks. In ten cases the patient had to give up his trade. Beneficial effects from head injuries are confined to fiction. Inadequate mental rest is responsible in most cases for imperfect recovery. Operation is of the greatest importance in all depressed fractures of the vault. Injurious effects are most likely to result in early life and in old age. Litigation for damages often inhibits recovery; apart from malingering recovery often accompanies the termination of law suits. Chronic headache is the commonest symptom, and is present in almost every case where there are aftereffects. Its varieties are many. It may be local or general; among the focal forms are: (1) Neuralgic headache, associated with scars; (2) headache with local tenderness; (3) local fixed pain without localized tenderness; usually due to local intracranial lesions. Traumatic cephalagia is frequently aggravated by alcohol. Surgically the most important condition is osteosclerosis, the pain originating in the sclerosing bone; it is peculiarly amenable to operative treatment. The pain is fixed and intense, with characteristic tenderness on pressure. Vertigo occurs in many cases and may be persistent. It was present in 22 out of 100 fracture cases. It is independent of any aural symptom, occurs usually after sudden movement, and is most common in the morning. Attacks of vomiting are sometimes found, and a change of disposition or character is not infrequently noticed. The patient may become depressed or irritable. Other symptoms are nervousness, inability for mental or physicial exertion, disturbance of sleep, increased susceptibility to the influence of alcohol, and inability to stand high temperatures.

4. **Antistreptococcus Serum in Scarlet Fever.**—Mackie's conclusions are as follows: 1. Antistreptococcic serum is of distinct value in a certain number of cases of scarlet fever, particularly where the throat lesion is severe and toxæmia is going on. 2. Bacteriological examination furnishes no sure guide as to which cases will be benefited by the serum; so that the serum should be given early in all cases. 3. The longer the disease has lasted before the serum is used, the less is the likelihood of benefit. The serum is too often only brought in at the last with the strychnine and oxygen. 4. If the first dose or two does not lower the temperature, its continuation is of no value. 5. The serum is liable to produce urticarioerythematous rashes, but even where it does no good there is no evidence that it does harm. 6. Those cases of diphtheria which present septic symptoms and those where tracheotomy may be required may with advantage be treated with antistreptococcic serum as well as with diphtheria antitoxine.

7. **Cancer.**—Adams has arrived at the following positive conclusions as a result of his investigations of cancer in Australia: 1. Cancer is not due to a bacterial or parasitic origin. 2. It is a constitutional disease due to a specific or malignant virus originating in the blood and chiefly manifesting itself after thirty-five years of age and at its greatest virulence between fifty and seventy years of age. 3. Malignant disease may be congenital and certain forms acquired by infection or contagion. 4. The principal factor in the cause is hereditary tendency. 5. The principal exciting factor is prolonged local irritation acting on a constitution suffering from an inherited tendency or which has been debilitated through want of treatment of one or the other of the following diseases in their order of frequency: Syphilis, alcoholism, obesity, rheumatism, gout, or tuberculous disease. 6. The principal dietetic factors in the cause are sugar, beer, and alcohol. 7. The principal hygienic factors in the cause are woods and forests whose dropping foliage decomposing causes stagnation of water; also badly formed streets and defective drainage in cities, and the overcrowding, badly housed and fed population of cities. 8. Cancer is a preventable disease and the absolute cure is only to be found in the means for preventing its exciting causes and completely removing the same. 9. The sanitary indigenous foliage of the following natural orders—*(a)* myrtaceæ, *(b)* lauraceæ, and *(c)* coniferæ—appears to exert a specific influence in rendering the native born population of the countries where they grow almost immune from malignant diseases other than those caused by prolonged local irritation (the Australian eucalyptus belonging to the myrtaceæ being the most powerful). 10. A eucalyptus oil obtained from various species grown in Australia possesses a specific action in arresting the pathological progress and process of malignant disease. 11. All internal and local treatment of a poisonous or irritating nature should be absolutely avoided, more particularly such local treatment as the x rays and Finsen's light, as they are likely to set up secondary processes around the site of lesion. Early and prompt removal when the malignant growth is accessible is far better.

8. **Cæcal Concretions.**—Forsyth states that the cæcum contains about two pounds of concretions. Under the name of "loaded cæcum" he recognizes a pretyphlitic stage of appendicitis, and by proper treatment avoids the later and more dangerous stages. A favorite lodging place for the concretions is the cul de sac of the cæcum below the ileocæcal valve. They set up peripheral irritation, and may give rise to the gravest mental symptoms. There are three types of cases—women who lead a quiet, uneventful life; young, healthy men; and the large class suffering from so-called "windy spasms"—borborygmi. The author has seen the emptying of a loaded cæcum put a stop to epileptic fits; he also suggests that the terrible fits occurring in puerperal eclampsia may in some cases be due to loaded cæcum.

9. **Lupus.**—Jacob states that of thirty cases of lupus there was a history of phthisis in twenty-two. He has had great success in the x rays, both in mild and ulcerated septic cases of lupus, rodent ulcer, and eczema. He cures ringworm in two exposures.

Letter to the Editor.

STERILE WATER ANÆSTHESIA.

New York, *February* 25, 1904.

To the Editor,

Sir: In his paper Sterile Water Anæsthesia in the Office Treatment of Rectal Diseases, which appeared in the issue for January 23, 1904, of your esteemed journal, Dr. Gant says that "Burney Yeo and Griffith, of England, were among the pioneers (1868) in suggesting the relief of pain by the subcutaneous injection of water." It may be of interest to show that the principle upon which these injections are based had been established at a much earlier period. Allow me to quote from a paper of my own, The Permanent Warm Bath Employed in Articular Inflammation (*Medical Record*, October 29, 1892): "It is probable that a law exists according to which soaking of the peripheric ends of the nerves reduces, and drying increases, their excitability. At least, Heyman (Virchow's *Archiv*, Vol. i, published in the year 1847) thinks it possible that the calming effect of the warm baths is superinduced by suppression of perspiration, and thus retention of moisture, which proceeding takes place during the bath, and which causes, in the first instance, soaking of Krause's end clubs and Meissner's sensory bodies; in the second instance, cessation of molecular movements in the extremities of the nerves." Since Dr. Gant omits to explain the physiological action of subcutaneous water injections more fully, I may be permtited to quote further from my paper: "Numerous physiological facts are known which support the theory that withdrawal of water excites the nerves, while gradual taking up of water reduces the irritability of nerves. On this theory is based the hypodermic injection of water to produce local anæsthesia."

As is well known, hypodermic injections were not practised so early as 1847, at least not in the Western world; if I am not mistaken we learned them from the Chinese during the sixth decade of the nineteenth century. A. Rose.

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Proceedings of Societies.

THE WESTERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

Thirteenth Annual Meeting, held at Denver, Col., December 28 and 29, 1903.

(Continued from page 475.)

Surgical Treatment of Nephritis.—This was the title of the President's Address, delivered by Dr. Alexander Hugh Ferguson, of Chicago.

Reference was made to the early history of this subject, and to the priority of the operation. The author added three cases to those he had already published of renal decapsulation and puncture for active diffuse nephritis.

The indications for surgical treatment of this condition were pointed out at length, and the technique of the operation fully described.

In looking over the literature, the author found that the causes of death after the operation in 123 cases, by different surgeons, were as follows: Four died of pulmonary œdema; 6 of uræmia; 4 of coma; 3 of sudden heart failure; 3 of exhaustion; and 1 each of endocarditis, suppression of urine (ether being used), anuria, general dropsy, collapse, pleuritic effusion, and myocardial thrombosis. There were 27 deaths out of 123 cases within a year after the operation. A closer analysis shows that of these 27 deaths, 6 died within eighteen hours after the operation; 9 between one and nineteen days; 2 between two and seven weeks; 3 between two and three months; and 1 lived a year. The vast majority of these deaths should not be attributed to the operation. Even allowing all deaths within a week to be due to the operation, there would be a mortality of only about nine per cent. When the limitations of the operation were more clearly defined, and many of the extreme cases left alone, the author thought the mortality should not be more than five per cent. in the hands of experienced surgeons. It was fair to conclude that the earlier an operation was performed in these cases, the less would be the fatality, and the greater the benefits.

Multiple Loose Bodies in the Knee Joint.—Dr. John P. Lord, of Omaha, Neb., reported the case of a middle-aged man who had suffered from recurrent attacks of arthritis, the result of loose bodies in the knee joint. The attacks of inflammation and the frequent incapacity resulting therefrom had driven the patient to seek operative relief. Loose bodies in the posterior part of the joint were the chief offenders, and it was thought that no ordinary incision would permit of their successful removal. The writer's attention having been called to the use of the Volkmann incision, by the Mayo Brothers, for suppurating knee joint, it was determined that this method of attack would be required in this case. Transverse division of the patella and the incision of the lateral and crucial ligaments were therefore done, as in an operation for resection. This permitted full command of the articulation. Great difficulty was encountered in removing two of the bodies located behind the condyles. The patella was wired. The capsular ligaments were sutured with chromicized gut. Drainage was instituted and an interrupted plaster dressing applied. Union was primary, and a good result secured, although motion was limited. After two months the degree of flexion amounted to about thirty per cent.

Attention was called to the necessity of delaying manipulation after this procedure for fear of retearing of the immature union of the ligaments, thus rekindling the arthritis. After a period of two months, however, active efforts were made to restore function, with greater success, although it was probable that full function could not be regained after such extensive surgical trauma of disarticulation. No precedent in literature was found for so radical an operation for this condition. There were ten of these loose bodies of large size, and so distributed that the ordinary incisions recommended would have been ineffective in securing the bodies, part of which were attached by pedicles. Less radical means would have defeated the object of the operation, and the patient's relief would not have been complete.

Chronic Adhesive Sclerosing Peritonitis.—Dr. H. G. Wetherill, of Denver, read a paper on this subject, in which, after reporting an interesting case at great length, he presented the following points: (1) The rareness of the disease. (2) Failure to recognize it generally and to describe it fully on this continent, though it had been long well known abroad. (3) The pathognomonic sign, namely, inability to unite the shrinking peritonæum when once divided during the course of the operation, which, so far as the writer was aware, he was the first to observe and describe. (4) The essential chronicity of the disease, as indicated by long standing symptoms, otherwise unexplained, and by the shrinking and retraction of the peritonæum at the first operation, sixteen months prior to the patient's death, which proved the previous existence of the malady, and that it was not directly or indirectly the result of the operation. (5) The great importance of covering all denuded surfaces when, before or during the operation, chronic adhesive sclerosing peritonitis was diagnosticated. (6) The characteristic subperitoneal connective tissue hyperplasia which was the pathological feature of the disease. (7) The shrinking or contraction of the peritonæum caused by it, the clinical feature. (8) The possible significance of a somewhat similar pathological process taking place in the skin, coincident with unusual gastrointestinal symptoms otherwise unaccounted for. (9) The danger of serious sequelæ incident to its surgical treatment. (10) The possibility of accomplishing much through medicinal measures, when the ætiology of the disease was better understood. Potassium iodide and inunctions of mercury were worthy of careful consideration and trial in any suspected case of plastic peritoneal sclerosis.

Median Perineal Prostatectomy.—Dr. George E. Goodfellow, of San Francisco, Cal., had operated by the median perineal route in cases of hypertrophy of the prostate approximately seventy-three times, without any immediate mortality, so far as he was aware. He described the technique of the operation in detail. All of these operations were done under spinal anæsthesia. Recently he had modified the operation a little. Instead of making an incision, as he had previously described in his papers, from the base of the scrotum to the margin of the anus, he now made an incision an inch in length above the perineal centre, and through this opening he could enucleate the prostate with his forefinger. If it was necessary to enlarge the opening, he did so in the usual way. But through an ordinary incision he had enucleated a prostate weighing 7½ ounces. In no case had he failed to secure anæsthesia when he had entered the canal. The needle was inserted between the second and third lumbar vertebræ.

Complications and Sequelæ of Prostatectomy.—Dr. James E. Moore, of Minneapolis, stated that no single operator had had sufficient experience to enable him to speak authoritatively upon the subject, and such extremes of experience had been reported that it was difficult to estimate the real dangers and difficulties of prostatectomy. It was altogether too grave an operation to be re-Epididymitis was quite a common sequel of prostate, and was only applicable to properly selected cases. There would always be a place for palliative measures in neglected cases of prostatic enlargement.

The most frequent cause of death following this operation was uræmia, consequently the most important preliminary examinations were those of the kidneys. The next greatset danger was sepsis, and in the presence of an infected bladder it was an ever present one.

The most positive indication for operation was very often a complicating cystitis, and it was for the relief of this complication that the various palliative measures were most frequently employed. The only satisfactory treatment for this complication was drainage, and this was best brought about by perineal prostatectomy. Stone was a frequent complication of enlarged prostate, and should always be sought for and removed during the operation. The incision for a prostatectomy, when too extensive, caused various complications. Hæmorrhage was an occasional complication, but its dangers had doubtless been over estimated. A serious objection to the suprapubic operation was the extensive injury done to the bladder; while the most difficult problem connected with the perineal operation was how to avoid injury to the rectum.

As sequelæ of prostatectomy, he mentioned impotence and incontinence, or dribbling. A communication between the urethra and the rectum was one of the sequels met with occasionally. Epididymitis was quite a common sequel of prostatectomy, sometimes becoming so troublesome as to require the removal of the epididymis.

Because the writer had dwelt briefly upon possible, as well as probable, complications and sequelæ of prostatectomy, he did not wish to be classified as a pessimist. Some failures were bound to follow this important operation, as they did every operation of like magnitude. But notwithstanding this fact, it was destined to be one of the greatest boons modern surgery had to offer suffering mankind.

Dr. Alexander Hugh Ferguson congratulated Dr. Goodfellow upon his remarkable success, but thought he would yet encounter cases that would terminate fatally. Personally, the speaker had operated upon thirty-one or two cases without a death, without complications or sequelæ, but since then in operating on these cases a death would occur after every few cases. He had had four deaths, so far as he could determine, after having operated on forty cases. In only one of these was death due to the operation *per se*.

The discussion was further participated in by Dr. C. E. Ruth, Dr. Charles A. Powers, Dr. John P. Lord, Dr. Archibald McLaren, Dr. William Jepson, Dr. D. S. Fairchild, Dr. Donald MacRea, all of whom did not give as roseate a view of the results following prostatectomy by any particular route as had been reported by some surgeons.

The Use of Silver Foil to Prevent Adhesions in Brain Surgery.—Dr. M. L. HARRIS, of Chicago, said the general principle of the introduction of some foreign substance had been tried in a sufficient number of cases of brain surgery to prevent adhesions, and with results which seemed to justify a belief in its efficacy. Of the materials thus far proposed, the author believed the thin foils were the best, and of these he preferred the silver foil. It was thin, soft, and smooth. It conformed to all irregularities of the surface on which it was laid. As many layers might be applied as necessary to secure a smooth, unbroken surface. It was not only tolerated very kindly by the tissues, but exerted a beneficial influence on granulating or healing surfaces. The foil might be placed directly in contact with the brain tissue between the pia and dura, or wherever it might be necessary to accomplish the purpose desired. The author had used the silver foil in a number of cases of brain surgery, and urged its more frequent use.

He cited a case which illustrated the application of the principle.

Dr. C. E. RUTH, of Keokuk, Iowa, gave a demononstration of the anatomical treatment of intracapsular fractures of the femoral neck.

Dr. DONALD MACREA, JR., of Council Bluffs, Iowa, discussed portal obstruction with gastrointestinal hæmorrhage following operation.

Dr. WILLIAM JEPSON, of Sioux City, Iowa, spoke of primary carcinoma of the spleen and its treatment by splenectomy.

Resection of Arteries and End to End Union: Experimental Research.—Dr. O. BEVERLY CAMPBELL, of St. Joseph, Mo., detailed forty experiments on animals, in which different methods of operating were adopted. The author stated that from a recognition of the probably correct theory of the coagulation of the blood, and considering the experiments that had been made and the results obtained, eliminating the process of infection, there still remained factors in the production of thrombosis in the suture of arteries yet to be met and overcome, before it could be hoped to reestablish permanently the circulation of the blood following end to end union of arteries. The possibility of permanently reestablishing the circulation of the blood in arteries following end to end union, or resection, was in the author's opinion yet to be demonstrated.

In the experiments of Murphy, as well as that of the writer, it was observed that where thrombosis did not occur, in the majority of cases an obliterating endarteritis occurred. Murphy observed: "After suture of a vessel there is a tendency to andarteritis obliterans." As this process was one of slow formation, it was one of minor importance as to the ultimate result of arterial suture. While the endarteritis was occluding the vessel, collateral circulation was being established, and the danger of death of the part obviated.

Conclusions.—1. The death of the endothelial cells following injury to arteries and the addition of cell death incident to the trauma inflicted from operative measures for the repair of the injury probably furnished the necessary nucleoalbumin needed for the production of the chemical process of coagulation of the blood.

2. That in the resection of arteries and in their suture in continuity, the suture should not penetrate the intima, as the additional death of endothelial cells incident to passing the suture and surrounding it from pressure necrosis might contribute to the coagulation of blood.

3. That the most rigid aseptic technique should be followed in surgical work upon the arteries.

(To be concluded.)

Book Notices.

A Text Book of Diseases of Women. By BARTON COOKE HIRST, M. D., Professor of Obstetrics in the University of Pennsylvania; Gynæcologist to the Howard, the Orthopædic, and the Philadelphia Hospitals. With 655 Illustrations, many of them in Colors. Philadelphia, New York, and London: W. B. Saunders & Company, 1903. Pp. 683. Price, $5.00 net.

Judging from the rapidity with which works on gynæcology land on the reviewer's desk of late, two inevitable conclusions must be drawn: the demand for books on this subject is constant and increasing, and publishers find a profitable field among students for the work of their teachers. Books of all kinds are appearing in rapid succession—the purely scientific, the purely clinical, and a combination of these. Some are poor, many are indifferently good, and a few are excellent. To the last class Hirst's book belongs. It is practical, it is scientific, it is thoroughly modern, it is didactic to a high degree without being pedantic. It is the reflection of a great experience thoroughly digested, and it offers, therefore, in a moderate space all that the student and the practitioner and most of what the specialist should know.

The author has adopted the regional, or anatomical, classification of diseases. In some respects this is convenient, for instance, all vaginal diseases being considered together, while it is somewhat confusing, on the other hand, requiring repeated cross reference. But Hirst has apparently got over this difficulty very well, for the reading of the book is easy and gives the impression of continuity.

While on the whole there is nothing strikingly new in the work, it may be well to mention some of the author's personal views and preferences. The combined vaginal and abdominal operation for carcinoma of the cervix is recommended as being more probably inductive of a cure, though Hirst correctly states that of the parametrium once involved the chances of a cure are very remote. He prefers silkworm gut to catgut in operating for complete perineal laceration, and gives in detail a description of his own operation for cystocele. The entire chapter on lacerations and plastic operations is especially clear and well illustrated.

The chapter dealing with diseases of the urinary tract is also lucid, and it is interesting to note the author's preference for Elsner's cystoscope. This and the Nitze instrument are illustrated in the text.

A most itneresting chapter is the final one, on

Detailed Technics of Gynæcic Surgery, which is full of valuable suggestions to the neophyte and to the practitioner, and contains many points in the detailed treatment of operative cases which are usually lacking in books of this character.

The illustrations are mostly original, made from drawings and photographs, and are excellently reproduced. They are numerous and really illustrative of the text. The index is rather meagre.

We have no doubt that this book will easily take rank as one of the popular text books on gynæcology, for the spirit and manner in which it is conceived and written are such as to appeal to those who desire an authoritative and modern text book on the subject.

General Pathology, or the Science of the Causes, Nature and Course of the Processes of Disease. By Dr. ERNST ZIEGLER, Professor of Pathology, Anatomy, and General Pathology in the University of Freiburg in Breisgau. Translated from the Tenth Revised German Edition and Edited by ALFRED SCOTT WARTHIN, Ph. D., M. D., Professor of Pathology and Director of the Pathological Laboratory in the University of Michigan, Ann Arbor, Mich. Profusely Illustrated. New York: William Wood & Company, MDCCCCIII. Pp. xxiii-760.

This very useful and popular text book is now presented in English for the second time. The present volume is translated from the tenth German edition, published in 1901 and dedicated to Virchow. In general style and appearance it differs but slightly from its predecessor, but the addition of the original splendid bibliograph, which the editor has enlarged by numerous references to American contributions, and which was omitted from the earlier English translation, has materially added to its usefulness. More than forty excellent new figures have been introduced, and the whole text is thoroughly modern in every respect, showing the effect of careful revision. Every pathologist is so familiar with this work that it is hardly necessary to review the present edition. We wish, however, to call attention to the valuable service that the publishers have done in giving this book to the English-reading student. The editor and translator has given us a liberal yet accurate translation, and we note but few objectionable expressions. In every respect this edition is superior to the previous one, and will doubtless be of much service to the student.

Handbook of Diseases of the Ear, For the Use of Students and Practitioners. By RICHARD LAKE, F. R. C. S., Eng.; Surgeon, Royal Ear Hospital, etc. New York: William Wood & Co., 1903.

Perhaps it may as well be confessed that the natural impulse of the reviewer, when confronted with a quiz-compend-sized volume of about two hundred small pages purporting to deal with and finish off the entire subject of clinical otology, is to unsheath the—more or less—trenchant blade of criticism and prepare to scalp the presumptuous author. This attitude will be the more instructive and quite inevitable if the reader is himself an aural surgeon, accustomed to handbooks in two quarto volumes, or systems in six. To him, as to the students and practitioners, for whose use Dr. Lake expressly designs it, this work will prove something of a revelation in the possibilities of putting the important anatomical, diagnostic, and operative facts before the reader in the tersest and most striking way. The practical activity of the office and clinic is considered primarily, and the principal tests of hearing, methods of examination, disease symptoms, and surgical procedures are fully described.

To say that the microscopical anatomy, neurology, and physiology of the organ of hearing are almost entirely neglected, and its pathology inadequately treated, is merely to indicate that the impossible has not been accomplished, or, rather, has not been attempted.

The little treatise, which is unusually well illustrated, may be recommended as a student's guide of much value, not as a substitute for more comprehensive text books or for practical instruction in clinical otology.

BOOKS, PAMPHLETS, ETC., RECEIVED.

Memoria de Los Trabajos Ejecutados Por el Consejo Superior de Salubridad, en el ano de 1900. Imprenta del Gobierno Federal En El Ex-Arzobispado, Mexico. (Avenida Oriente 2, num, 726). 1901. With two charts. Pp. 184.

Second Series of Lectures on Diseases of the Nervous System—Subjective Sensation of Sight and Sound, Abiotrophy, and Other Lectures. By SIR WILLIAM R. GOWERS, M. D., F. R. C. P., F. R. S., Honorary Fellow Royal College Physicians, Ireland; Member of the Société des Médecins Russes of St. Petersburg, etc. P. Blakiston's Sons Co., 1012 Walnut Street, Philadelphia, Pa. 1904. Pp. 250.

A Laboratory Manual of Physiological and Pathological Chemistry for Students in Medicine. By Dr. E. SALKOWSKI, Professor in the University and Director of the Chemical Laboratory of the Pathological Institute, Berlin. Authorized Translation from the Second Revised and Enlarged German Edition by W. R. ORNDORFF, A. B., Ph. D., Professor of Organic and Physiological Chemistry in Cornell University. Ten Figures and One Colored Plate. First Edition. Published by John Wiley & Sons, New York. Chapman & Hall, Limited, London. 1904. Pp. vi to 263. [Retail price $2.50 and $1.25].

Directions for Laboratory Work in Physiological Chemistry. By HOLMES C. JACKSON, Ph. D., Assistant Professor of Physiological Chemistry in the University and Bellevue Hospital Medical College. Second Edition. John Wiley & Sons, New York. Chapman & Hall, Limited, London. 1903. Pp. vi to 148.

Fifteenth Annual Report of the New Jersey Training School for Feeble Minded Girls and Boys. Illustrated. Cumberland County, Vineland. 1903. Pp. 80.

An Atlas of Human Anatomy for Students and Physicians. By CARL TOLDT, M. D., Professor of Anatomy in the University of Vienna, assisted by Professor ALOIS DALLA ROSA, M. D. Translated from the German by M. EDEN PAUL, M. D., Brux., M. R. C. S., L. R. C. P. Third Section, D. Myology (Figures 490 to 640 and index) Rebman Company, 10 West Twenty-third Street, corner of Fifth Avenue, New York. Rebman, Limited, 129 Shaftesbury Avenue, Cambridge Circus, W. C., London Agents. 1904. Pp. 260 to 400a.

Report of the Commissioner of Education for the Year 1904. Volume 2, Published by Government Printing Office. 1903. Pp. 2447.

Verhandlungen der Berliner medicinischen Gesellschaft, aus dem Gesellschaftsjahre 1903. (Separat-Abdruck aus der *Berliner klinischen Wochenschrift*). Herausgegeben von dem Vorstande der Gesellschaft, Band XXXIV. Druck von L. Schumacher. 1904. Berlin. Pp. xlix to 512.

A Chart of Diseases of the Lungs, Pleuræ, Bronchi, Trachea, and Larynx. Published by the McArthur Hypophosphite Co., Ansonia, Conn.

Miscellany.

Some Incompatibilities.—According to the *Revista Farmaceutica Chileña,* 1903, p. 195, the following combinations give rise to incompatibilities:

Antipyrine and quinine precipitate each other. According to Carles, the precipitate is soluble in dilute acids and probably also in gastric juice. Extract of cinchona and a solution of borax also give precipitates; this incompatibility is avoided, according to Demandre, by dissolving the cinchona extract in double the amount of glycerin. Quinine and bromides give precipitates when a solution of bromides is mixed with extract of cinchona. The same extract with iron forms iron tannate. According to Patien, this may be avoided by the use of the following formula: Potassium ferrotartrate, 10 grammes; extract of cinchona, 10 grammes; glycerin, 20 grammes; distilled water, 10 grammes, enough Madeira wine being added to make the mixture measure 1 litre. Syrup of rhubarb precipitates watery solutions of ergot owing to the tannin contained in the rhubarb. Magnesium sulphate and sodium bicarbonate, when mixed, form an insoluble magnesium carbonate.

Very Appropriate.—Crisp English, we should imagine to be a very proper medium for the delivery of the Hunterian (or any other) lectures. We are more amused than surprised, therefore, to find him the Hunterian lecturer for 1904.

The Citizen in the Making.—News comes that there is great opposition to vaccination among the recently landed immigrants of Philadelphia, some of them going so far as to bolt their doors when a visit from the vaccinating corps of the health board is expected. This is a powerful argument against the supposed stupidity and ignorance of the new immigrant, as this trait places him on the exact mental level of the many thousands of honored "antis" of every description who adorn the land.

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Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from February 26, to March 5, 1904:

Place.	Date.	Cases.	Deaths.
Smallpox—United States.			
Arkansas—Fort Smith	Feb. 13-20	5	
California—San Francisco	Feb. 14-21	9	
Colorado—Denver	Dec. 26-Jan. 30	18	
Delaware—Wilmington	Feb. 20-27		1
Dist. Columbia—Washington	Dec. 20-27	7	
Florida—Jacksonville	Feb. 20-27	1	
Illinois—Belleville	Feb. 6-27	7	
Illinois—Chicago	Feb. 20-27	2	
Illinois—Danville	Feb. 20-27	1	
Maryland—Baltimore	Feb. 20-27	2	
Michigan—Detroit	Feb. 20-27	1	
Michigan—83 localities	Feb. 13-27	Present.	
Missouri—St. Louis	Feb. 20-27	9	1
New Hampshire—Manchester	Feb. 20-27	3	
New Jersey—Trenton	Feb. 20-27		3
New York—Buffalo	Feb. 20-27	1	
Ohio—Bucyrus	Feb. 20-27	3	
Ohio—Cincinnati	Feb. 12-26	9	1
Ohio—Cleveland	Feb. 20-26	1	
Ohio—Toledo	Feb. 20-27	1	
Pennsylvania—Allentown	Feb. 20-27	1	
Pennsylvania—Johnstown	Feb. 20-27	2	
Pennsylvania—Philadelphia	Feb. 20-27	26	12
Pennsylvania—Pittsburgh	Feb. 20-27	2	imported
Pennsylvania—Williamsport	Feb. 13-27	7	2
South Carolina—Charleston	Feb. 20-27	6	1
Tennessee—Memphis	Feb. 20-27	35	
Tennessee—Nashville	Feb. 20-27	15	
Virginia—Pocahontas	Feb. 1-29	7	
Wisconsin—Milwaukee	Feb. 20-27	4	
Smallpox—Foreign.			
Africa—Cape Town	Dec. 1-31	1	
Africa—Green and Sea Point	Dec. 1-31	1	
Austria—Prague	Jan. 30-Feb. 13	11	
Belgium—Antwerp	Jan. 30-Feb. 13	9	2
Belgium—Brussels	Jan. 30-Feb. 13		2
Brazil—Rio de Janeiro	Jan. 24-31	29	19
Canada—Quebec	Feb. 13-27	6	
China—Hongkong	Jan. 9-16	2	
China—Shanghai	Jan. 9-26		20
France—Nantes	Jan. 1-31	2	
France—Rheims	Feb. 7-14	1	
Great Britain—Edinburgh	Feb. 6-13	19	1
Great Britain—Hull	Feb. 6-13	3	1
Great Britain—Leith	Jan. 30-Feb. 13	5	
Great Britain—London	Jan. 30-Feb. 13	11	
Great Britain—Manchester	Feb. 6-13	1	
Great Britain—South Shields	Feb. 6-13	2	1
India—Bombay	Jan. 26-Feb. 2		10
India—Karachi	Jan. 24-31	1	
Java—Batavia	Jan. 16-23	15	2
Malta	Jan. 16-30	4	
Mexico—City of Mexico	Feb. 14-21	16	8
Netherlands—Amsterdam	Feb. 6-20	7	1
Russia—Moscow	Jan. 23-Feb. 6	15	5
Russia—St. Petersburg	Jan. 30-Feb. 6	2	2
Spain—Santander	Jan. 8-15	3	
Turkey—Constantinople	Jan. 31-Feb. 14		23
Yellow Fever.			
Brazil—Rio de Janeiro	Jan. 24-31	5	1
Mexico—Merida	Feb. 13-20	1	
Mexico—Vera Cruz	Feb. 13-20	1	
Cholera—Insular.			
Philippine Islands—Provinces	Jan. 9-16	219	163
Cholera—Foreign.			
India—Calcutta	Jan. 23-30		27
India—Madras	Jan. 16-22		2
Plague—United States.			
California—San Francisco	Feb. 8	1	
			Bacteriologically confirmed February 27th.
Plague—Insular.			
Philippine Islands—Manila	Jan. 9-16	5	4
Plague—Foreign.			
Africa—Port Elizabeth	Jan. 9-16	2	2
Brazil—Para	Jan. 28-30	9	
Brazil—Rio de Janeiro	Jan. 24-31	8	5
India—Bombay	Jan. 26-Feb. 2		384
India—Calcutta	Jan. 23-30		17
India—Karachi	Jan. 24-31	11	10
Mauritius	Jan. 21-Feb. 4	45	32

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending March 3, 1904:

ASHFORD, F. A., Assistant Surgeon. Granted leave of absence for ten days from March 28th. March 1, 1904.

BOGGESS, J. S., Assistant Surgeon. Granted leave of absence for three days from February 18th.

FRICKS, L. D., Passed Assistant Surgeon. Relieved from duty at the Immigration Depot, New York, N. Y., and assigned to duty in the office of the United States Consul at La Guayra, Venezuela. February 29, 1904.

GOLDBERGER, JOSEPH, Assistant Surgeon. To report to chairman of board of examiners at Washington, D. C., March 9, 1904, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

HOLT, J. M., Assistant Surgeon. To proceed to San Francisco, Cal. February 29, 1904.

KORN, W. A., Assistant Surgeon. To procede to Washington, D. C., and report to chairman of board of examiners, March 9, 1904, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

LLOYD, B. J., Assistant Surgeon. Relieved from duty at San Francisco, Cal., and assigned to duty in the office of the United States Consul at Callao, Peru. February 26, 1904. To proceed to Concord, Cal., for special temporary duty.

MANNING, H. M., Assistant Surgeon. Relieved from duty at Honolulu, T. H., and directed to proceed to Manila, P. I., and report to Chief Quarantine Officer for assignment to duty. February 29, 1904.

McMullen, John, Passed Assistant Surgeon. Bureau order of December 3, 1903, relieving Passed Assistant Surgeon McMullen from duty at Hongkong, China, and directing him to proceed to San Francisco, Cal., amended so that he shall report to the Chief Quarantine Officer at Honolulu for temporary duty. February 29, 1904.

Nydegger, J. A., Passed Assistant Surgeon. Granted leave of absence for one month from March 6, 1904, on account of sickness.

Richardson, S. W., Pharmacist. To proceed to St. Louis, Mo., and assume charge of the Marine Hospital exhibit at the Louisiana Purchase Exposition. February 26, 1904.

Trotter, F. E., Assistant Surgeon. Relieved from duty at San Francisco, Cal., and directed to report to Passed Assistant Surgeon Rupert Blue, Plague Laboratory, San Francisco, for duty. February 26, 1904.

Warren, B. S., Assistant Surgeon. Granted one day's extension of leave of absence, February 22, 1904.

Promotion.

Passed Assistant Surgeon J. C. Perry commissioned as surgeon. March 1, 1904.

Boards Convened.

Board convened to meet at Washington, D. C., February 29, 1904, for the physical examination of candidates for position of second assistant engineer, Revenue Cutter Service. Detail for the board—Assistant Surgeon General L. L. Williams, chairman. Assistant Surgeon A. J. McLaughlin, recorder.

Board convened to meet at Washington, D. C., March 4, 1904, for the physical examination of Chief Engineer G. B. Maher, Revenue Cutter Service. Detail for the board—Assistant Surgeon General L. L. Williams, chairman. Assistant Surgeon General W. J. Pettus, recorder.

Casualty.

Assistant Surgeon General Howard C. Russell died at Stapleton, N. Y., March 2, 1904.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending March 5, 1904:

Bourke, James, First Lieutenant and Assistant Surgeon. Relieved from temporary duty as attending surgeon and examiner of recruits, Chicago, Ill., and ordered to Fort Sheridan, Ill., for duty.

Dean, Elmer A., First Lieutenant and Assistant Surgeon. Left Fort Strong, Mass., on February 26th, on ten days' leave of absence, having been relieved from duty by Wilfrid Turnbull, First Lieutenant and Assistant Surgeon.

Harvey, Philip F., Colonel and Assistant Surgeon-General. Left Chicago, March 2nd, on thirty days' leave, with permission to apply for an extension of thirty days.

La Garde, Louis A., Major and Surgeon. Relieved from duty in Washington, D. C., and ordered to the Division of the Philippines for duty.

McAndrew, P. H., First Lieutenant and Assistant Surgeon. Left Jefferson Barracks, Mo., on two months' leave of absence.

Moseley, E. B., Lieutenant-Colonel and Deputy Surgeon-General. Granted thirty days' leave of absence, from about March 1st, with permission to apply for an extension of three months and to go beyond the sea.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending March 5, 1904:

De Vries, J. C., Acting Assistant Surgeon. Detached from duty with recruiting party No. 2, and ordered to the naval recruiting station, Baltimore, Md.

Janney, W. H., Acting Assistant Surgeon. Detached from the naval recruiting station, Baltimore ,Md., and ordered to duty with recruiting party No. 2.

McCullough, F. E., Passed Assistant Surgeon. Ordered to the Asiatic Station, sailing about March 9th.

Murphy, J. F., Assistant Surgeon. Detached from the *Wisconsin* and ordered to the *Isla de Cuba.*

Strine, H. F., Assistant Surgeon. Detached from the naval station, Olongapo, P. I., and ordered to Annapolis.

Spratling, L. W., Surgeon. Ordered to report for special temporary duty in the Bureau of Medicine and Surgery, Navy Department, Washington.

Taylor, J. S., Passed Assistant Surgeon. Detached from the naval hospital, New York, and ordered to accompany a marine battalion to San Francisco, Cal., and thence to the *Relief.*

Births, Marriages, and Deaths.

Born.

Corbusier.—In Fort Mansfield, Watch Hill, Rhode Island, on Monday, February 22nd, to Dr. Harold D. Corbusier, Contract Surgeon of the United States Navy, and Mrs. Corbusier, a daughter.

Kornreich.—In New York, N. Y., on Wednesday, February 17th, to Dr. Conrad P. Kornreich and Mrs. Kornreich, a son.

Married.

Golde—MacNeill.—In Germantown, Pennsylvania, on Saturday, February 27th, Dr. A. Henry Golde and Miss Margaret Barrie Cameron MacNeill.

Moore—Burnham.—In New York, N. Y., on Wednesday, February 24th, Dr. Albert H. Moore and Miss Mary Burnham.

Youngman—Ray.—In Philadelphia, Pennsylvania, on Wednesday, March 2nd, Dr. Maurice D. Youngman and Miss Katherine H. Ray.

Died.

Archer.—In Holgate, Ohio, on Friday, February 26th, Dr. James D. Archer, in the forty-sixth year of his age.

Baker.—In Newark, N. J., on Tuesday, March 1st, Dr. Frank E. Baker, in the forty-ninth year of his age.

Canfield.—In Edgar, Nebraska, on Monday, February 22nd, Dr. P. B. Canfield, in the forty-ninth year of his age.

Case.—In Cleveland, Ohio, on Friday, February 26th, Dr. Guy B. Case, in the fifty-third year of his age.

Cosford.—In Redlands, California, on Thursday, February 25th, Dr. Thomas Bettison Cosford, of Lockport, N. Y., in the fifty-first year of his age.

Hanna.—In Arlington, Virginia, on Thursday, February 25th, Dr. Albert A. Hanna, of Baltimore.

Highlands.—In Newtown, Ohio, on Monday, February 29th, Dr. W. W. Highlands, in the eighty-second year of his age.

Kinne.—In Paterson, New Jersey, on Thursday, March 4th, Dr. Theodore Young Kinne, in the sixty-fourth year of his age.

Ludlow.—In New York, N. Y., on Wednesday, March 2nd, Dr. Ogden Curtis Ludlow.

Pattison.—In Plattsburg, N. Y., on Thursday, March 3nd, Dr. A. F. Pattison, in the seventy-seventh year of his age.

Price.—In Towson, Maryland, on Tuesday, March 1st, Dr. Abram A. Price.

Russell.—In Stapleton, Staten Island, on Wednesday, March 2nd, Dr. Howard C. Russell, of the D. S. Marine Hospital Service.

Staples.—In Winona, Minnesota, on Monday, February 22nd, Dr. Franklin Staples, in the seventy-first year of his age.

Toal.—In New York, N. Y., on Friday, February 26th, Dr. David D. Toal, in the sixty-first year of his age.

Wallace.—In Newark, New Jersey ,on Tuesday, March 1st, Dr. David L. Wallace, in the forty-ninth year of his age.

Warfield.—In Longwood, Virginia, on Wednesday, February 17th, Dr. Evan W. Warfield, in the seventy-ninth year of his age.

cavity, and he must be dense indeed who could sufficiently enlarge an opening to drag a loop of intestine down through it without realizing that he had perforated the uterus; and of an individual who fails to recognize the intestine when he has it in his sight and in his hands, and proceeds to scrape a hole in it, nothing in this connection need be said. Any operation would be dangerous in such hands and no conclusions need be drawn as to the danger of such occurrences at the hands of one justified by education and experience to attempt even so called minor operations.

In hastily reviewing the literature of this subject in the best recent textbooks the greatest divergence of opinion seems to exist as to the advisability of the postoperative tamponing of the uterine cavity and the postoperative douche.

Of those who advocate tamponing, all agree upon using strips of gauze, although some use plain sterile gauze, while others advocate various antiseptics upon the gauze. The gauze is left in the uterus for from twenty-four to seventy-two hours.

It seems as though there should be a definite scientific reason for adopting one course or the other. I have adopted the rule of not tamponing the cavity for the following reason: No matter how strenuous the effort, it is probable that absolute asepsis is never achieved. The tamponing of the uterine cavity with gauze immediately after a curettement and while the abraded surfaces are still the site of more or less abundant hæmorrhage, furnishes a mesh in which the blood will clot and remain within the cavity, instead of draining away by simple force of gravity. It being impossible to obtain absolute asepsis, this blood clot presents an admirable culture medium upon which the relatively few organisms present may rapidly multiply. If the number of organisms originally present was considerable they might multiply in twenty-four, or, of course, much more easily in seventy-two, hours into many times the lethal dose for that individual.

As the abraded surfaces will not in so short a time be protected by an intact epithelial surface, the withdrawal of the gauze is bound to deposit the organisms on fertile soil. If, then, under such circumstances the woman escapes infection, it is to be credited to the marvelous powers of resistance inherent within her, and occurs in spite of the uterine tamponing, not because of it.

It is far more rational thoroughly to clean the cavity during the operation and then to leave the blood and exudates free to drain through an amply dilated cervix, thus tending to wash away organisms.

As regards postoperative douches, it is wisest to avoid douches of any kind for the first forty-eight hours, or until the cervix has had time so far to retract as to leave little possibility and no liability of washing material from the vagina into the cervical or uterine canal. Of course, special indication may exist for thorough intrauterine douches. Antiseptic solutions are entirely unnecessary and may do harm, either through local chemical irritation, or through absorption. Normal salt solution or sterile water should be used.

It is certainly wise for some of wide experience to give from time to time to those of less experience, warnings of the trouble into which it is possible for them to get without realizing it, but I cannot agree that it is right to characterize the operation of uterine curettement as dangerous in the abstract, or in the hands of those competent to undertake the performance of any surgical procedure. It seems quite as culpable to overestimate the dangers as to underestimate them.

158 Newbury Street.

APPENDICITIS IN YOUNG CHILDREN.[*]

By JOHN F. ERDMANN, M. D.,

NEW YORK,

VISITING SURGEON TO GOUVERNEUR HOSPITAL, ETC.

In discussing this subject I limit myself to the consideration of cases of appendicitis occurring in children not over ten years of age, and shall consider only the symptomatology and operative and postoperative treatments.

Since January, 1902, I have seen 250 cases of appendicitis in all, operating in 201 of these. Of this number 29 cases occurred in children under ten years of age. Of the 29 cases, I operated in 22 with 2 deaths, a mortality of .0909 per cent. All the cases were acute; nine patients were operated on in a primary attack and 11 in secondary or multiple attacks; in two not stated. There were 14 cases of gangrene and perforation; 7 cases with foreign bodies, 4 cases included under foreign bodies containing from 6 to 30 pin worms each. The appendix was removed in every instance. Fourteen cases were drained; these were not in each instance the 14 cases of perforation and gangrene, as some of the latter were closed.

Other complications were, in one case, subphrenic abscess with operation, discharged improved; in one, pneumonia; in one, tuberculous peritonitis—this patient, I am informed, died twelve or fourteen months later, of general tuberculosis; one case of amygdalitis; and one in which an acute articular rheumatism occurred in the second week.

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[*] Part of the Symposium on Abdominal Surgery in Young Children, read before the County Medical Society, December 28, 1903.

The deaths occurred in cases that were desperate, and the only chance for life seemed to be in operating.

Of the seven cases not operated on by me, one was in a child two years and three fourths old, and another in one five years old; each child died within a few hours, operation not being considered advisable, owing to their almost moribund condition when seen. One was referred to St. Luke's Hospital and was operated on, result not known; while in the remaining four cases operation was refused and further traces of them were unobtainable.

The cases operated on occurred in the following numbers as to years: 1 at three years and one sixth, 2 at five years, 3 at six, 7 at seven, 4 at nine, and 5 at ten years. The deaths were one at six years and one at nine years. During this period I have also removed the appendix nine times in infants from four to eight months old, and once in a child at four years and three fourths. These were intussusception cases and have no bearing upon this paper, except as a matter of interest, especially in the treatment of the stump. Of these cases of intussusception with appendicectomy three patients died, but death could not be attributed to the appendicectomy.

The incisions made were those of McBurney, in sixteen cases, and either the Kammerer or split rectus in the remainder. The stump was inverted after the method of Dawbarn four times, and in the remaining eighteen cases the stumps were tied off and cauterized with pure carbolic acid. This latter procedure was followed in all the cases operated on for intussusception.

The diagnosis in children under ten years is difficult, from the fact that we must rely largely upon objective signs and such symptoms as are obtainable from the household nurses, governesses, and parents; as most children of this age are so fearful that something terrible is going to happen to them, that in their fright their statements conflict, or they are so young as to be unable to give any vocal expression, except that of crying. A careful history from the physician in attendance, the nurse, or parent, with reference to pain, bloody stool, etc., and the period of duration of the disease when seen, should exclude intussusception. Pneumonia or pleurisy of the type that is ushered in with lower intercostal pain is exceptionally difficult to exclude in the first day unless distinct chest symptoms of the disease are present. These cases bear watching for a day for development. Should the pulse become very rapid and the face become anxious, appendicitis can be diagnosticated, while, if the breathing becomes accelerated, the face flushed or livid, although the abdomen be tense and distended, pneumonia is to be considered. I must confess that I have seen the abdomen opened, and have opened it myself, for a pneumonia. Recently I saw a case, with one of our pædiatricians, for intussusception in which I made a diagnosis of pneumonic peritonitis. This patient was about eight months old, had a lobar pneumonia, and with it profoundly distended and rigid abdomen, complete obstruction, rapid feeble pulse, and temperature of about 102.5° F. At the time of the consultation I suggested exploration, although I felt that neither intussusception nor appendicitis was present. On returning in two hours with my assistants I found the child practically moribund, and refused to operate. Death followed in about two hours. Autopsy revealed a general peritonitis; no other visceral involvement; appendix healthy.

For our diagnosis of appendicitis we have, then, to rely, in the very young, on pain, manifested by fitful crying and sleep, abdominal tenderness, and rigidity of the right lower quadrant after the first few hours have elapsed; the absence of blood, bloody mucus, etc., in the stool; elevation of pulse and temperature, usually more pronounced in children than adults; tumor fixed, and in the classical region if the illness is of several days' duration, and at this time a temperature typical of pus. Almost invariably the little patients unconsciously place their hand in the region of the appendix to ward off manipulations in this area. This latter sign, to me, is almost pathognomonic of the disease.

I am a firm believer that once an appendicitis has occurred, the patient is always in danger until the organ is removed, and I advise the patient in all such cases seen, to submit to operation.

The usual preliminary steps that can be undertaken in emergency operations should be followed. The incision is either that of McBurney or Kammerer, or that which splits the rectus, no matter whether we feel that drainage is likely to be necessary or not. The McBurney is done when no mass can be felt, or when the mass is well confined to the iliac fossæ, while the Kammerer or split rectus is used in those cases where the mass lies more to the median line or down in the region of the bladder.

The incision when first made is never over two inches long, and is more than likely to be that of Morris, one inch and a half in length. As a rule I use no gauze protecting dam, but make a very careful finger dissection, recognizing readily when the rupture of the abscess, if an included one, takes place. The discharge is rapidly taken up by small sponges in forceps; the opening into the abscess cavity is gradually enlarged as the leakage diminishes, the cavity finally wiped out with dry gauze sponges, the appendix sought for, and adhesions broken up. When the appendix is freed, the usual procedure of ligating the mesoappendix is followed; then the appendix is excised and the stump treated in any of the following ways: the Dawbarn inversion method; the seromuscular cuff method, suturing the cuff over the ligated mucosa; clamping with a strong forceps on the principle of the angeiotribe near the base, cutting off above the forceps then inverting the crushed stump; and the usual method, that of ligating the appendix at its base and cauterizing with carbolic acid the exposed and everted mucous membrane. Should the appendix be bound down to other viscera so closely that freeing it would impair the integrity of any of the surrounding organs, I strip it out by splitting the serous and muscular coats at some point where possible, and then shell or strip out the mucous canal, ligating at the usual site. This stripping method is exceptionally easy and can always be used in difficult adhesion cases. Recently I stripped out an appendix seven inches long that I followed to the cæcum, which had not descended, but lay in the site usually occupied by the hepatic flexure of the colon.

When free pus of the serous variety is present in the general cavity, I sponge the peritoneal cavity as dry as possible and close the wound without drain. When gangrene of the appendix and suspicious mesoappendix are present, I drain for from twenty-four hours to the time required as shown by the discharge, or by temperature chart, and pulse.

I do not wash the entire cavity, having given up this method several years ago, but I do wipe out the circumscribed abscess cavities with H_2O_2 and salt solution, and then drain or not, as experience has taught me. My drainage is usually a small cigarette drain, made with rubber tissue including a piece of sterile gauze loosely rolled. This passes down into the pelvis or simply into the iliac fossa, as indicated by the extent of the abscess, etc., calling for drain.

The incision is closed with the exception of the point of drain, when such is used, by layers, and a provisional suture is placed quite close to the drain so that, in case the conditions arise that will warrant the removal of the drain in a day or two, this suture can be tied, thereby allowing a primary closure to take place.

The After Treatment.—A movement of the bowels is desirable in the first twenty-four hours following operation, and it is my custom to introduce one tenth of a grain calomel triturates as soon as the vomiting ceases. When free seropus has been present and the abdominal wound is sewed up, I have from half an ounce to one ounce of magnesium sulphate and from eight to twelve ounces of water at 100° F. given by the rectum before the patient is out of the influence of his anæsthetic. Nothing is given by mouth in the more serious cases until the bowels have moved or flatus has been expelled *per rectum*. After the bowels have moved the patient is allowed milk and broth diet for twenty-four hours; then, if the temperature is under 101° F., light diet is given, and regular diet as soon as the chart shows a temperature of 99.5° F. or under. A standing order for cathartics, if necessary to produce a movement daily, is given.

When drainage has been used I change the abdominal dressings as often as discharge and odor demand, but do not remove or change the drain until the third to fifth day, and even as late as the seventh day.

The patient is allowed to roll whenever he likes, and is allowed to sit up in bed, if not drained, on the fourth day; out of bed on the seventh; if drained, he is placed in a semi-sitting position on the third or fourth day, and sits up in bed the earliest possible moment that the wound will allow.

POSTOPERATIVE PNEUMONIA, WITH A REPORT OF A CASE.*

By LAWRENCE E. HOLMES, M. D.,

BILTMORE (ASHEVILLE), N. C.

The subject of postoperative pneumonia is one of so great interest and importance that every case ought to be reported in detail, in order that it may be possible to discover the cause of this most distressing, and very frequently fatal, condition. No further excuse is needed for reporting the following case, and I take this opportunity of briefly reviewing the subject under discussion.

Case.—T. W. M., male, aged nineteen years, was operated on by Dr. Meriwether in the Biltmore Hospital, February 19, 1902, for sarcocele and phimosis. The operation performed was unilateral castration, followed by circumcision.

Family and previous history were absolutely negative, as was the history of the present condition. I will, therefore, not take your time by going over unnecessary details, which have no interest whatever, in connection with the subsequent history of the case. The patient was in good health, as he had been all his life, though he was never very robust. He took the ether, which was administered on plain gauze, very well, except that the secretion of mucus was extremely profuse during the whole time of its administration; and at one time, before he was completely under its influence, it was necessary to stop the ether for a few moments, on account of the great amount of mucus in the throat, which so interfered with breathing as to cause marked cyanosis. After this, however, there was no more trouble.

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* Read before the North Carolina State Medical Association, Hot Springs, N. C., June, 1903.

He was under the influence of the anæsthetic about one hour. He stood the operation very well, going off the table in good condition.

The next day, February 20th, the patient complained of severe pain in the epigastric region, aggravated by breathing. His temperature ran up above 102° F.; pulse, 100; respiration, 22. The wounds were examined and found in good condition. Pneumonia was suspected, but no signs of it could be discovered.

February 21st. In the morning, T., 102.5° F.; pulse, 100; respirations, 22. There is some cough with slight amount of blood stained mucoid expectoration. No signs of lung consolidation can be made out. Evening T., 105° F.; pulse, 106; respirations, 32. Physical examination shows slight impairment of resonance on percussion, over whole of right lung. Just below the angle of the scapula a few crepitant râles can be heard, and over the whole right lung breathing is somewhat harsher than on left, particularly just below the angle of the scapula. Cough is severe. The expectoration is all uniformly bloodstained, having the characteristic "rusty" appearance. At this time, of course, there was no question as to the diagnosis of pneumonia.

February 22nd. Signs of congestion more marked over whole of right lung. Râles heard throughout same area. General condition about the same.

February 23rd. Right lung shows signs of very marked congestion, but not of absolute consolidation; breathing very harsh, fremitus greatly increased, râles heard over most of lung.

February 24th. Condition about the same as yesterday. Cough moderate, causing sharp pain; sputum still "rusty." Physical signs unchanged.

February 26th. For past four days temperature has varied from 102° to 104° F.; pulse and respiration have gradually gone up, now being 130 and 38, respectively. Patient somewhat delirious in afternoon and evening.

March 1st. For the last three days the patient has been restless and delirious most of the time; at times almost violently so. The temperature has gradually come down, reaching the normal to-day. General condition somewhat better.

March 3rd. For the past three days temperature has been up again, reaching about 102° F. No cause for it could be detected. Down to normal again to-day. Lung is gradually clearing up, though posteriorly impairment of percussion resonance is very marked; less so anteriorly; though below the clavicle the breathing is still harsh, and vocal resonance increased.

March 16th. Patient has been steadily improving. Temperature has remained normal. There is still decided impairment of percussion resonance over right lung, posteriorly; this is probably due to a thickening of the pleura, for the breath sounds are clear, though fainter than normal, and no râles can be heard. Expansion is somewhat diminished. Anteriorly, the breath sounds are still somewhat harsher than normal.

Two days later the patient was discharged. I might add that I heard of him about a couple of months later, when he was perfectly well. At no time did the wounds show any signs of infection.

The important question to decide in this particular case is, exactly what caused the pneumonia; and this it is impossible to say. From the fact that the secretion of mucus was so free that respiration was at one time greatly interfered with, it is quite possible that some mucus might have been aspirated into the lung, carrying with it germs from the mouth, and thus have set up the inflammatory process in a lung already irritated by the ether vapor and having probably some peculiar susceptibility to its influence; for it is likely that the same sensibility to the ether vapor, which manifested itself in the mouth by such a profuse secretion of mucus and saliva, extended throughout the mucous membranes of the respiratory tract.

When we come to investigate the subject of postoperative pneumonia, we find great diversity of opinion as to its ætiology, as well as to its frequency. The various names used almost interchangeably at the present day for this condition —postoperative, postanæsthetic, postetherization and ether pneumonia, suggest in themselves different theories to account for it.

By some it is thought to be brought about chiefly by the impairment of the resisting power produced by the shock of the operation itself; by others it is thought that the condition of lowered resistance is produced by the general anæsthetic, either ether or chloroform. Still others, particularly the advocates of chloroform as a general anæsthetic, are inclined to attribute any pulmonary complication following an operation in which ether has been employed to the irritation produced by the anæsthetic on the lung tissue itself; while others consider it the result of the aspiration into the lungs of some foreign matter—mucus or vomited food particles—a true aspiration pneumonia, similar in origin and character to that which we see in bulbar palsy or in other conditions associated with motor or sensory laryngeal paralysis. Still others are inclined to attribute most cases to pulmonary embolus; while the chilling of the patient, which is so apt to occur either during the operation from exposure, or later, on removal—often when damp with perspiration—from a hot operating room to a much cooler room, and frequently through draughty passages, is in many cases, doubtless a causative factor.

Another strongly predisposing factor in the production of these postoperative pulmonary complications is the hypostatic congestion induced by the protracted dorsal position, maintained after so many operations, associated very frequently with a greatly enfeebled state of the general system.

The inability to expand the lungs fully or to get rid by coughing of any secretions that may collect in the lungs, on account of the pain produced by the attempt, particularly after laparotomies, makes this predisposing factor more potent.

The wide difference of opinion with regard to the ætiology of this condition is to be explained by the fact that there is no one cause to which all cases can be attributed, there being probably a certain amount of truth in each of the various theories, some cases being caused by one thing and some by another, and still more by a combination of several or all of the above named causes.

What I want to do is briefly to review the opinions of various observers on the subject, and to try to find out, if possible, the most probable cause or causes of this distressing condition, so that we may the better know how to prevent it.

With the exception of stating the fact that postoperative pneumonia may be either lobar or lobular, though more frequently the latter, I do not intend to mention its pathology, symptomatology, or treatment.

Ashhurst (1) speaks of postoperative pneumonia under the subject of systemic anæsthetics in general. He says, "A low form of pneumonia or a kind of suffocative catarrh may follow [the use of general anæsthetics] and prove fatal in a few days." He thus, apparently, does not consider it more likely to follow the use of one anæsthetic than another, but to be simply a rare condition which may occur as a result of the use of a general anæsthetic.

He also quotes Zweifel with regard to the occurrence of catarrhal pneumonia following operations by artificial light when chloroform is employed. Under these circumstances, the latter considers the pneumonia as produced in some way by the action of the vapor of the chloroform combining with the gases of combustion, but does not suggest how.

It is to be presumed that he considers the pneumonia to be caused by the irritation produced in the air passages by this combination of gases.

That there is danger in the use of chloroform by artificial light—excluding electricity—is not perhaps so generally known as it should be. This danger has been recently pointed out in an editorial in the *Philadelphia Medical Journal* (2), where reference is made to a case in which the operation was performed by gaslight under chloroform anæsthesia, when four nurses and two doctors showed signs of poisoning, one of the former dying twenty-eight hours after leaving the operating room. In these cases it has been shown that the poisonous vapor is $COCl_3$, produced by the combination of chloroform with carbon monoxide. Though in this case the severe toxic symptoms, followed in one of those affected by death, were undoubtedly due to the constitutional action of the poisonous gas, "the severe spasmodic cough," which was the first symptom, was undoubtedly due to the local irritative effect of the gas on the mucous membrane of the air passages, which in itself might in other cases be sufficient to set up a catarrhal pneumonia. So Zweifel, as quoted above, is in all probability correct in his theory.

Some observers consider sudden death occurring under chloroform anæsthesia by gaslight to be caused by the same poisonous gas (3).

In a recent discussion before the Paris Academy of Medicine, on the relative merits of ether and chloroform, Poncet (4), after a careful study of the subject, expressed his opinion as follows: "Considering the unquestionable danger [sudden death] to which the employment of chloroform always exposes one, I prefer ether, which is far less poisonous; the great reproach attached to this anæsthetic is, that it is more irritant to the respiratory passages than chloroform, and it has even been said that, if the latter causes more deaths on the operating table, the former kills more in the wards. . . . It is true that one sees bronchopneumonias following ether narcosis, but the individual affected is always a subject whose equilibrium is more or less unstable, from the point of view of pulmonary complications, as the result of a preexistent infection; it is necessary, also, to take into consideration the shock of the operation and all the causes of chilling of which the surgical operation is the occasion; so that, according to my opinion, it would be more correct to speak of pneumonias of operation than of pneumonias of etherization."

This, also, is the opinion of most of those who have made a study of the subject.

In a discussion on the subject of ether anæsthesia at the French Congress of Surgery (5), held in Paris last October, Juillard, who reported over 9,000 etherizations without a single death, said, "I have never seen bronchopulmonary complications due to ether, and I am persuaded that the majority of pneumonias with which this agent is reproached are simply infectious pneumonias. One ought, however, to be on the lookout for the contraindications of etherizations, especially a bad condition of the respiratory tract."

On the same occasion, Roux, of Lausanne, said, "I believe that the great danger of ether is in its harmlessness, on account of which it is administered far too freely and without proper care. In my opinion, it is sufficient to watch the administration of this anæsthetic to avoid postoperative complications. Chloroform has always seemed to me to cause as many postoperative pneumonias as ether."

A different opinion was expressed by Montprofit, of Antwerp, who stated that he had used ether about 500 times, and had frequently observed complications in the respiratory tract. He then gave up the use of ether, employing chloroform exclusively. He reported 5,800 chloroformizations with only one death.

In a review of the subject of chloroform and ether anæsthesia, Poncet (6) says: "It has not been demonstrated, and no statistics have proved, that the postoperative pulmonary complications, such as bronchitis, congestion of the lungs, bronchopneumonia, œdema of the lungs, etc., are due to the irritant action of the vapor of ether. The so called etherization or chloroformization pneumonias are essentially due to infection. The pulmonary complications are probably just as frequent in those operative cases which receive no anæsthetic. It is not exact to say that the mortality from ether narcosis in the days following the operation is equal to that caused by chloroform, which kills at the time of the operation. This opinion becomes much less justified when one considers the fact that the vapor of chloroform is more irritating than that of ether."

Henle (7), who has made a special study of the subject, says that pneumonia is not an uncommon sequel of laparotomy, but he does not seem to consider it more common after the use of ether than chloroform, thugh he states that it is less common after infiltration than after general anæsthesia. The majority of the pneumonias are lobular, and come on within the first three days. According to his statistics, out of 1,787 laparotomies, pneumonia occurred in 143; that is, in over 8 per cent. Of these, over 45 per cent. died; the total mortality of laparotomies from pneumonia alone would thus be over 3 per cent., which is certainly very high indeed. He found that the liability to pneumonia increased with age, and was more common in his cases after jejunectomy, incarcerated umbilical hernia, and resection of the stomach. He considers that the interference with the respiration caused by opening the abdominal cavity predisposes to pneumonia; as also does the chilling of the body during the operation. Aspiration of foreign matter he mentions as one of the causes. He considers it very important to keep the patient from "catching cold" after operation, in order to avoid pneumonia.

In regard to the relative frequency of pneumonia following the different methods of anæsthesia, Eisendrath (8) says: "It was formerly thought that acute pulmonary complications following operations were more frequently found with ether than with any other anæsthetic. Mikulicz has shown that the percentage is relatively larger in local anæsthetics (Schleich) than if a general anæsthetic is given. In the last few years 1,007 goître operations with general anæsthesia (chloroform) were followed in 7.5 per cent. of the cases by pneumonia, and of these, 3.4 per cent. terminated fatally. This shows that we can no longer blame the general anæsthetic as being the chief cause of pulmonary complications following operations."

Killing (9), another writer on the subject, says that pneumonia is the most dangerous of the complications which follow operations on the gastrointestinal tract. He gives the common causes, as

First.—Inspiration into the lung, during narcosis, of putrid secretions or contents of stomach.

Second.—Lodgment of emboli in vessels of the lung.

Third.—The continued dorsal decubitus while the resistant powers are at low ebb, causing a hypostatic congestion.

Fourth.—The ordinary infective processes causing pneumonia in the sick as well as in the sound. To this class, he says, belong those cases in which pneumonia comes on directly after the operation, within twenty-four hours, without any assignable cause. He says that some cases are dependent upon the admission of air into the abdominal cavity, so that it strikes against the under surface of the diaphragm, allowing bacteria to accumulate there, and be carried by the lymphatics through the diaphragm to the lungs. He seems to think that "this explanation is substantiated by the fact that, since his operating room has been so constructed as to provide practically germ proof air, he has not had a single case of unexplainable pneumonia."

Since the lymphatics of the diaphragm have no direct connection with the lungs, the above theory hardly seems tenable.

Practically the same classification is given by Eisendrath (8), who has made a careful study of the subject.

First.—Complications [of general anæsthesia] may follow an anæsthetic, especially ether, when given in too concentrated a form, due to the fact that the mouth secretions are aspirated into the trachea and bronchi and may give rise to bronchitis, lobular, and lobar pneumonia.

Second.—They may be hypostatic, and this may occur with ether as well as with chloroform, being due to the recumbent position, diminished heart action, close fitting dressings, and to the tympany following operations, which is frequently a result of the paralysis of the muscular fibres of the intestines.

Third.—There may be aspiration of the particles of food, and this may occur with ether as well as with chloroform, giving rise to pulmonary abscess and gangrene.

Fourth.—Embolism, and this is the frequent explanation of the causes, including cases in which cocaine has been used, of the pulmonary complications of which we have spoken. " This is especially frequent after operations in the pelvis, and on strangulated hernias, and when there has been any previous anæmia, or in cachectic individuals. . . . We can aid in avoiding pneumonia after ether by keeping the head dependent, below the level of the trunk, and turned on one side. There is little danger in using ether other than the bronchial irritations, if these suggestions are strictly adherred to."

Osler, in his *Practice of Medicine,* discusses the subject in question under two heads, ether pneumonia and postoperative pneumonia. He says that pneumonia was a common cause of death after surgical operations before the days of anæsthesia, and he quotes Erichsen as saying that, of 41 deaths after surgical injuries, 23 cases exhibited signs of pneumonia. Under ether pneumonia —incorrectly so called—he mentions a report of 13 cases in 5,000 anæsthetizations, presumably etherizations, 8 of which were tongue or jaw cases. He says that in Johns Hopkins Hospital there have been 30 cases of pneumonia with 15 deaths, following anæsthesia; he does not mention, however, what anæsthetic was employed; 79 per cent. of the cases followed laparotomy. He mentions the fact that the use of ether has been largely restricted in Czerny's clinic, on account of the injurious after effects on the respiratory tract. " Czerny suggests that the association of ether pneumonia to abdominal operations is associated with pain on coughing, which leads to the accumulation of secretion and through this to retention or aspiration pneumonia.

" Among the various views brought forward to account for it, are the rapid evaporation of the ether, causing chilling of the pulmonary tissues, chilling of the patient at the time of operation, infection from inhaler, and direct action of the ether on the lungs."

He ends up by saying that the probability is that the prolonged etherization lowers the vitality of the tissues of the finer bronchi, and permits the pathogenic organisms, which are always present, to do their work.

In a recent editorial in the *Journal of the American Medical Association* (10) on the subject of lung complications of appendicitis, Sonnenburg's statistics of 1,000 operations for appendicitis are quoted, in which he found lung complications of some sort in 5 per cent. of all cases, though less than 1 per cent. of all these were pneumonia. In the editorial, reference is made to the frequency of inflammatory conditions of the lungs following strangulated hernia, attributable, probably, to lung embolus. It goes on to say: " Although a large number of cases may be due to embolus, there are undoubtedly cases in which other ætiologic factors are of still greater importance. The advocates of chloroform anæsthesia are inclined to call all of these cases ether pneumonias or ether bronchitis, but it is significant that the inflammation seldom follows directly after the administration of the anæsthetic, usually several days later, which should not be the case if inflammation resulted directly from the effect of the anæsthetic. Exposure of the patient in poorly heated operating rooms may give rise to chilling of the parts of the body not accustomed to exposure, and inflammatory diseases of the respiratory tract. This is no doubt a factor of greater importance than is generally believed. The fact that patients are kept flat on their backs to lessen the liability of postoperative hernia, not only after operations for appendicitis, but after all abdominal operations, makes these inflammatory conditions much more frequent after abdominal operations. Those who believe that thrombosis most frequently results from infection, will perhaps attribute to the infectious condition itself a part of the danger of causing these conditions."

In his work on *Gynæcology,* vol. i, page 149, Kelly says: " Pneumonia may follow the administration of the anæsthetic, whether ether or chloroform is given. Out of 1,800 administrations I have seen the complication eight times. The liability of pneumonia is increased, if the patient has a slight bronchitis or a coryza beforehand."

Hare, speaking of the subject, in his *System of Therapeutics,* says, " Bronchitis and pneumonia seldom result in this vicinity from the administration of ether. The complication is too rare to be considered in choosing an anæsthetic. Two factors call for careful investigation in connection with this subject, viz., the quality of the ether and the exposure of the patient. Certain brands of the one are unfit for use by reason of their irritating qualities and comparatively small narcotic properties. Exposure of any considerable portion of the body usually covered and the application of wet clothes are fraught with danger, and may be accountable for a certain proportion of the cases of postoperative pneumonia. Patients who are properly protected and who inhale a high degree of sulphuric ether, administered in a judicious manner, have little to fear from any affection of the respiratory tract as a result of the anæsthetic. The tendency of patients who have been etherized to suffer from pneumonia is probably exaggerated and is attributed to the wrong source. They should, however, be guarded from taking cold, as their relaxed condition undoubtedly renders them more susceptible."

I will not weary you further with any more quotations, but I wish simply briefly to sum up what we have learned from them.

The first thing is, that it is much more correct to speak of postoperative pneumonia than it is to speak of anæsthesia or ether pneumonia; for statistics show that pneumonia following operations was as frequent, or more so, before the days of anæsthesia, as at the present time; and also, that it is as frequent now (at least after some kinds of operations), when local anæsthesia is used for major operations, as when a general anæsthesia is employed. A general anæsthetic, therefore, does not materially increase the danger of pneumonia following operations if the lungs are in a healthy condition.

The next important thing we have learned is that if pneumonia is more liable to follow the use of ether than it is that of chloroform, which is at least a question, the difference is so slight that it does not begin to counteract the much greater danger with which the administration of the latter is associated.

Finally, from a knowledge of the possible causes, what means of prophylaxis can we employ?

To begin with, we must be sure that we have a pure drug, and that the inhaler, or whatever we use in its place, is perfectly clean. What seems to me the best method of administering ether—best because it is simplest—is to use several thicknesses of plain gauze placed over the mouth and nose, and on this the ether is to be dropped. This can be sterilized before using and afterwards be destroyed. Every possibility of infection by means of the inhaler is thus eliminated.

Of great importance is the care with which the anæsthetic is given. It is often said that anybody can give ether, simply because it is so safe. But, doubtless, this feeling of comparative safety is the indirect cause of much of the subsequent trouble, when it does occur; for, as a result of it, the anæsthetic is often entrusted to the incompetent or inexperienced. In almost all operations the anæsthetizer holds a more important and responsible position than does the operator's assistant. That this fact, however, is not generally recognized, is proved by the fact that, by many doctors, almost any one is considered competent to give an anæsthetic, even a medical student or a nurse, and also by the small fee which the anæsthetizer gets, as compared with that of the assistant.

The anæsthetic should be given slowly until the patient is thoroughly under its influence, and then enough should be given to keep him in that condition, for it is during the struggles that occur when the subject is only partially anæsthetized that the danger of aspirating some foreign substance into the lungs is the greatest. On the other hand, it is important to avoid giving too much of the anæsthetic, for there can be no question but that profound narcosis must depress the vital functions, and thus make the patient less liable to resist infection. Since the becoming chilled, either, during or after an operation, may certainly act as a predisposing cause, it is very important to avoid anything of the kind by having the operating room warm and free from draughts, the patient covered as completely as possible, and especially well protected when being removed from the operating room; before which all damp garments should be taken off, the patient dried with towels if the skin is moist, and a dry night dress put on.

During anæsthesia, especially if there is any tendency to become choked, the patient's head should be kept lower than the rest of the body and turned to one side; and when recovering from the effects of the anæsthetic, the head should always be kept on one side on a level with, or somewhat lower than, the body; never on a pillow.

In order to avoid hypostatic congestion, especially if there is any tendency in that direction, the patient's position should be changed as soon as possible after the operation, even if it is only by raising first one side and then the other by means of a pillow, due regard being paid, of course, to the requirements of the after treatment of the operation itself. If these precautions are carefully carried out, we shall find that postoperative pneumonia is such a rare condition that the fear of it will almost cease to be a factor in one's cavity, and he must be dense indeed who could sufficiently enlarge an opening to drag a loop of intestine down through it without realizing that he had perforated the uterus; and of an individual who fails to recognize the intestine when he has it in his sight and in his hands, and proceeds to scrape a hole in it, nothing in this connection need be said. Any operation would be dangerous in such hands and no conclusions need be drawn as to the danger of such occurrences at the hands of one justified by education and experience to attempt even so called minor operations.

In hastily reviewing the literature of this subject in the best recent textbooks the greatest divergence of opinion seems to exist as to the advisability of the postoperative tamponing of the uterine cavity and the postoperative douche.

Of those who advocate tamponing, all agree upon using strips of gauze, although some use plain sterile gauze, while others advocate various antiseptics upon the gauze. The gauze is left in the uterus for from twenty-four to seventy-two hours.

It seems as though there should be a definite scientific reason for adopting one course or the other. I have adopted the rule of not tamponing the cavity for the following reason: No matter how strenuous the effort, it is probable that absolute asepsis is never achieved. The tamponing of the uterine cavity with gauze immediately after a curettement and while the abraded surfaces are still the site of more or less abundant hæmorrhage, furnishes a mesh in which the blood will clot and remain within the cavity, instead of draining away by simple force of gravity. It being impossible to obtain absolute asepsis, this blood clot presents an admirable culture medium upon which the relatively few organisms present may rapidly multiply. If the number of organisms originally present was considerable they might multiply in twenty-four, or, of course, much more easily in seventy-two, hours into many times the lethal dose for that individual.

As the abraded surfaces will not in so short a time be protected by an intact epithelial surface, the withdrawal of the gauze is bound to deposit the organisms on fertile soil. If, then, under such circumstances the woman escapes infection, it is to be credited to the marvelous powers of resistance inherent within her, and occurs in spite of the uterine tamponing, not because of it.

It is far more rational thoroughly to clean the cavity during the operation and then to leave the blood and exudates free to drain through an amply dilated cervix, thus tending to wash away organisms.

As regards postoperative douches, it is wisest to avoid douches of any kind for the first forty-eight hours, or until the cervix has had time so far to retract as to leave little possibility and no liability of washing material from the vagina into the cervical or uterine canal. Of course, special indication may exist for thorough intrauterine douches. Antiseptic solutions are entirely unnecessary and may do harm, either through local chemical irritation, or through absorption. Normal salt solution or sterile water should be used.

It is certainly wise for some of wide experience to give from time to time to those of less experience, warnings of the trouble into which it is possible for them to get without realizing it, but I cannot agree that it is right to characterize the operation of uterine curettement as dangerous in the abstract, or in the hands of those competent to undertake the performance of any surgical procedure. It seems quite as culpable to overestimate the dangers as to underestimate them.

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APPENDICITIS IN YOUNG CHILDREN.*

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In discussing this subject I limit myself to the consideration of cases of appendicitis occurring in children not over ten years of age, and shall consider only the symptomatology and operative and postoperative treatments.

Since January, 1902, I have seen 250 cases of appendicitis in all, operating in 201 of these. Of this number 29 cases occurred in children under ten years of age. Of the 29 cases, I operated in 22 with 2 deaths, a mortality of .0909 per cent. All the cases were acute; nine patients were operated on in a primary attack and 11 in secondary or multiple attacks; in two not stated. There were 14 cases of gangrene and perforation; 7 cases with foreign bodies, 4 cases included under foreign bodies containing from 6 to 30 pin worms each. The appendix was removed in every instance. Fourteen cases were drained; these were not in each instance the 14 cases of perforation and gangrene, as some of the latter were closed.

Other complications were, in one case, subphrenic abscess with operation, discharged improved; in one, pneumonia; in one, tuberculous peritonitis—this patient, I am informed, died twelve or fourteen months later, of general tuberculosis; one case of amygdalitis; and one in which an acute articular rheumatism occurred in the second week.

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* Part of the Symposium on Abdominal Surgery in Young Children, read before the County Medical Society, December 28, 1903.

The deaths occurred in cases that were desperate, and the only chance for life seemed to be in operating.

Of the seven cases not operated on by me, one was in a child two years and three fourths old, and another in one five years old; each child died within a few hours, operation not being considered advisable, owing to their almost moribund condition when seen. One was referred to St. Luke's Hospital and was operated on, result not known; while in the remaining four cases operation was refused and further traces of them were unobtainable.

The cases operated on occurred in the following numbers as to years: 1 at three years and one sixth, 2 at five years, 3 at six, 7 at seven, 4 at nine, and 5 at ten years. The deaths were one at six years and one at nine years. During this period I have also removed the appendix nine times in infants from four to eight months old, and once in a child at four years and three fourths. These were intussusception cases and have no bearing upon this paper, except as a matter of interest, especially in the treatment of the stump. Of these cases of intussusception with appendicectomy three patients died, but death could not be attributed to the appendicectomy.

The incisions made were those of McBurney, in sixteen cases, and either the Kammerer or split rectus in the remainder. The stump was inverted after the method of Dawbarn four times, and in the remaining eighteen cases the stumps were tied off and cauterized with pure carbolic acid. This latter procedure was followed in all the cases operated on for intussusception.

The diagnosis in children under ten years is difficult, from the fact that we must rely largely upon objective signs and such symptoms as are obtainable from the household nurses, governesses, and parents; as most children of this age are so fearful that something terrible is going to happen to them, that in their fright their statements conflict, or they are so young as to be unable to give any vocal expression, except that of crying. A careful history from the physician in attendance, the nurse, or parent, with reference to pain, bloody stool, etc., and the period of duration of the disease when seen, should exclude intussusception. Pneumonia or pleurisy of the type that is ushered in with lower intercostal pain is exceptionally difficult to exclude in the first day unless distinct chest symptoms of the disease are present. These cases bear watching for a day for development. Should the pulse become very rapid and the face become anxious, appendicitis can be diagnosticated, while, if the breathing becomes accelerated, the face flushed or livid, although the abdomen be tense and distended, pneumonia is to be considered. I must confess that I have seen the abdomen opened, and have opened it myself, for a pneumonia. Recently I saw a case, with one of our pædiatricians, for intussusception in which I made a diagnosis of pneumonic peritonitis. This patient was about eight months old, had a lobar pneumonia, and with it profoundly distended and rigid abdomen, complete obstruction, rapid feeble pulse, and temperature of about 102.5° F. At the time of the consultation I suggested exploration, although I felt that neither intussusception nor appendicitis was present. On returning in two hours with my assistants I found the child practically moribund, and refused to operate. Death followed in about two hours. Autopsy revealed a general peritonitis; no other visceral involvement; appendix healthy.

For our diagnosis of appendicitis we have, then, to rely, in the very young, on pain, manifested by fitful crying and sleep, abdominal tenderness, and rigidity of the right lower quadrant after the first few hours have elapsed; the absence of blood, bloody mucus, etc., in the stool; elevation of pulse and temperature, usually more pronounced in children than adults; tumor fixed, and in the classical region if the illness is of several days' duration, and at this time a temperature typical of pus. Almost invariably the little patients unconsciously place their hand in the region of the appendix to ward off manipulations in this area. This latter sign, to me, is almost pathognomonic of the disease.

I am a firm believer that once an appendicitis has occurred, the patient is always in danger until the organ is removed, and I advise the patient in all such cases seen, to submit to operation.

The usual preliminary steps that can be undertaken in emergency operations should be followed. The incision is either that of McBurney or Kammerer, or that which splits the rectus, no matter whether we feel that drainage is likely to be necessary or not. The McBurney is done when no mass can be felt, or when the mass is well confined to the iliac fossæ, while the Kammerer or split rectus is used in those cases where the mass lies more to the median line or down in the region of the bladder.

The incision when first made is never over two inches long, and is more than likely to be that of Morris, one inch and a half in length. As a rule I use no gauze protecting dam, but make a very careful finger dissection, recognizing readily when the rupture of the abscess, if an included one, takes place. The discharge is rapidly taken up by small sponges in forceps; the opening into the abscess cavity is gradually enlarged as the leakage diminishes, the cavity finally wiped out with dry gauze sponges, the appendix sought for, and adhesions broken up. When the appendix is freed, the usual procedure of ligating the mesoappendix is followed; then the appendix is excised and the stump treated in any of the following ways: the Dawbarn inversion method; the seromuscular cuff method, suturing the cuff over the ligated mucosa; clamping with a strong forceps on the principle of the angeiotribe near the base, cutting off above the forceps then inverting the crushed stump; and the usual method, that of ligating the appendix at its base and cauterizing with carbolic acid the exposed and everted mucous membrane. Should the appendix be bound down to other viscera so closely that freeing it would impair the integrity of any of the surrounding organs, I strip it out by splitting the serous and muscular coats at some point where possible, and then shell or strip out the mucous canal, ligating at the usual site. This stripping method is exceptionally easy and can always be used in difficult adhesion cases. Recently I stripped out an appendix seven inches long that I followed to the cæcum, which had not descended, but lay in the site usually occupied by the hepatic flexure of the colon.

When free pus of the serous variety is present in the general cavity, I sponge the peritoneal cavity as dry as possible and close the wound without drain. When gangrene of the appendix and suspicious mesoappendix are present, I drain for from twenty-four hours to the time required as shown by the discharge, or by temperature chart, and pulse.

I do not wash the entire cavity, having given up this method several years ago, but I do wipe out the circumscribed abscess cavities with H_2O_2 and salt solution, and then drain or not, as experience has taught me. My drainage is usually a small cigarette drain, made with rubber tissue including a piece of sterile gauze loosely rolled. This passes down into the pelvis or simply into the iliac fossa, as indicated by the extent of the abscess, etc., calling for drain.

The incision is closed with the exception of the point of drain, when such is used, by layers, and a provisional suture is placed quite close to the drain so that, in case the conditions arise that will warrant the removal of the drain in a day or two, this suture can be tied, thereby allowing a primary closure to take place.

The After Treatment.—A movement of the bowels is desirable in the first twenty-four hours following operation, and it is my custom to introduce one tenth of a grain calomel triturates as soon as the vomiting ceases. When free seropus has been present and the abdominal wound is sewed up, I have from half an ounce to one ounce of magnesium sulphate and from eight to twelve ounces of water at 100° F. given by the rectum before the patient is out of the influence of his anæsthetic. Nothing is given by mouth in the more serious cases until the bowels have moved or flatus has been expelled *per rectum.* After the bowels have moved the patient is allowed milk and broth diet for twenty-four hours; then, if the temperature is under 101° F., light diet is given, and regular diet as soon as the chart shows a temperature of 99.5° F. or under. A standing order for cathartics, if necessary to produce a movement daily, is given.

When drainage has been used I change the abdominal dressings as often as discharge and odor demand, but do not remove or change the drain until the third to fifth day, and even as late as the seventh day.

The patient is allowed to roll whenever he likes, and is allowed to sit up in bed, if not drained, on the fourth day; out of bed on the seventh; if drained, he is placed in a semi-sitting position on the third or fourth day, and sits up in bed the earliest possible moment that the wound will allow.

POSTOPERATIVE PNEUMONIA, WITH A REPORT OF A CASE.*

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The subject of postoperative pneumonia is one of so great interest and importance that every case ought to be reported in detail, in order that it may be possible to discover the cause of this most distressing, and very frequently fatal, condition. No further excuse is needed for reporting the following case, and I take this opportunity of briefly reviewing the subject under discussion.

CASE.—T. W. M., male, aged nineteen years, was operated on by Dr. Meriwether in the Biltmore Hospital, February 19, 1902, for sarcocele and phimosis. The operation performed was unilateral castration, followed by circumcision.

Family and previous history were absolutely negative, as was the history of the present condition. I will, therefore, not take your time by going over unnecessary details, which have no interest whatever, in connection with the subsequent history of the case. The patient was in good health, as he had been all his life, though he was never very robust. He took the ether, which was administered on plain gauze, very well, except that the secretion of mucus was extremely profuse during the whole time of its administration; and at one time, before he was completely under its influence, it was necessary to stop the ether for a few moments, on account of the great amount of mucus in the throat, which so interfered with breathing as to cause marked cyanosis. After this, however, there was no more trouble.

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* Read before the North Carolina State Medical Association, Hot Springs, N. C., June, 1903.

He was under the influence of the anæsthetic about one hour. He stood the operation very well, going off the table in good condition.

The next day, February 20th, the patient complained of severe pain in the epigastric region, aggravated by breathing. His temperature ran up above 102° F.; pulse, 100; respiration, 22. The wounds were examined and found in good condition. Pneumonia was suspected, but no signs of it could be discovered.

February 21st. In the morning, T., 102.5° F.; pulse, 100; respirations, 22. There is some cough with slight amount of blood stained mucoid expectoration. No signs of lung consolidation can be made out. Evening T., 105° F.; pulse, 106; respirations, 32. Physical examination shows slight impairment of resonance on percussion, over whole of right lung. Just below the angle of the scapula a few crepitant râles can be heard, and over the whole right lung breathing is somewhat harsher than on left, particularly just below the angle of the scapula. Cough is severe. The expectoration is all uniformly bloodstained, having the characteristic "rusty" appearance. At this time, of course, there was no question as to the diagnosis of pneumonia.

February 22nd. Signs of congestion more marked over whole of right lung. Râles heard throughout same area. General condition about the same.

February 23rd. Right lung shows signs of very marked congestion, but not of absolute consolidation; breathing very harsh, fremitus greatly increased, râles heard over most of lung.

February 24th. Condition about the same as yesterday. Cough moderate, causing sharp pain; sputum still "rusty." Physical signs unchanged.

February 26th. For past four days temperature has varied from 102° to 104° F.; pulse and respiration have gradually gone up, now being 130 and 38, respectively. Patient somewhat delirious in afternoon and evening.

March 1st. For the last three days the patient has been restless and delirious most of the time; at times almost violently so. The temperature has gradually come down, reaching the normal to-day. General condition somewhat better.

March 3rd. For the past three days temperature has been up again, reaching about 102° F. No cause for it could be detected. Down to normal again to-day. Lung is gradually clearing up, though posteriorly impairment of percussion resonance is very marked; less so anteriorly; though below the clavicle the breathing is still harsh, and vocal resonance increased.

March 16th. Patient has been steadily improving. Temperature has remained normal. There is still decided impairment of percussion resonance over right lung, posteriorly; this is probably due to a thickening of the pleura, for the breath sounds are clear, though fainter than normal, and no râles can be heard. Expansion is somewhat diminished. Anteriorly, the breath sounds are still somewhat harsher than normal.

Two days later the patient was discharged. I might add that I heard of him about a couple of months later, when he was perfectly well. At no time did the wounds show any signs of infection.

The important question to decide in this particular case is, exactly what caused the pneumonia; and this it is impossible to say. From the fact that the secretion of mucus was so free that respiration was at one time greatly interfered with, it is quite possible that some mucus might have been aspirated into the lung, carrying with it germs from the mouth, and thus have set up the inflammatory process in a lung already irritated by the ether vapor and having probably some peculiar susceptibility to its influence; for it is likely that the same sensibility to the ether vapor, which manifested itself in the mouth by such a profuse secretion of mucus and saliva, extended throughout the mucous membranes of the respiratory tract.

When we come to investigate the subject of postoperative pneumonia, we find great diversity of opinion as to its ætiology, as well as to its frequency. The various names used almost interchangeably at the present day for this condition —postoperative, postanæsthetic, postetherization and ether pneumonia, suggest in themselves different theories to account for it.

By some it is thought to be brought about chiefly by the impairment of the resisting power produced by the shock of the operation itself; by others it is thought that the condition of lowered resistance is produced by the general anæsthetic, either ether or chloroform. Still others, particularly the advocates of chloroform as a general anæsthetic, are inclined to attribute any pulmonary complication following an operation in which ether has been employed to the irritation produced by the anæsthetic on the lung tissue itself; while others consider it the result of the aspiration into the lungs of some foreign matter—mucus or vomited food particles—a true aspiration pneumonia, similar in origin and character to that which we see in bulbar palsy or in other conditions associated with motor or sensory laryngeal paralysis. Still others are inclined to attribute most cases to pulmonary embolus; while the chilling of the patient, which is so apt to occur either during the operation from exposure, or later, on removal—often when damp with perspiration—from a hot operating room to a much cooler room, and frequently through draughty passages, is in many cases, doubtless a causative factor.

Another strongly predisposing factor in the production of these postoperative pulmonary complications is the hypostatic congestion induced by the protracted dorsal position, maintained after so many operations, associated very frequently with a greatly enfeebled state of the general system.

The inability to expand the lungs fully or to get rid by coughing of any secretions that may collect in the lungs, on account of the pain produced by the attempt, particularly after laparotomies, makes this predisposing factor more potent.

The wide difference of opinion with regard to the ætiology of this condition is to be explained by the fact that there is no one cause to which all cases can be attributed, there being probably a certain amount of truth in each of the various theories, some cases being caused by one thing and some by another, and still more by a combination of several or all of the above named causes.

What I want to do is briefly to review the opinions of various observers on the subject, and to try to find out, if possible, the most probable cause or causes of this distressing condition, so that we may the better know how to prevent it.

With the exception of stating the fact that postoperative pneumonia may be either lobar or lobular, though more frequently the latter, I do not intend to mention its pathology, symptomatology, or treatment.

Ashhurst (1) speaks of postoperative pneumonia under the subject of systemic anæsthetics in general. He says, " A low form of pneumonia or a kind of suffocative catarrh may follow [the use of general anæsthetics] and prove fatal in a few days." He thus, apparently, does not consider it more likely to follow the use of one anæsthetic than another, but to be simply a rare condition which may occur as a result of the use of a general anæsthetic.

He also quotes Zweifel with regard to the occurrence of catarrhal pneumonia following operations by artificial light when chloroform is employed. Under these circumstances, the latter considers the pneumonia as produced in some way by the action of the vapor of the chloroform combining with the gases of combustion, but does not suggest how.

It is to be presumed that he considers the pneumonia to be caused by the irritation produced in the air passages by this combination of gases.

That there is danger in the use of chloroform by artificial light—excluding electricity—is not perhaps so generally known as it should be. This danger has been recently pointed out in an editorial in the *Philadelphia Medical Journal* (2), where reference is made to a case in which the operation was performed by gaslight under chloroform anæsthesia, when four nurses and two doctors showed signs of poisoning, one of the former dying twenty-eight hours after leaving the operating room. In these cases it has been shown that the poisonous vapor is $COCl_3$, produced by the combination of chloroform with carbon monoxide. Though in this case the severe toxic symptoms, followed in one of those affected by death, were undoubtedly due to the constitutional action of the poisonous gas, " the severe spasmodic cough," which was the first symptom, was undoubtedly due to the local irritative effect of the gas on the mucous membrane of the air passages, which in itself might in other cases be sufficient to set up a catarrhal pneumonia. So Zweifel, as quoted above, is in all probability correct in his theory.

Some observers consider sudden death occurring under chloroform anæsthesia by gaslight to be caused by the same poisonous gas (3).

In a recent discussion before the Paris Academy of Medicine, on the relative merits of ether and chloroform, Poncet (4), after a careful study of the subject, expressed his opinion as follows: " Considering the unquestionable danger [sudden death] to which the employment of chloroform always exposes one, I prefer ether, which is far less poisonous; the great reproach attached to this anæsthetic is, that it is more irritant to the respiratory passages than chloroform, and it has even been said that, if the latter causes more deaths on the operating table, the former kills more in the wards. . . . It is true that one sees bronchopneumonias following ether narcosis, but the individual affected is always a subject whose equilibrium is more or less unstable, from the point of view of pulmonary complications, as the result of a preexistent infection; it is necessary, also, to take into consideration the shock of the operation and all the causes of chilling of which the surgical operation is the occasion; so that, according to my opinion, it would be more correct to speak of pneumonias of operation than of pneumonias of etherization."

This, also, is the opinion of most of those who have made a study of the subject.

In a discussion on the subject of ether anæsthesia at the French Congress of Surgery (5), held in Paris last October, Juillard, who reported over 9,000 etherizations without a single death, said, " I have never seen bronchopulmonary complications due to ether, and I am persuaded that the majority of pneumonias with which this agent is reproached are simply infectious pneumonias. One ought, however, to be on the lookout for the contraindications of etherizations, especially a bad condition of the respiratory tract."

On the same occasion, Roux, of Lausanne, said, "I believe that the great danger of ether is in its harmlessness, on account of which it is administered far too freely and without proper care. In my opinion, it is sufficient to watch the administration of this anæsthetic to avoid postoperative complications. Chloroform has always seemed to me to cause as many postoperative pneumonias as ether."

A different opinion was expressed by Montprofit, of Antwerp, who stated that he had used ether about 500 times, and had frequently observed complications in the respiratory tract. He then gave up the use of ether, employing chloroform exclusively. He reported 5,800 chloroformizations with only one death.

In a review of the subject of chloroform and ether anæsthesia, Poncet (6) says: "It has not been demonstrated, and no statistics have proved, that the postoperative pulmonary complications, such as bronchitis, congestion of the lungs, bronchopneumonia, œdema of the lungs, etc., are due to the irritant action of the vapor of ether. The so called etherization or chloroformization pneumonias are essentially due to infection. The pulmonary complications are probably just as frequent in those operative cases which receive no anæsthetic. It is not exact to say that the mortality from ether narcosis in the days following the operation is equal to that caused by chloroform, which kills at the time of the operation. This opinion becomes much less justified when one considers the fact that the vapor of chloroform is more irritating than that of ether."

Henle (7), who has made a special study of the subject, says that pneumonia is not an uncommon sequel of laparotomy, but he does not seem to consider it more common after the use of ether than chloroform, thugh he states that it is less common after infiltration than after general anæsthesia. The majority of the pneumonias are lobular, and come on within the first three days. According to his statistics, out of 1,787 laparotomies, pneumonia occurred in 143; that is, in over 8 per cent. Of these, over 45 per cent. died; the total mortality of laparotomies from pneumonia alone would thus be over 3 per cent., which is certainly very high indeed. He found that the liability to pneumonia increased with age, and was more common in his cases after jejunectomy, incarcerated umbilical hernia, and resection of the stomach. He considers that the interference with the respiration caused by opening the abdominal cavity predisposes to pneumonia; as also does the chilling of the body during the operation. Aspiration of foreign matter he mentions as one of the causes. He considers it very important to keep the patient from "catching cold" after operation, in order to avoid pneumonia.

In regard to the relative frequency of pneumonia following the different methods of anæsthesia, Eisendrath (8) says: "It was formerly thought that acute pulmonary complications following operations were more frequently found with ether than with any other anæsthetic. Mikulicz has shown that the percentage is relatively larger in local anæsthetics (Schleich) than if a general anæsthetic is given. In the last few years 1,007 goître operations with general anæsthesia (chloroform) were followed in 7.5 per cent. of the cases by pneumonia, and of these, 3.4 per cent. terminated fatally. This shows that we can no longer blame the general anæsthetic as being the chief cause of pulmonary complications following operations."

Killing (9), another writer on the subject, says that pneumonia is the most dangerous of the complications which follow operations on the gastrointestinal tract. He gives the common causes, as

First.—Inspiration into the lung, during narcosis, of putrid secretions or contents of stomach.

Second.—Lodgment of emboli in vessels of the lung.

Third.—The continued dorsal decubitus while the resistant powers are at low ebb, causing a hypostatic congestion.

Fourth.—The ordinary infective processes causing pneumonia in the sick as well as in the sound. To this class, he says, belong those cases in which pneumonia comes on directly after the operation, within twenty-four hours, without any assignable cause. He says that some cases are dependent upon the admission of air into the abdominal cavity, so that it strikes against the under surface of the diaphragm, allowing bacteria to accumulate there, and be carried by the lymphatics through the diaphragm to the lungs. He seems to think that "this explanation is substantiated by the fact that, since his operating room has been so constructed as to provide practically germ proof air, he has not had a single case of unexplainable pneumonia."

Since the lymphatics of the diaphragm have no direct connection with the lungs, the above theory hardly seems tenable.

Practically the same classification is given by Eisendrath (8), who has made a careful study of the subject.

First.—Complications [of general anæsthesia] may follow an anæsthetic, especially ether, when given in too concentrated a form, due to the fact that the mouth secretions are aspirated into the trachea and bronchi and may give rise to bronchitis, lobular, and lobar pneumonia.

Second.—They may be hypostatic, and this may occur with ether as well as with chloroform, being due to the recumbent position, diminished heart action, close fitting dressings, and to the tympany following operations, which is frequently a result of the paralysis of the muscular fibres of the intestines.

Third.—There may be aspiration of the particles of food, and this may occur with ether as well as with chloroform, giving rise to pulmonary abscess and gangrene.

Fourth.—Embolism, and this is the frequent explanation of the causes, including cases in which cocaine has been used, of the pulmonary complications of which we have spoken. "This is especially frequent after operations in the pelvis, and on strangulated hernias, and when there has been any previous anæmia, or in cachectic individuals. . . . We can aid in avoiding pneumonia after ether by keeping the head dependent, below the level of the trunk, and turned on one side. There is little danger in using ether other than the bronchial irritations, if these suggestions are strictly adherred to."

Osler, in his *Practice of Medicine,* discusses the subject in question under two heads, ether pneumonia and postoperative pneumonia. He says that pneumonia was a common cause of death after surgical operations before the days of anæsthesia, and he quotes Erichsen as saying that, of 41 deaths after surgical injuries, 23 cases exhibited signs of pneumonia. Under ether pneumonia —incorrectly so called—he mentions a report of 13 cases in 5,000 anæsthetizations, presumably etherizations, 8 of which were tongue or jaw cases. He says that in Johns Hopkins Hospital there have been 30 cases of pneumonia with 15 deaths, following anæsthesia; he does not mention, however, what anæsthetic was employed; 79 per cent. of the cases followed laparotomy. He mentions the fact that the use of ether has been largely restricted in Czerny's clinic, on account of the injurious after effects on the respiratory tract. "Czerny suggests that the association of ether pneumonia to abdominal operations is associated with pain on coughing, which leads to the accumulation of secretion and through this to retention or aspiration pneumonia.

"Among the various views brought forward to account for it, are the rapid evaporation of the ether, causing chilling of the pulmonary tissues, chilling of the patient at the time of operation, infection from inhaler, and direct action of the ether on the lungs."

He ends up by saying that the probability is that the prolonged etherization lowers the vitality of the tissues of the finer bronchi, and permits the pathogenic organisms, which are always present, to do their work.

In a recent editorial in the *Journal of the American Medical Association* (10) on the subject of lung complications of appendicitis, Sonnenburg's statistics of 1,000 operations for appendicitis are quoted, in which he found lung complications of some sort in 5 per cent. of all cases, though less than 1 per cent. of all these were pneumonia. In the editorial, reference is made to the frequency of inflammatory conditions of the lungs following strangulated hernia, attributable, probably, to lung embolus. It goes on to say: "Although a large number of cases may be due to embolus, there are undoubtedly cases in which other ætiologic factors are of still greater importance. The advocates of chloroform anæsthesia are inclined to call all of these cases ether pneumonias or ether bronchitis, but it is significant that the inflammation seldom follows directly after the administration of the anæsthetic, usually several days later, which should not be the case if inflammation resulted directly from the effect of the anæsthetic. Exposure of the patient in poorly heated operating rooms may give rise to chilling of the parts of the body not accustomed to exposure, and inflammatory diseases of the respiratory tract. This is no doubt a factor of greater importance than is generally believed. The fact that patients are kept flat on their backs to lessen the liability of postoperative hernia, not only after operations for appendicitis, but after all abdominal operations, makes these inflammatory conditions much more frequent after abdominal operations. Those who believe that thrombosis most frequently results from infection, will perhaps attribute to the infectious condition itself a part of the danger of causing these conditions."

In his work on *Gynæcology,* vol. i, page 149, Kelly says: "Pneumonia may follow the administration of the anæsthetic, whether ether or chloroform is given. Out of 1,800 administrations I have seen the complication eight times. The liability of pneumonia is increased, if the patient has a slight bronchitis or a coryza beforehand."

Hare, speaking of the subject, in his *System of Therapeutics,* says, "Bronchitis and pneumonia seldom result in this vicinity from the administration of ether. The complication is too rare to be considered in choosing an anæsthetic. Two factors call for careful investigation in connection with this subject, viz., the quality of the ether and the exposure of the patient. Certain brands of the one are unfit for use by reason of their irritating qualities and comparatively small narcotic properties. Exposure of any considerable portion of the body usually covered and the application of wet clothes are fraught with danger, and may be accountable for a certain proportion of the cases of postoperative pneumonia. Patients who are properly protected and who inhale a high degree of sulphuric ether, administered in a judicious manner, have little to fear from any affection of the respiratory tract as a result of the anæsthetic. The tendency of patients who have been etherized to suffer from pneumonia is probably exaggerated and is attributed to the wrong source. They should, however, be guarded from taking cold, as their relaxed condition undoubtedly renders them more susceptible."

I will not weary you further with any more quotations, but I wish simply briefly to sum up what we have learned from them.

The first thing is, that it is much more correct to speak of postoperative pneumonia than it is to speak of anæsthesia or ether pneumonia; for statistics show that pneumonia following operations was as frequent, or more so, before the days of anæsthesia, as at the present time; and also, that it is as frequent now (at least after some kinds of operations), when local anæsthesia is used for major operations, as when a general anæsthesia is employed. A general anæsthetic, therefore, does not materially increase the danger of pneumonia following operations if the lungs are in a healthy condition.

The next important thing we have learned is that if pneumonia is more liable to follow the use of ether than it is that of chloroform, which is at least a question, the difference is so slight that it does not begin to counteract the much greater danger with which the administration of the latter is associated.

Finally, from a knowledge of the possible causes, what means of prophylaxis can we employ?

To begin with, we must be sure that we have a pure drug, and that the inhaler, or whatever we use in its place, is perfectly clean. What seems to me the best method of administering ether—best because it is simplest—is to use several thicknesses of plain gauze placed over the mouth and nose, and on this the ether is to be dropped. This can be sterilized before using and afterwards be destroyed. Every possibility of infection by means of the inhaler is thus eliminated.

Of great importance is the care with which the anæsthetic is given. It is often said that anybody can give ether, simply because it is so safe. But, doubtless, this feeling of comparative safety is the indirect cause of much of the subsequent trouble, when it does occur; for, as a result of it, the anæsthetic is often entrusted to the incompetent or inexperienced. In almost all operations the anæsthetizer holds a more important and responsible position than does the operator's assistant. That this fact, however, is not generally recognized, is proved by the fact that, by many doctors, almost any one is considered competent to give an anæsthetic, even a medical student or a nurse, and also by the small fee which the anæsthetizer gets, as compared with that of the assistant.

The anæsthetic should be given slowly until the patient is thoroughly under its influence, and then enough should be given to keep him in that condition, for it is during the struggles that occur when the subject is only partially anæsthetized that the danger of aspirating some foreign substance into the lungs is the greatest. On the other hand, it is important to avoid giving too much of the anæsthetic, for there can be no question but that profound narcosis must depress the vital functions, and thus make the patient less liable to resist infection. Since the becoming chilled, either, during or after an operation, may certainly act as a predisposing cause, it is very important to avoid anything of the kind by having the operating room warm and free from draughts, the patient covered as completely as possible, and especially well protected when being removed from the operating room; before which all damp garments should be taken off, the patient dried with towels if the skin is moist, and a dry night dress put on.

During anæsthesia, especially if there is any tendency to become choked, the patient's head should be kept lower than the rest of the body and turned to one side; and when recovering from the effects of the anæsthetic, the head should always be kept on one side on a level with, or somewhat lower than, the body; never on a pillow.

In order to avoid hypostatic congestion, especially if there is any tendency in that direction, the patient's position should be changed as soon as possible after the operation, even if it is only by raising first one side and then the other by means of a pillow, due regard being paid, of course, to the requirements of the after treatment of the operation itself. If these precautions are carefully carried out, we shall find that postoperative pneumonia is such a rare condition that the fear of it will almost cease to be a factor in one's calculations when we come to consider the subject of operation or the choice of an anæsthetic.

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THE INACCURACY OF THE COMMON SPOON AS A MILK SUGAR MEASURE IN THE HOME MODIFICATION OF MILK.

By D. J. M. MILLER, M. D.,

PHILADELPHIA.

Because of the different statements made by writers on infant feeding, as to the amount of milk sugar contained in the common teaspoon or tablespoon, and from the very unequal results obtained by himself and others in testing the matter, it has been for some years the custom of the writer to direct those who consult him about the feeding of their babies to procure from a druggist two boxes holding, respectively, when filled to the level, one drachm and one ounce of milk sugar.

Lately, his attention has again been called to this subject by a recent paper on infant feeding, in which a new milk sugar capacity is given to the ordinary teaspoon.

This induced the writer to repeat the measurements made some years ago, with the result of confirming the former conclusion that no two measurements, even when made by the same person, are ever alike, and that every person has a different conception as to what is meant by a full or level spoonful of any substance, whether powder or liquid.

As an illustration of this, the amount of milk sugar contained in a level teaspoon, as measured by three different persons, weighed respectively 55, 85 and 65 grains, and a level tablespoonful 168, 215 and 195 grains; a variation in one case of 30, and in the other of 47, grains.

Again, the contents of a teaspoonful or tablespoonful of milk sugar, weighed by the writer with a carefulness which the average nurse or mother would not exercise, especially when hurried, gave on two occasions the following results:

A level teaspoonful of milk sugar weighed 50 grains and 62 grains.

A full rounded teaspoonful of milk sugar weighed 90 grains and 98 grains.

A level tablespoonful of milk sugar weighed 150 grains and 175 grains.

A full or rounded tablespoonful of milk sugar weighed 263 grains and 235 grains.

According to J. E. Winters, a teaspoon will hold 120 grains of milk sugar (it is left to the mother or nurse to decide whether a level, full, or heaping spoon is meant). Judson and Gittings put 60 grains as the capacity of one teaspoonful and a half (imagine the average nursery maid, or even a more intelligent person, measuring, with even approximate accuracy, a half teaspoonful of any substance)! Holt and Fischer consider a level tablespoonful as equivalent to three drachms, or 180 grains, while J. F. Conners and Judson and Gittings calculate its capacity as 160 grains. Our own observations show that it may weigh anywhere from 150 to 215 grains, or more or less. It may be objected that this is an unimportant matter, that in the home modification of milk accuracy is not aimed at or necessary. This would be true if the variation from the desired percentages were trivial. But when we consider that if one person measures out 168 grains for a level tablespoonful, and another 215 grains, while the writer of the milk prescription calculates it as 160 grains, it will be seen that the result, in 20 ounces of a 5 per cent. sugar solution, would be 24 and 165 grains more of sugar than was desired; in other words, instead of a 5 per cent. solution, either a 5.25 or 6.75 per cent. solution would be obtained.

Here, again, the objection may be raised that in practice these differences are of little moment, sugar being usually digested without difficulty by healthy infants. In weakly children, however, the result might be different; besides, as we all attempt in home modification to approach as closely as possible to the percentages we desire to give, this end can be more accurately attained, so far as the sugar is concerned, by the adoption of some such contrivance as the boxes which the writer, as stated above, has long employed, or by using the more accurate ready made measures of Griffith and Rotch.

In conclusion, the writer is well aware that he is offering nothing new in these remarks—the devices of Griffith, Rotch, and others bear witness to that; he simply wishes again to direct attention to the well known inexactness of the common spoon as a measure for milk sugar, and, it may be added, for all solids and liquids.

Maryland Board of Health.—Dr. Eugene Jones, of Kensington, has been appointed by Governor Warfield a member of this body.

TERTIARY SYPHILIS OF THE NOSE AND PHARYNX.*

By W. SCOTT RENNER, M. D.,

BUFFALO, N. Y.

(*Concluded from page 488.*)

DIAGNOSIS OF SYPHILIS OF THE NOSE AND THROAT.

Although there are in many cases great difficulties to be encountered in making a diagnosis of a tertiary lesion of syphilis, which has been illustrated by the histories of some of the cases which I have reported, yet the majority of the cases should be diagnosticated by the appearance of the lesion, and that without fear of making a mistake and independently of obtaining any history of infection. And yet there are many physicians devoting their lives entirely to the treatment of diseases of the upper air passages who talk learnedly of correcting deformities of nasal sæpta, who discuss the best methods of treating the diseases of the nasal accessory sinuses and of the mastoid process, and who have received special training in diseases of the nose, throat, and ear, when they cannot and do not recognize the usual and characteristic lesions of syphilis, or even suspect them, because they have not obtained a history of primary infection, or because they think it could not occur in the patient, possibly a respectable married woman with grown up children, or because a child with a characteristic faucial lesion has no Hutchinson's teeth. Where there is any doubt, there is, however, apt to be found some of the accompanying conditions about to be mentioned, which will confirm the diagnosis. There may be osteoscopic pains in the head at night; there may be nodes on the shin or frontal bones; there may be skin eruptions, such as psoriasis of the flexor surfaces of the extremities; horny formations upon the palms of the hands or soles of the feet; rupia and horse-shoe shaped skin ulcerations may be found. Besides these, there may be oculomotor paralysis, cerebral symptoms, apoplexy in people under fifty years, or a tendency to abortion in women and the birth of dead children. Other less certain conditions might be mentioned. The above, however, are syphilitic lesions and can be depended upon, which is only necessary when the throat lesion itself is not characteristic; and when the lesion first discovered is not characteristic, it is not unusual to find some lesion in other parts of the respiratory tract which is characteristic. The loss of the nasal sæptum or of the epiglottis will naturally greatly aid us in deciding the character of a suspected swelling in other regions.

Gummata of the hard palate are easily diagnosticated. They could only be mistaken for phosphorus poisoning, scleroma, which is seldom seen in this country, malignant tumors, and lupus.

The greatest difficulty in the mouth arises in the case of an isolated suspected gumma of the tongue, where it may be difficult to say whether it is a primary syphilitic sore, a gumma, or a carcinoma. Here we are aided by remembering that cancer is usually accompanied by pain from the outset, and that a gumma is not accompanied by much swelling of the lymphatic glands, while both a chancre and cancer are; but in the case of a chancre, by the time that the glands are much infiltrated the skin eruption can be found if looked for. The infiltration of a gumma is usually more circumscribed than that of a cancer. If we feel that the case is probably one of cancer a microscopical examination of an extirpated piece of the tumor will confirm our diagnosis. When the lesion is syphilitic it will disappear quickly under the proper treatment. Cancer and tuberculosis do not respond to such treatment. The diagnosis of lesions of the nose and pharynx has been already indicated. The destruction of any part of the bony sæptum is almost pathognomonic of tertiary syphilis.

There are many traditions which linger in medicine, and they are often very intimately associated with medical progress. Scrofula used to include much that is now known to be tuberculous, but there are certain cases which were called scrofulous, and which are now called tuberculous by many practitioners, which are in no way connected with tuberculosis. Such are certain cases of syphilis hereditaria tarda. I have seen children with a characteristic perforation of the soft palate or some other marked lesion of the upper respiratory tract treated for tuberculosis by men who are expert diagnosticians of tuberculous conditions of the lungs, when the only sign which could point to such a condition was the emaciation of the patient. Such patients are given cod liver oil. The consequence is that many children have died of scrofula or tuberculosis who, had they been treated for hereditary syphilis, would have recovered good health in a very short time.

These mistakes seem to arise from the fact that it is considered necessary to have interstitial keratatis, Hutchinson's teeth, and evidences of ulceration at the corners of the mouth, in order to establish a diagnosis of hereditary syphilis; yet the diagnosis should be just as easily made if a perforating ulcer of the soft palate, or any other evidence as easily recognized as gummata of the upper air passages, is found. Such traditions linger, not because the truth has not been pointed out by the best teachers and writers, but because the majority of the profession have not been instructed and have failed to instruct themselves in regard to the characteristic appearance of an ordinary tertiary lesion of syphilis wherever found; for such mistakes were pointed out long ago by Fournier, when he said that the history of syphilis hereditaria tarda was chiefly the history of the mistakes regarding scrofula.

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* Accepted as a candidate thesis for the American Laryngological Association, June, 1903.

It must not be forgotten when we are considering syphilis in children that young children frequently acquire the disease accidentally. Frequently whole families of children are accidentally infected or it is carried from one to another by dishes, playthings, etc.

THE PROGNOSIS.

The prognosis for the healing of perforations and ulcerations is always good in these cases, except in a certain number of cachectic individuals in whom the antisyphilitic treatment has no influence in arresting the destructive progress of the disease. Usually, tertiary lesions of the nose and throat heal promply under specific treatment, especially when it is accompanied by proper local treatment.

The prognosis for the life of the patient is always favorable, except when the ulceration is in the neighborhood of vital parts which, if the disease is very virulent, may be attacked. If the disease attacks the cribriform plate of the ethmoid bone or the body of the sphenoid, *i. e.,* the roof of the nose, the meninges of the brain may be involved and death result therefrom. Similarly, when the pharyngeal disease causes necrosis of the cervical vertebræ, the spinal cord may become affected, or ulceration of the lateral pharyngeal wall, especially of a deep gumma of the tonsil, may perforate the carotid artery, resulting in a fatal hæmorrhage.

The first question usually asked by patients with nasal syphilis is: "Must I expect disfigurement of my nose?" The answer to this question must be very carefully given, for it is often impossible to say what changes may be going on in the bony framework near an ulceration which of itself does not seem dangerous to the external form of the nose, but which may greatly disfigure the nose by the contraction of the cicatricial tissue that forms during the healing of the ulcerations. Fortunately much can be done to overcome such deformities by plastic operations, subcutaneous injection of paraffin, etc. The technique of such operations cannot be described here without making this paper, already too long, very tedious. Such operations should not be undertaken until the specific treatment has been carried out a sufficiently long time to be sure that no return of the disease will take place.

The loss of the sense of smell may be due to ulceration in the upper part of the nose, as on the middle turbinated bones, when the prognosis for the recovery of the olfactory sense is bad; but when the condition is due to obstruction of respiration by disease of the tissues in the lower part of the nose, olfaction will be restored when the healing of the parts takes place and respiration through the nose is restored. Nasal speech is certain to follow perforation of the hard palate when such a perforation is much larger than the head of a pin. This can only be overcome by wearing an obturator or by doing a plastic operation, which is usually not successful. Adhesions between the palate and the posterior pharyngeal wall, which are most prone to occur in hereditary syphilis, are very difficult to remedy, failure often occurring after repeated operations.

Lieven, of Aachen, found from his personal experience that tertiary syphilis of the nose occurring during the third and fourth year after infection was but a link in the chain of several severe tertiary manifestations. The other links of the chain occur simultaneously or later, and are such as rupia of the skin and nodes on the cranial and shin bones; but he admits that his experience may be due to the severe character of the cases which come to Aachen for treatment. He also states, as has been already pointed out, that it has been his experience that the occurrence of syphilis in the nose later than ten years after infection is the last syphilitic manifestation that the patient will experience.

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Army Medical Corps.—A bill to increase the efficiency of the medical department of the United States Army has been introduced by Senator Proctor. Under its provisions the medical department will consist of one surgeon-general, with the rank of brigadier-general; a medical corps; a medical reserve corps; the hospital corps; the nurse corps, and the dental surgeons now authorized by law. The medical corps will consist of 12 colonels, 18 lieutenant-colonels, 110 majors, and 300 captains or first lieutenants, who will have the pay and allowances of officers of corresponding grades in the cavalry arm of the service. Secretary Taft approves of this bill and recommends an increase to 16 colonels and 24 lieutenant-colonels.

Monroe County, N. Y., Medical Association.—At the regular annual meeting of this association, held in Rochester on March 1st, the following officers were elected: President, Dr. Thomas A. O'Hare; vice-president, Dr. E. Mott Moore; secretary and treasurer, Dr. James C. Davis. Elective members of executive committee: Dr. Daniel F. Curtis, three years; Dr. Richard M. Moore, two years; Dr. S. Case Jones, one year.

Our Subscribers' Discussions.

A SERIES OF PRIZE ESSAYS.

[*Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:*

XXVIII.—What do you rely on in the diagnosis of smallpox in the papular stage? (Under adjudication.)

XXIX.—How do you treat nocturnal incontinence of urine? (Under adjudication.)

XXX.—What are your achievements in improvising surgical instruments and appliances? (Answers due not later than April 2nd.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of $25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED*) that the answers be short, if practicable, no one answer to contain more than six hundred words.*

Only subscribers to the NEW YORK MEDICAL JOURNAL AND PHILADELPHIA MEDICAL JOURNAL *(including regular and volunteer officers of the Medical corps of the United States Army, Navy, and Marine Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.*]

The prize of $25 for the best essay submitted in answer to question XXVII has been awarded to Dr. Richard Lightburn Sutton, Assistant Surgeon, United States Navy, whose article appears on page 453.

PRIZE QUESTION NO. XXVII.

THE TREATMENT OF PARAPHIMOSIS.

(*Concluded from p.* 456.)

Dr. J. N. Weller, of Akron, O., writes:

The surgeon would seldom be called to treat paraphimosis if every child with a tendency to a long and narrow prepuce was circumcised. The advisability of circumcision should be thoroughly impressed upon the parents. In this way masturbation and the accumulation of irritating substances under the prepuce—in themselves causes of paraphimosis—would be largely avoided.

Usually these cases are not presented until there is considerable swelling of the glans and œdema of the foreskin about the frænum. The parts should be thoroughly irrigated with some mild cleansing solution. A warm saturated solution of boric acid will answer the purpose very well. The corona should be lightly anointed with petrolatum, taking care to avoid rendering the glans oily, as this will impede manipulation. Grasping the penis, posteriorly to the constriction, between the index and middle fingers of the left hand, the glans is compressed and manipulated by the left and right thumbs until the traction from behind forces the foreskin over the corona, while the thumbs press the glans under the constriction.

If there is much œdema in the prepuce and glans, the former should be subjected to multiple small punctures, while the latter is compressed by a short elastic finger cot or small rubber bands exerting uniform pressure. The penis should then be bandaged in dry sterile gauze and all attempts at reduction should cease for the space of one or two hours. At the end of this time it will often be possible readily to replace the foreskin by the method described.

If manipulations do not suffice a small blunt-pointed bistoury, entered flatwise, should be carefully worked under the constriction. Once under, the cutting edge is turned upward with gentle force dividing the constricting band so as not to injure the corpus cavernosum underneath.

Balanoposthitis is usually associated with paraphimosis, and, after the foreskin is replaced, these conditions should be treated by irrigation twice daily with a saturated solution of boric acid, and dressed with sterile gauze moistened with lotio nigra or a weak bichloride solution.

As a guard against subsequent trouble and in the interest of cleanliness, circumcision should be done as soon as the inflammation subsides.

Chancres, chancroids, ulcerations, and other abnormal conditions may be concealed beneath the prepuce. If a chancre is present the foreskin will often feel indurated near the lesion; if chancroids, there will usually be considerable inflammation with pus exuding around the corona. The inference may be further confirmed by one or two sores external to the constriction.

In these cases the prepuce should be incised on the dorsum to an extent corresponding to the length of the glans. This may be accomplished without pain by injecting a 2 per cent. solution of cocaine in the line of incision.

The flaps thus formed having been turned back, the underlying parts are open to inspection, and any abnormal conditions may receive local treatment.

One is often tempted to do a complete circumcision. This should never be done if the foreskin is much thickened, or if chancroids are present. In the former condition the operation cannot be neatly done; in the latter there is danger of chancroidal infection in the incisions. The straight dorsal incision should always be cauterized with pure carbolic acid and a moist bichloride dressing applied to the parts.

After all evidence of disease and inflammation has disappeared, the so called dogear flaps are treated by complete circumcision.

Dr. Everett S. Hicks, of Port Dover, Ont., Canada, writes:

We distinguish three classes: I, Congenital; II, Irreducible; III, Reducible.

I. *Congenital paraphimosis,* where the glans is congenitally uncovered, is best left without treatment. II. *Irreducible.*—It is stated, though I have seen no such cases, that some paraphimoses are irreducible and that in such circumstances after incising the strangulation, it is best to apply a lead or an aluminum acetate lotion and allow the parts to mould themselves. III. *Reducible.*—*(a)* The prophylactic treatment should begin at birth. Every male child should at birth be examined as to the permeability of his foreskin and the presence or absence of adhesions. Where these are present a probe flat on one end should be used and the adhesions broken. The mother or the nurse should be instructed daily to draw back the prepuce as far as possible, and in that way attempt to get the preputial opening of such a size that a paraphimosis or phimosis cannot occur.

(b) Where a true paraphimosis is present with strangulation we must keep in mind the dangers of œdema and gangrene. Our cases will usually be first seen in their œdematous stage, the œdema being the primary obstacle to reduction. When no inflammatory symptoms are present we should make an immediate attempt at reduction by taxis. Cleanse the penis by wiping with gauze sponges and a mild lather of green soap. Cleanse the hands in the same manner. Dip the penis in a saturated solution of boric acid in *cold* boiled water. Leave it in this cold solution until some contraction has occurred. Draw back the prepuce slightly and free it from any adhesions with the flat probe. With the probe also smear the space between the corona and the swollen prepuce with borated petrolatum. Do not smear all the glans or the whole penis. Remember that it is necessary to return through the constriction not only the glans, but also a fold of mucous membrane. Taxis may be made in one or two ways. First, with the thumb and first finger of the left hand make a supporting ring behind the swollen prepuce. With the thumb and one, two, or three fingers of the right, squeeze out all the serum possible and attempt to push the glans through the swollen prepuce steadied and pulled forward by the left. Or, support and draw the prepuce forwards with the fingers of both hands, using the thumbs to push back the glans.

If unsuccessful we must take some pains to remove all obstacles. We may puncture the œdematous parts with a sterilized needle and squeeze the serum out. If still irreducible, saturate absorbent cotton in a solution of adrenalin 1 : 3000 and make a cap like structure to cover the glans and prepuce. Over this apply a small rubber elastic bandage. Commencing at the glans and using there the most traction on our bandage we gradually encircle the whole penis in the same manner as when one attempts to remove a ring from a swollen finger. Now dip the bandaged penis again into our *cold* boric solution and leave it for five minutes. Uncover and quickly try taxis once more in the manner outlined above. If not soon remedied we are in a position immediately to proceed to the next step. Pass a curved grooved director under the constricting ring in a direction outward from the root of the penis. It is handiest and best to insert it in the middle line of the dorsum of the penis. Down the groove of the director pass a scalpel or one blade of a pair of angular probe pointed scissors, and cut through the strangulation. At times it is possible to find the ring from without. It is apt to be the first constriction behind the coronal fold. In that case it may be possible to remedy the trouble by nicking this ring alone.

As a dressing we require an antiseptic and antiphlogistic which can easily be applied at frequent intervals by the nurse. A solution of aluminum acetate diluted five times with water and applied on clean cloths will fill the bill. This may be followed, when the œdema and infiltration have well subsided, by a simple borated petrolatum ointment.

Dr. R. C. Fish, of Worcester, Mass., writes:

The first point to decide in the treatment of paraphimosis is whether the case is "strangulated or non-strangulated." The surgeon must also be guided in his treatment by the age of the patient, the elapsed time since the occurrence, the cause, and condition of the organ at the time of examination.

In *paraphimosis with strangulation,* delay is inadmissible. An anæsthetic should always be administered. Often under anæsthesia, relaxation takes place and reduction is rendered comparatively easy. If reduction is difficult, and there is much swelling in front of the stricture, I apply ice locally to produce shrinkage and make a few small punctures to let out serum from the ridge in front of the stricture.

In reducing I seize the penis behind the strictured prepuce, between the first and second fingers of each hand, one placed on each side. I then make lateral pressure on the glans with both thumbs (thus relieving it of the blood and œdema), and at the same time draw the strictured prepuce forward with two fingers of each hand, the idea being to make the glans as small as possible by compression, and to pull the stricture over the glans, rather than push the glans through the stricture.

In some cases it is preferable to encircle the penis with one hand, using the other for manipulation. (This is known as Phillips's method). If these methods fail, I introduce subcutaneously a tenotomy knife flatwise, and cut outward until tension is relieved, taking care to avoid the subcutaneous veins, lest extensive subcutaneous extravasation of blood should follow.

When there is much inflammatory consolidation of tissue, I divide the stricture at two or more points.

The treatment after reduction consists in position, rest, cleanliness, and syringing the preputial cavity with a warm, mild, astringent, and antiseptic solution, two or three times daily; preferably after micturition. I use mercury bichloride 1 : 2000 when there is ulceration at line of constriction. I relieve constriction with the knife, treat the wound antiseptically, and allow it to heal by granulation. In cases where sloughing has occurred, all constriction must be relieved, circulation restored and sloughing stopped and eliminated. This can be accomplished by immersing the penis in hot bichloride solution 1 : 2000, and permitting the penis to remain therein fifteen minutes at a time. This can be done three or more times daily, and hot antiseptic dressings applied. After circulation is thoroughly established, and sloughing eliminated, the immersions can be omitted and the parts will heal by granulation.

I have never yet seen a case of gangrene of glans, necessitating amputation, but should my conscience, judgment, and conditions of patient justify, I should perform an amputation.

Non-strangulated Paraphimosis.—I lubricate the corona and a little of the mucous layer with ethereal soap, and reduce as already detailed. If difficult to reduce, I immediately give an anæsthetic.

In cases where an anæsthetic is contraindicated, I apply a thin rubber bandage half way up and on the penis. After eighteen or twenty-four hours I remove the bandage and seldom have any trouble in reducing. I make it a rule, however, when there is no contraindication, to anæsthetize the patient if there is any difficulty in reduction.

In cases complicating gonorrhœa, chancroid, herpetic, and other ulcerations, the œdema and main inflammatory condition, I treat by position, pressure, puncture, evaporating, and astringent lotions. I also keep a sharp lookout for commencing strangulations.

If patient is restless and sleepless at night, I give a mild opiated powder.

Correspondence.

LETTER FROM MONTREAL.

Typhoid Fever.—Death Rate.—Notre Dame Hospital.—Hôtel Dieu.—Royal Victoria Hospital.—Western General Hospital.—Protestant Hospital for the Insane.

MONTREAL, *March* 3, 1904.

Typhoid fever has been epidemic during the past two months in several suburbs of this city—Westmount, St. Henri, St. Cunégonde, Mile End—but not in the city proper. In all, there have been over sixty cases, and our city hospitals have been taxed to their utmost capacity. One hospital has had at one time as many as thirty, and another as many as forty, cases in its wards. The Provincial board of health took a hand in endeavoring to check the outbreak, but a bacteriological test of the water supplied to the different municipalities failed to establish the presence of any typhoid bacilli, although sewage contamination was abundant. Sections of the lay press thought to make light of the seriousness of the epidemic, asserting that most of the cases were not true typhoid; but all the cases which were brought to the hospitals in this city were so diagnosticated, and whenever the Widal test was applied, definite agglutination was obtained. In addition, autopsies upon fatal cases showed the characteristic lesions of that disease. The epidemic is, however, now practically over, as no new cases have been reported during the past few weeks.

The number of deaths in this city, for the year 1903, amounted to 6,941, as compared with 6,275 for 1902. Reckoning the population of the city of Montreal at 324,000, the death rate was 21 per thousand. Our city suffers especially during the months of June, July, and August, owing to the greatly increased infant mortality during those months, which, in 1903, was 429 in excess of the average quarterly number. In July alone last year the deaths among infants under five years of age numbered 375.

According to the annual report of Notre Dame Hospital, 300 more patients were treated in 1903 than in 1902, the total numbers standing 2,433 for 1903, as against 2,132 for 1902. The number of days' residence reached the total of 39,057, an increase of 4,301 over the previous year. The average stay of each patient, however, remains about the same, viz., sixteen days. The average cost of each patient per diem was $87^{3}/_{5}$ cents. Of the 2,433 in-door patients treated during the year, 2,088 left the hospital cured or improved; in 143 there was no improvement; 56 when admitted were moribund; 116 died in the wards, giving a death rate of 7.06. In the dispensaries there were 2,530 consultations, being a total of 21,245, as compared with 18,715 for last year. The total expenditure was \$34,238.90, an increase over last year of \$3,438.80.

In the Hôtel Dieu hospital, according to the annual report for the year 1903, there were 1,326 male patients and 1,234 female patients treated. Of the first class there were 688 cured; 504 relieved; 17 incurable; 117 died. Of the second class, 626 were cured; relieved, 493; incurable, 20; died, 95. The males demanded 34,882 days' treatment, while the females required 34,007 days.

The total number of patients admitted to the Royal Victoria Hospital, during 1903, was 2,931, as compared with 2,814 for 1902, being an increase of 117. These cases were distributed as follows: Medical, 1,004; surgical, 1,185; diseases of women, 320; eye and ear, 282; nose and throat, 140. The total number of days' stay was 74,000; the daily average was 203. The discharges numbered 2,769; the deaths, 142; the deaths within forty-eight hours of admission, 38; the death rate, 4.88. In the outpatient department the cases were distributed as follows: Medical, 9,890; surgical, 4,578; diseases of women, 1,542; eye and ear, 4,122; nose and throat, 3,506. The total income for the year was \$140,368, while the ordinary expenditure amounted to \$120,419. The total cost of each patient per diem was \$1.62½.

In the Western General Hospital, during 1903, 600 patients were admitted, an increase of eleven over 1902. There were thirty patients in the hospital on the 1st of January, 1903. During the year, 563 were discharged, 31 died, and 34 remained in the hospital on the 31st of December, 1903. The death rate for the year was 5.16 per cent., or, deducting deaths occurring within forty-eight hours of admission, 3 per cent. The total number of days' stay was 11,176, giving an average of 18.6 per patient. The total number of consultations in the outdoor departments was 7,560, as compared with 6,570 for the preceding year. There were 96 applications for admission to the training school, seventeen probationers were admitted, and thirteen accepted as pupil nurses.

The annual meeting of the Protestant Hospital for the Insane, situated at Verdun, province of Quebec, was held recently in Montreal, when a question of unusual interest came up for discussion on the statement of the medical superintendent, Dr. Burgess, namely, that of voluntary committment. Dr. Burgess explained that he had been solicited by people, who believed that they would be mentally benefited by treatment in the institution, but nothing could be done in this direction until the law of the Province was amended, and towards this end it was decided to bring the matter to the attention of the Quebec Government. According to the annual report of the medical superintendent, the admission for the year numbered 152, and the number under treatment, 581. There were discharged as recovered 57, and as improved 23. The deaths numbered 44. The discharge rate was 58.55 per cent., and the recovery rate 37.5 per cent. of the admissions.

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Therapeutical Notes.

Dysmenorrhœa of Young Girls.—*Journal des praticiens* for February 20, 1904, recommends digitalis if there is mitral stenosis. If not, the general health should be built up. The patient should remain in bed during the first few days, and an enema containing a small quantity of laudanum may be given. A suppository of belladonna in cacao butter is equally efficacious. If the flow is copious, the following pills may be administered:

℞ Ergotine ....10 centigrammes (1½ grains);
Quinine sulphate.......2 centigrammes ($^3/_{10}$ grain);
Powdered digitalis leaves............1 centigramme ($^3/_{20}$ grain);
Powdered coca............enough to make one pill.
M. Take 2 to 4 daily.

Ergot being somewhat powerful, hydrastis and viburnum prunifolium may be substituted for it, five minims of the tincture of each being administered every two hours. Small doses of hamamelis and cannabis indica may be useful.

Flien, of Berlin, recommends painting the nasal mucosa with solutions of morphine and cocaine; he alleges a connection between menstruation and congestion of the pituitary membrane. There is no harm in trying this method, even if it acts only through suggestion:

℞ Cocaine hydrochloride..............25 centigrammes (4¾ grains);
Morphine hydrochloride...........10 centigrammes (1½ grains);
Distilled water.............10 grammes ($^1/_8$ ounce).
M. Paint two or three times daily.

Fainting.—*Journal des praticiens*, for January 23rd, states that the various stimulating inhalations offered in this condition from time immemorial affect rather the conjunctival mucosa than the pituitary; this has been proved by experiments on dogs and guinea pigs. The following is a good mixture:

℞ Alcohol } of each...........10 grammes ($^1/_8$ ounce);
Ether }
Acetic acid or ammonia } of each.........1 gramme
Menthol } (15 drops).
M. Apply a few drops on a handkerchief.

In grave cases a hypodermic injection into the buttock:

℞ Camphor ....2½ grammes (37½ grains);
Sulphuric ether............10 grammes ($^1/_8$ ounce).
M. Inject 15 minims.

Half the quantity of ether replaced by olive oil will render the injection less painful.

Administration of Creosote.—*Presse médicale* for February 6, 1904, quotes from Gilbert the following formulæ. Internally, this pill is useful:

℞ Beechwood creosote } of each............5 grammes
Iodoform } (75 grains);
Licorice powder..........enough to make 80 pills.
M. Eight pills daily, at mealtimes.

Here is a creosoted wine:

℞ Beechwood creosote...13½ grammes (200 minims);
Tincture of gentian........20 grammes ($^2/_8$ ounce);
Montpellier alcohol.....250 grammes ($8^1/_8$ ounces);
Malaga wine............enough to make one quart.
M. Tablespoonful contains 3 drops of creosote.

A creosoted oil may be used:

℞ Beechwood creosote..............10 to 50 grammes ($^1/_8$ ounce to $1^2/_8$ ounces);
Codliver oil..............................1 quart.
M. Tablespoonful contains 2¼ to 11¼ minims of creosote.

Strong alcoholic preparations are:

℞ Beechwood creosote......15 grammes (2¼ grains);
Rum ....975 grammes (32½ ounces).
M.

Or:

℞ Beechwood creosote........10 grammes ($^1/_8$ ounce);
Alcohol, 90 per cent......300 grammes (10 ounces);
Syrup of gentian......700 grammes ($23^1/_8$ ounces).
M. Liqueur glass of either of the foregoing in the after dinner coffee.

For rectal injection:

℞ Creosote ....16 grammes (½ ounce);
Oil of sweet almonds....250 grammes ($8^2/_8$ ounces).
M. Tablespoonful contains 15 drops; beat up this quantity with a yolk of egg and a cupful of tepid water.

Hypodermically, the following will serve:

℞ Creosote ....16 grammes (½ ounce);
Sterilized olive oil......224 grammes (7½ ounces).
M. Inject from 75 minims to one ounce.

For inhalation, Tapret's spray is used; it contains 20 parts of creosote to 1,000 parts of alcoholized water.

Rheumatism.—Huchard and Fiessinger, in *Journal des praticiens*, for February 20, 1904, recommend as a local measure:

℞ Lanolin } of each.......20 grammes ($^2/_8$ ounce);
Petrolatum }
Tincture of nux vomica } of each..5 grammes
Compound tincture of benzoin } (75 minims).
M. For an ointment.

The authors also speak highly of very hot baths with the following addition:

℞ Emulsion of green soap } of each.......100 grammes
Oil of turpentine } ($3^1/_8$ ounces).
M. For a full bath.

Whooping Cough.—Variot's formula, given in *Journal de médecine interne* for February 15, 1904, is:

℞ Potassium bromide........8 grammes (2 drachms);
Tincture of valerian.......8 grammes (2 drachms);
Distilled water............250 grammes (5 ounces).
M. Three spoonfuls daily, size according to age.

Erysipelas.—Combemale is cited in *Journal de médecine interne*, for February 15, 1904, as using:

℞ Ichthyol } of each..........10 grammes ($^1/_8$ ounce).
Lanolin }
M. Apply several times daily and protect thoroughly with cotton.

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OUR SUBSCRIBERS' DISCUSSIONS.

The attention of our subscribers is drawn to the fact that we have opened Discussion No. XXX, viz.: What are your achievements in improving surgical instruments and apparatus? Answers will be received until April 2nd.

THE PUBLIC HEALTH AND MARINE HOSPITAL SERVICE.

Surgeon General Wyman's report for the year ending June 30, 1902, dated November 1, 1902, a volume of 487 pages, has recently been issued. From its perusal one cannot but feel a sense of satisfaction and pride in the continued efficiency of the service. At the close of the period covered by the report there were 181 acting assistant surgeons on the force, though there were only 105 commissioned officers. We presume there are good reasons for this excess of medical men serving without a commission, but we cannot avoid the impression that a reduction in their number should be effected as rapidly as may be consistent with the good of the service by the commissioning of additional assistant surgeons, for it seems hardly probable that the work required of the corps will ever be so reduced as to warrant dispensing with the acting assistant surgeons without replacing them by commissioned officers.

The sanatorium for tuberculous patients at Fort Stanton, New Mexico, continues to do excellent work, and it is gratifying to observe that arrangements have been made by means of which some of the patients who have recovered are rendered either wholly or in part self-supporting. Still more gratifying is the surgeon general's willingness to offer the benefits of the institution to others than the men of the mercantile marine, "I would urgently recommend," he says, "as a sanitary and prophylactic measure the expediency of receiving . . . such cases of tuberculosis as may be sent there by State health authorities for treatment, upon the payment of a per diem rate to be based upon the cost of maintenance." This recommendation—a most admirable one—is made in the interest of the general campaign against consumption in the United States.

The report further deals with such individual diseases as the Oriental plague, smallpox, cholera in the Philippines, and leprosy, also with the medical inspection of immigrants, domestic quarantine, border quarantine, the yellow fever institute, the hygienic laboratory, and sanitary conventions of the American republics. A hundred pages are devoted to the clinical histories and post mortem findings in individual cases of fatal disease. Two formal papers by officers of the service are reproduced: The Sanatorium Treatment of Tuberculosis, by Surgeon Carrington, read at the Saratoga meeting of the American Medical Association, and The Necessity of Disinfection, by Passed Assistant Surgeon Rosenau, read before the New York State Association of Railway Surgeons. The usual statistics follow, together with special reports from individual stations.

JUNOD'S BOOT REVIVED.

Years ago an ingenious Swiss physician, one Dr. Junod, conceived the idea of dry cupping on a large scale for the relief of various visceral congestions. In carrying out his scheme he encased the foot and leg in an air tight appliance that fitted close at the top, and then made as near an approach to a vacuum in the apparatus as he could by means of an air pump communicating with its interior. The device was known as Junod's boot. The boot was doubtless an efficient affair, especially as an agent of suggestion, for how could the patient who felt it draw, resist the conviction that, in accordance with the popular traditions of the times, his ailments were emigrating into the boot? The positive sensation of suction must have served powerfully to sustain such a thought. But Junod's boot does not seem, nevertheless, to have come into very extensive use or its vogue to have survived for a great length of time. This is much to be wondered at. However, at this late day appliances operating upon exactly the same principle are perhaps destined to come into use.

In the *Münchener medizinische Wochenschrift*, for February 9th, Professor August Bier, of the University of Bonn, figures and elaborately describes certain devices of his invention for inducing hyperæmia of special parts, not, it is true, for purposes of derivation, but for exerting a special therapeutic action on the part, said action being the result of the hyperæmia induced. This being the case, it is perhaps hardly fair to call them revived forms of Junod's boot, although in the mechanism they certainly are. As they have to be made in more or less special forms to adapt them to the different parts to which they are to be applied, they must be rather expensive, but we hope that they will be thoroughly tested in actual practice.

THE PRACTICE OF KISSING: SOCIAL, SENTIMENTAL, AND PATHOLOGICAL.

The social history and scientific criticism of the practice of osculation are in the atmosphere just now. But a short period has elapsed since the thrillingly instructive volume of Dr. Nyrop, *The Kiss and Its History,* was presented to the public in an English dress. And a twentieth century epoch in the history of English law was made when the legislators of Great Britain eliminated the necessity for contamination—and possible infection—of the lips of a witness in a court of law, by contact with the foul and bacteria-laden cover of the Testament. This was, assuredly, a consummation to be desired —most devoutly; and we do not at all believe that the adoption of the "sanitary oath" will in the least diminish the trustworthiness of sworn testimony. The practice of "kissing the book" appears to have been originally peculiar to the British Isles, and there does not seem to be any known quotable authority for its origin; but we incline to think that a plausible explanation will be afforded by the history of the introduction of the English version of the Bible. This was substituted, as the infallible guide of religious and moral thought and action, for the previously infallible authority of the Church. In this connection, the effect of the Reformation was to substitute a certain amount of familiarity for the previously pervading awe, so that loving expression was superadded to the former wholly reverential feeling.

The gradual development of the bacteriological item in the physical morals of osculation is, of course, familiar to all readers of the recent literature of medical journalism. One of the most interesting and complete of these latter-day discussions is one contributed by M. Féré, the well-known authority on the emotions. As might be expected, the author is very much at home in his subject; especially so in the neuropathic department. To the average healthy citizen, the practice of kissing includes danger of insidious bacterial infection. When the mucocutaneous investment of the lips presents one or more breaches of continuity, the danger is, of course, indefinitely increased. But to such dangers there is superadded, in case of the neuropath, that of a shock highly injurious to the nervous system. A kiss has been followed by an epileptic fit; we must, however, note that the kiss had been *enforced.* And another case has been reported in which kissing had the immediate effect of inhibiting the power of sexual intercourse, and producing at the same time a feeling of intense anxiety. M. Féré refers, of course, to the legislative control of osculation which was introduced into Virginia by Mr. Ware. It has, indeed, been long known to ethnologists that, among many primitive tribes and races the practice of kissing was unknown. Among the Lapps and the Maoris, rubbing of noses occupied its place. The average native of Japan, a country which promises to take so important a place in the making of future history, still knows nothing of the practice of kissing.

The practice of lip-to-lip salutation was especially characteristic of English social life in Tudor times. Its universal employment was one of the things noticed by Erasmus during his sojourn in England, and is thus commented on in one of his *Epistolæ* (Furnivell's version): "Here are girls with angels' faces, so kind and obliging that you would prefer them to all your Muses. Besides, there is a custom here never to be sufficiently commended. Whenever you come, you are received with a kiss by all; when you take your leave, you are dismissed with kisses; you return, kisses are repeated. They come to visit you, kisses again; they leave you, you kiss them all round. Should they meet you anywhere, kisses in abundance; in fine, wherever you move, there is nothing but kisses." This delectable word painting of Anglo-Saxon life contrasts favorably with the gloomy one of the domestic existence of ancient Rome in the days of its republican austerity. The author of *The Decline and Fall of the Roman Empire* informs us, in characteristic diction of grandiose ponderosity, that such form of salutation was employed by the Roman husband on reaching home—for the purpose of ascertaining whether his wife had made a special visit to the wine cellar in his absence; a breach of domestic discipline for which she sometimes paid with her life. Professor Lombroso would refer the demonstrative affection of all modern kissing to maternal origin. M. Féré looks upon kissing as a manifestation of sentiment, as well as a means of eliciting and exalting it. For our own part, we are disposed to adhere to our older form of belief: that the evolution of specially sensitive nerve endings in the mucocutaneous labial margin has largely contributed to the widespread popularity of osculation.

NEW METHODS OF TREATMENT OF PULMONARY TUBERCULOSIS.

It is generally admitted that in incipient and early cases of pulmonary tuberculosis treatment in sanatoria furnishes the best results, so good in fact that when taken in time pulmonary tuberculosis is a curable disease, as recently stated by Woodhead. But many patients are unable to leave their homes for lack of means or other causes. In some instances the sanatorium treatment may be carried out in the patient's home, but in the large majority of cases this is impossible or impracticable. It is in such cases that specific remedies and modes of treatment would be specially applicable. Of late a number of such specific methods have been advocated, which it may be of interest briefly to describe. Treatment by a drug or drugs would be the simplest, cheapest, and easiest applied, and several have been advanced. Harper (*Lancet,* October 18, 1902), believing that gout and tuberculosis are mutually inhibitory, professes to have attained excellent results by the administration of pure urea in increasing doses of from twenty to eighty grains three times a day. The object in view is to alter the soil by increasing the amount of nitrogen, the tissues of a consumptive being under-mineralized as compared with those of a gouty individual, and thus to bring about immunity. In the culture tube urea inhibits the growth of tubercle bacilli.

Drage, relying on the phagocytic and (according to Metchnikoff) the antitoxine-producing properties of the leucocytes, has treated tuberculosis by means of hypodermic injections of sodium cinnamate and other derivatives of cinnamic acid, with apparently good results. Cinnamic acid, in common with pilocarpine and some other substances, has the property of producing an artificial leucocytosis. Dewar (*British Medical Journal,* November 21, 1903) has applied the iodoform treatment of tuberculous joints to pulmonary tuberculosis. He injects from five to seven minims of a not quite saturated solution of iodoform in ether into the arm. He has given as high as forty grains of iodoform at a dose, and finds that it is possible fairly to saturate the patient with the drug without any harmful effect. The method is not one for routine use by the general practitioner, great care, patience, and constant asepsis being necessary. Every vessel occluded diminishes the patient's chances of recovery. He has treated advanced cases in this way, and reports great benefit thereby. Chowry-Umthen (*British Medical Journal,* October 24, 1903) calls attention to the value of formaldehyde in pulmonary phthisis. It is best administered by means of continuous inhalation and vaporization, but may also be given by intravenous injection or forced through the skin by means of the electric current (?).

High frequency currents of low potential, together with intralaryngeal injections of antiseptics, such as iodine, thymol, etc., are alleged by Bowie (*Lancet,* October 31, 1903) to have a curative effect in pulmonary tuberculosis. The currents, which are given directly to the walls of the thorax, bring about a stronger power of resisting the toxines of the tubercle bacillus.

A serum treatment has been advanced by Marmorek (*Lancet*, December 12, 1903). By growing tubercle bacilli on a mixture of leucotoxic serum and an emulsion of liver cells, he states, the bacilli produce their toxine outside of the body. This toxine, or "vaccine," when introduced into susceptible animals leads to the production of an antitoxine which not only shields against infection, but is also curative of the tuberculosis. And, finally, Maher (whose article was recently published in this *Journal*) thinks that he has obtained from the milk of a tuberculous cow an organism which is directly and immediately antagonistic to the tubercle bacillus, although non-pathogenic itself. While statements are freely made in text books as to the antagonism of microorganisms, yet instances of positive inimical action are but few and doubtful. In almost every instance the presence of another organism, even though non-pathogenic, favors infection with a given pathogenic bacterium. Nevertheless the immediate results obtained by Maher were very striking and demand further investigation.

In conclusion, when attempting to decide as to the value of any of these modes of treatment of pulmonary tuberculosis, it should be remembered that all the patients were presumably under as favorable circumstances as possible, and that sudden and unexpected improvement is no rare thing in this disease. J. B. Billings, Jr.

DANGER IN SOILED MONEY.

The Springfield, Mass., Board of Health has recommended that the city treasurer should procure clean banknotes from the Federal government at regular intervals, and that all disbursements at the treasurer's office should be made in clean and unused bills.

We might well copy the system of the Bank of England, which destroys a note as soon as it is presented at the bank. The difficulty arises from the fact that our citizens on the Atlantic seaboard are perfectly satisfied with the convenience of paper money, and do not desire to handle gold. That there is a real danger, however, in handling paper money is not to be doubted, and it would be well if we all had the custom of our California fellow citizens of handling gold and silver exclusively, except in large sums. A small bill is a curiosity on the Pacific slope. We believe that *Staphylococcus pyogenes aureus*, despite its name, cannot raise its dread brood on a gold coin so well as on its paper voucher, and that *auri sacra fames* is not one of its faults.

THE LATE DR. FRANKLIN STAPLES.

Last week we recorded the death of Dr. Staples as having taken place at his home, in Winona, Minnesota, on February 22d. The deceased was not a man who "made a stir in the world," but his useful and unassuming career seems to us worthy of mention. It was the privilege of the writer of this paragraph to know Dr. Staples in the days when both were students in the College of Physicians and Surgeons of the City of New York, in the session of 1861-1862. Dr. Staples was then noted among the students for his full and accurate appreciation of the instruction given by the faculty and for the sound sense with which he indicated its practical applications. During the later years of his life Dr. Staples gave a good deal of attention to medical matters of an historical nature, and wrote on such subjects a number of short articles into which he infused much genial philosophy. Some of those articles were published in this journal.

THE COMPULSORY NOTIFICATION OF INFECTIOUS DISEASE.

Much as we may be inclined to sympathize with the practitioner who innocently, or at least without evil intent, neglects to report cases of infectious disease, we cannot take exception to the firm action recently taken by the commissioner of health in securing the punishment of such dereliction of duty. To be efficient, the health authorities must be kept informed of the prevalence of infectious disease.

FREE ANTITOXINE.

The notion having been spread abroad that there is a "corner" in diphtheria antitoxine, we hear of efforts to bring about such legislation as will enable a State to produce the article for gratuitous issue. Without expressing any opinion as to the state of the market, we wish to emphasize our oft repeated conviction that the indiscriminate free distribution of such products, as well as their sale in competition with private enterprise, is *contra bonos mores* and unworthy of the support of the medical profession.

OUR EARLY AMERICAN WRITERS.

Few physicians of the present time have contributed more than Dr. William Osler, of Baltimore, toward making known the excellences of a number of early American medical writers. A notable addition to Dr. Osler's good work in this direction will be found in his letter, published in this issue, in which he mentions Dr. James Jackson's original description of alcoholic neuritis.

News Items.

Society Meetings for the Coming Week:

Monday, *March 21st.*—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

Tuesday, *March 22nd.*—Metropolitan Medical Society, New York (private); New York Medical Union (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynæcology); Richmond, Va., Academy of Medicine and Surgery.

Wednesday, *March 23rd.*—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private).

Thursday, *March 24th.*—New York Academy of Medicine (Section in Obstetrics and Gynæcology); New York Orthopædic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement; Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.; New York Celtic Medical Society.

Friday, *March 25th.*—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

Saturday, *March 26th.*—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

Change of Address.—Dr. Hermanus L. Baer, to 161 Madison Avenue.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending March 12, 1904:

	Week end'g Mar. 12.		Week end'g Mar. 5.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	1,579	23	1,435	30
Diphtheria and croup	353	44	408	41
Scarlet fever	496	21	551	27
Smallpox	5	..	1	..
Chickenpox	112	..	136	..
Tuberculosis	455	198	405	188
Typhoid fever	22	9	27	8
Cerebrospinal meningitis	..	10	..	11
Totals	3,022	305	2,963	305

The J. Hood Wright Memorial Hospital, by its entertainment given recently at the Waldorf, realized about $2,000.

Roosevelt Hospital, it is said, has been obliged to close Ward III devoted to female surgical diseases, for want of funds. The hospital requires an endowment of some $500,000 to carry on its work properly.

The Bushwick Central Hospital, of Brooklyn, desires to erect a new and commodious building that will be strictly modern in all its appointments. An appeal will, therefore, be made to residents of the Borough for funds to carry out the project.

The Beth Israel Hospital benefited to the extent of about $20,000 by the receipts of the Purim ball at Madison Square Garden on March 9th. This sum will go to build a new wing to the hospital, which needs much more room, owing to the large increase of population on the east side.

The Borough of the Bronx has been suddenly afflicted with severe epidemics of both scarlet fever and measles. The Roman Catholic Orphan Asylum on the Kingsbridge Road is a particularly unhappy sufferer.

Bellevue Crowded.—Exactly 1,000 patients were in Bellevue Hospital on March 14th, 143 of whom had to be accommodated on cots. Other hospitals, also overcrowded, sent their surplus applicants to Twenty-sixth Street.

Errata.—In our issue for March 12th occurred two errors which we have been asked to correct. In Dr. Renner's article, on page 486, Fig. 19 is placed upside down. In Dr. Murray's article, pages 498 and 499, Figs. 2 and 4, have unfortunately been transposed. The figure numbered 2 should be numbered 4, and *vice versa*.

Dr. W. J. McDermott, a noted surgeon in the civil war, and a friend of Presidents Lincoln and Grant, died on March 12th, aged seventy-three years; he was a member of the State Assembly when war was declared, and immediately resigned to serve as surgeon. Subsequently he served at Alexandria, Fair Oaks, and the battle of the Wilderness, besides having been incarcerated in Libby prison, whence he was released on parole. Dr. McDermott practised in Westchester till the end of his life, and became well known in Masonic circles.

The Inspectors of the Health Department of New York City have petitioned the legislature for an increase of salary and an assurance of permanence in their occupation. They desire to have the salary for a beginner fixed at $1,200 to be raised to $2,100 after ten years' service. At present the tenure of office seems to be subject to the caprice of officials and as proper inspection of the schools requires the physician's entire time and precludes the possibility of private practice, it does not seem improper that the petition should receive legislative assent. The work is arduous, requiring ten hours' busy occupation at least, and exposure to contagious and infectious disease is constant.

The Red Cross Hospital.—The Red Cross Hospital, at No. 110 West Eighty-second Street, is soon to have a fine new building, the gift of W. T. Wardell, one of the trustees of the hospital. Mr. Wardell, who is also treasurer of the Standard Oil Company, gave the gift on the condition that the present policy of the hospital in refusing to use alcoholic stimulation in any form be continued. Work on the new building will begin early in the summer, and the present plans are for a three story building, so constructed as to admit of future enlargement. The lot is in Central Park West, between Ninety-ninth and One Hundredth Streets. It has 100 feet front, and is valued at $125,000. The new hospital is also to have an ambulance service, a feature which the institution at present lacks. The Red Cross Hospital is the only hospital in the city that takes this stand on the use of alcohol, and has been in existence for eight years, being supported entirely by private contributions.

New York Academy of Medicine, 17 West Forty-third Street.—The Section on Laryngology and Rhinology will meet on Wednesday at 8.15 p. m., when the presentation of cases will include A Case of Papilloma of the Uvula, by Dr. Herman Jarecky, and A Case of Lupus of the Larynx, by Dr. Max J. Schwerd. Dr. Victor C. Pedersen will exhibit An Attachment to Bennett's Inhaler for Pharyngeal and Tracheal Administration and for the Ethyl Chloride Ether Sequence, and Dr. Beaman Douglas will exhibit Anatomical Specimens of Frontal Sinus to illustrate his paper, Question of the Intranasal Frontal Sinus Operation. Dr. Louis Fischer will read Exanthematous Eruptions Following Nasopharyngeal Operations, upon which a general discussion will follow. Francis J. Quinlan, M. D., chairman; Harmon Smith, M. D., secretary, 44 West Forty-ninth Street.

The Section on Obstetrics and Gynæcology will meet on Thursday evening, March 24th, at the same hour, when the subject for discussion will be The Treatment of Peritonitis: Post-Virginal, by Dr. A. E. Gaillant; Post-Puerperal, by Dr. Robert Murray; and Post-Operative, by Dr. E. H. Grandin. A. Palmer Dudley, M. D., chairman; Charles F. Adams, M. D., secretary, 104 West Seventy-third Street.

Mount Sinai Hospital.—The appellate division of the supreme court has decided that the grant by the city to this institution of its old site at Lexington Avenue and Sixty-sixth Street is unconstitutional. The property was originally part of the common lands of the city. In 1871 part of the block on which the hospital stood was leased to the hospital corporation for ninety-nine years at a yearly rental of $1. In 1897 the hospital authorities decided to move uptown and secured a site at Madison Avenue and One Hundred and First Street, whereupon the corporation appealed to the city for permission to sell the old site and apply the proceeds to the building of the new hospital. This permission was granted, and on November 28, 1898, a deed was made conveying the property absolutely to the hospital. The city also agreed to pay 60 cents a day for every free patient cared for in the institution. Subsequently the site at Sixty-sixth Street and Lexington Avenue was sold to David H. Hyman, he agreeing to pay therefor $425,000 in instalments. Subsequently he repudiated the deal, and suit was brought to compel him to carry out his contract. He raised the point that the hospital's title was unmarketable. The suit was sent to a referee, who decided against Hyman, and he appealed. Justice Hatch, writing the decision, all the justices concurring, sustains Hyman's contention. The Mount Sinai Hospital Corporation is placed in a most embarrassing position as a result of this decision. The new hospital at One Hundred and First Street and Madison Avenue is approaching completion, and the trustees had depended upon the amount to be realized from the downtown site to help pay for the new structure.

The New Mount Sinai Hospital.—This handsome structure, the most recent development of modern architecture, is now completed and the process of equipment is rapidly proceeding. It is expected to transfer the patients in the course of a week or so to the new building.

The general plan is of the pavilion type, the hospital consisting of ten separate buildings, exclusive of the ambulance house, which are connected only on the ground floor, by means of corridors. Five of these buildings are devoted to the housing of patients, and will contain 456 beds. Light, ventilation, cleanliness, disinfection, and isolation have received special attention, and on the roof of each of the buildings devoted respectively to medical, surgical, private hospital, children's, and isolation cases is a glass enclosed solarium for the convalescents. The other five buildings are devoted respectively to administration, kitchen and laundry, pathology, dispensary, and nurses' training school. Every building has an independent ventilating system, the air being drawn from well above the street level into the cellar, where it is filtered, warmed, and distributed through the building, the vitiated air being exhausted by fans under the roof. It is impossible to describe in detail the plans, but the following features are worthy of special notice: On the fifth floor of the administration building is a group of operating rooms dedicated by Mr. Benjamin Stern to the memory of his brother, Bernard Stern. All the appointments are of the highest practical character. Besides the main operating room, built of Italian marble, there are four smaller operating rooms, with all necessary anæsthetic rooms, sterilization rooms, etc. In the basement of the medical building, the wards of which accommodate 158 patients, is an adequate sterilizing plant for the sterilization of all effects belonging to patients on admission, with 550 open lockers for their subsequent storage, and also of all hospital supplies, such as mattresses, etc. The surgical building accommodates 154 patients, and is constructed on a similar general plan to the medical building. The private pavilion, dedicated by members of the Guggenheim family to the memory of Barbara Guggenheim, fronts on Fifth Avenue; the five floors are divided into single rooms and suites of rooms, consisting of bedroom, bathroom, and connecting parlor. This pavilion accommodates 53 private patients. The children's pavilion, dedicated by Mr. Henry L. Einstein to the memory of his son, contains on the four upper floors 56 beds. The kitchen building contains in the basement a large kitchen and an auxiliary one. Everything is arranged to insure perfect cleanliness. In the cellar of this building are the engines, boilers, etc., the incineration furnace, central refrigerating plant, and bakery; on the fourth floor also is the hospital laundry. The isolation building is the only building that has no connecting corridor, and is furnished with its own kitchen and operating rooms, and all appointments. Perhaps the most striking feature of the building is the wonderful accommodation for the pathological department, due to the munificence of Mr. Adolph Lewisohn. It contains in the basement storerooms for supplies, rooms for animals, photomicography, and a thorough ventilating plant to carry off the vapors from the chemical hoods. There are autopsy rooms and ample facilities for cold storage. On the second floor is the museum, a dark room for spectroscopic and polariscopic examinations, laboratories for the attending staff, a physiological chemistry room, etc. The third floor contains a special library, the bacteriological department, a laboratory of general pathology and clinical microscopy, and a photographic dark room. There is a beautiful mortuary chapel attached to the autopsy department. The nurses' building, which, with the dispensary, fronts on Madison Avenue, contains accommodation for 150 student nurses; an infirmary and kitchen for sick nurses; parlors, class rooms, and a recreation roof. The dispensary building contains, besides the pharmacy and storerooms, twelve departments for the treatment of ambulance cases, each with its operating or resting room, x ray and Finsen light rooms, etc. The situation of the hospital, occupying the entire block between Fifth and Madison Avenues and One Hundredth and One Hundred and First Streets, is about as ideal a location as could be selected for a hospital in this large city. Whatever fresh air can be obtained from Central Park is available for the hospital. The outlook from the wards which are in the upper portions of the building affords a beautiful prospect. At the same time being on the East side, the hospital is easy of access from the lower East side districts, from which a large proportion of its patients will be drawn.

The new hospital buildings were formally opened on March 15th, the President, Isaac Wallach, presiding. In addition to the opening address of the President, Governor Odell and others spoke. The officers and directors of the Mount Sinai Hospital are: Isaac Wallach, president; Isaac Stern, vice-president; David Wile, second vice-president; E. Asiel, treasurer; Leo Arnstein, secretary; Henry Gitterman, Simon Rothschild, Max Nathan, George Blumenthal, Herman Mendel, Edward Oppenheimer, Morris S. Barnet, Henry R. Ickelheimer, Meyer H. Lehman, Kalman Haas, Joseph F. Cullman, Joseph Fox, Adolph Lewisohn, Isaac N. Heidelberg, Emil S. Levi, Murray Guggenheim, Jefferson Seligman, Henry. Morgenthau, Jacob Emsheimer, James Speyer, Louis M. Josephthal, Hugo Blumenthal, Charles A. Wimpfheimer, M. Samuel Stern, directors, and Adolph Herrmann, honorary director.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g Mar. 5.		Week end'g Mar. 12.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	33	6	48	6
Diphtheria	62	13	74	12
Scarlet fever	89	8	95	4
Typhoid fever	195	19	142	25
Consumption	..	64	..	87
Cerebrospinal fever	..	..	..	..

Dr. Bruce Burns, chief surgeon of the Frankford Hospital of Philadelphia has resigned from that institution.

The Presbyterian Hospital of Philadelphia has become the beneficiary of $1,000 by the will of Ann Jane Barr, of Oak Lane.

The Citizens' Permanent Relief Committee of Philadelphia has been authorized to spend $1,000 for the relief of 400 families rendered homeless and destitute by the flood at Middletown, Pa.

Dr. W. W. Knowlton, of Camden, N. J., had a narrow escape from death in a runaway accident. His horse became frightened and struck a telegraph pole with such violence that the doctor was thrown to the sidewalk. He sustained only slight injuries.

The Visiting Nurses' Society of Philadelphia held its annual meeting last week. Over 30,000 visits were paid during last year. The object of the society is to provide the poor with the best possible home nursing. The following officers were elected: President, Mrs. Henry C. Lea; corresponding secretary, Miss Lucey Davis; recording secretary, Mrs. Morris Jastrow; treasurer, Mrs. Albert P. Brubaker.

The Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis.—The fifth lecture in the international course, given under the auspices of the Phipps Institute, will be delivered by Professor C. Maragliano, of Genoa, Italy, on Monday, March 28th, at the Witherspoon building, Philadelphia, the subject being The Specific Therapy of Tuberculosis and Vaccination Against the Disease. The medical profession in general is cordially invited to attend.

Methodist Hospital.—Ground was broken last week on the estate of the Methodist Hospital at Broad and Wolf Streets for the Mary Robinson Burton memorial dispensary, which, when completed, will have cost $17,000, to be taken from a fund donated to the hospital by Miss Burton. The building will be two stories high, 40 by 80 feet, and in the Flemish Bond style of architecture. On the first floor will be the drug store, storeroom, pathological laboratory, morgue, and isolating room. On the second floor will be the eye, nose and throat, ear, medical, surgical, gynæcological, skin, and children's clinics.

The Section on General Medicine of the College of Physicians of Philadelphia held a stated meeting on Monday, March 14, 1904, in the Lower Hall, at 8.15 o'clock, at which the following was the programme: Dr. Clifford B. Farr, A Case of Emphysema Presenting Peculiar Features; Dr. W. B. Stanton (by invitation), A Patient with a Pulsating Empyema; Dr. Herman B. Allyn, Remarks on a Severe Case of Appendicitis Ending in Recovery without Operation; Dr. J. H. Musser, Dr. James W. Wister (by invitation), and Dr. Norman B. Gwyn, A Case of Acute Hæmorrhagic Leucæmia; Dr. Robert N. Willson, The Diagnosis of Incipient Phthisis, with special reference to the Physical Signs and the Frequency of Bacilli in the Sputum. Fellows desiring to read papers at future meetings are requested to communicate with the clerk. Fellows desiring to become members of the Section on General Medicine will please send their names and addresses to the clerk. S. McC. Hamill, M. D., clerk, 1822 Spruce Street.

Philadelphia County Medical Society.—At the meeting of March 9th the following papers were read: Dr. J. F. Schamberg, The Cutaneous Manifestations of Syphilis (with lantern); Dr. J. M. Swan, Visceral Syphilis; Dr. C. W. Burr, Syphilis of the Nervous System; Dr. H. M. Christian, The Treatment of Syphilis. At a regular meeting of the Northern Branch of the society, held on March 10th, the following papers were read, the meeting constituting a symposium on genitourinary subjects: Dr. H. R. Loux, The Local Treatment of Gonorrhœic Infections, discussion opened by Dr. H. M. Christian; Dr. Orville Horwitz, The Best Method of Operating for the Radical Cure of Hypertrophy of the Prostate Gland: Based on a Study of One Hundred and Forty-one Radical Operations, discussion opened by Dr. Edward Martin. The Kensington Branch of the society had the following programme on March 8th: Dr. R. W. Bemis, Symptoms and Diagnosis of Postnasal Adenoids; Dr. Charles McCreight, Treatment of Postnasal Adenoids. The West Philadelphia Branch of the society met on March 12th. The symposium on tuberculosis comprised the following papers: Dr. C. A. Codman, The Early Diagnosis and Treatment of Pulmonary Tuberculosis; Dr. M. B. Hartzell, Tuberculosis as it Affects the Skin; Dr. Ross Hall Skillern, Laryngeal Tuberculosis; Dr. W. S. Newcomet, Tuberculosis and the X Ray.

The Typhoid Fever Situation in Philadelphia.—Although a few less cases of typhoid fever were reported in Philadelphia during the week ending March 12th, the situation is still one that cannot be passed over lightly. When we consider the complexity which the disease sometimes offers, and the atypical varieties which sometimes occur, it is probable that many more cases of the disease occur than are reported as such. In addition to the customary polluted condition of the water supplied to that city from the Schuylkill river, there have occurred within the last few weeks a succession of avalanches of ice all along the Susquehanna river. In addition to bringing with it much pollution from towns along the banks of the Schuylkill river, it is very likely that the force of the waters has also carried with it much precipitated impurity from the bed of the river. There are still large ice jams, especially near the tributaries of the Susquehanna river, and while this does not affect the city of Philadelphia directly, it has been the cause of much sickness elsewhere in the State. This year has been a notable one for gorges all through the State. The break in the Flat Rock dam in Philadelphia has caused a greath dearth of water from that source. Apparently all that can be done at present regarding the polluted drinking water is to continue to impress upon the inhabitants of Philadelphia the vital necessity for boiling the water until effective filtration has been satisfactorily established.

GENERAL

Statement of Mortality in Chicago, Ill., for the Week Ending March 12, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on estimated midyear populations of 1,950,000 for 1904, and of 1,820,000 for 1903:

	Mar. 12, 1904.	Mar. 5, 1904.	Mar. 4, 1903.
Total deaths, all causes	549	625	631
Important causes of death—			
Acute intestinal diseases	20	27	23
Apoplexy	10	8	13
Bright's disease	38	33	39
Bronchitis	21	30	35
Consumption	86	54	60
Cancer	24	14	15
Convulsions	15	17	20
Diphtheria	6	5	15
Heart diseases	32	51	31
Influenza	3	5	19
Measles	1	0	6
Nervous diseases	14	32	27
Pneumonia	127	165	133
Scarlet fever	4	3	4
Smallpox	0	0	2
Suicide	5	7	17
Typhoid fever	9	13	13
Violence (other than suicide)	20	31	20
Whooping cough	0	1	10

Satisfactory decreases of most of the controllable diseases are indicated by the number of cases reported during the week—scarlet fever being the only serious exception; but even this is less prevalent than a year ago, the number of cases reported being 46, 37, and 58, respectively, for the week, for the previous week and for the week of 1903. The number of diphtheria cases reported is one tenth less than the previous week; of measles only one sixth and of chickenpox only one seventh. There have been but two deaths each from measles and whooping cough since January 1st—an unprecedented record. No case of smallpox was discovered during the week, and there are but six cases in the Isolation Hospital; at this time last year there were 56 cases under treatment.

The Yale Medical School Orator for the current year, it is announced, will be Dr. William S. Halstead, of Baltimore. who has been a professor at the Johns Hopkins University for nearly a quarter of a century. Dr. Halstead was a graduate of Yale in the academic department in 1874, and took his medical degree at Columbia in 1877.

The Lutheran Hospital at Granite City, Mo., has broken ground for a $30,000 structure at the corner of Twenty-first and I Streets.

The Newburgh Bay. N. Y., Medical Society, at its meeting on March 8th, elected officers as follows: President. Dr. H. A. Waldron; treasurer, Dr. John Deyo; secretary, Dr. L. R. Pierce.

Red Cross Hospital in Detroit, Mich.—It is stated that the National Red Cross Organization will erect a hospital in Detroit to be operated as a city institution.

The Physicians' Club, of Buffalo, N. Y., have elected the following officers for the current year: President, Dr. J. Henry Dowd; vice-president, Dr. F. M. Boyle; secretary, Dr. W. C. Callahan.

The Good Samaritan Hospital of Cleveland, O., will soon open its new buildings at the corner of Ansel Avenue and Superior Street. A training school for nurses is one of the features.

John Knowsley Thornton, M. B., C. M., Edin., died at Cambridge, England., on January 3rd. He was a distinguished abdominal surgeon in London till he became ill in 1896, and was an Honorary Fellow of the American Association of Obstetricians and Gynæcologists.

The Academy of Medicine, of Cincinnati, O., at its meeting on March 6th, elected the following officers: President, Dr. S. P. Kramer; first vice-president, Dr. John M. Withrow; second vice-president, Dr. Julia W. Carpenter; treasurer. Dr. Magnus A. Tate; secretary, Dr. Stephen E. Cone.

Bill in Restraint of Marriage.—Assemblyman Matthews is soon to introduce a bill at Albany providing that all persons must obtain a physician's certificate before securing a marriage-license. The bill has for its object the prevention of marriage by the insane, imbecile, and those affected with contagious disease.

Physician's Testimony Safeguarded. — The Court of Appeals has handed down a decision at Albany in favor of a woman plaintiff who is suing the supreme lodge of a secret society for the death benefit of her husband. The physician, whose testimony it is supposed would have been to the effect that the husband committed suicide and that therefore his wife was not entitled to the fraternal insurance, was barred from testifying, and the plaintiff was awarded $2,000.

Dr. Robert Milne Murray, of Edinburgh, physician to the Royal Maternity and Simpson Memorial Hospital, assistant gynæcologist to the Royal Infirmary, and lecturer on midwifery and the diseases of women in the Edinburgh Medical School, died in Edinburgh on February 15th. Dr. Murray's contributions to the literature of midwifery were many and important, and his death at the age of forty-nine years leaves a gap in the Scottish medical hierarchy hard to fill.

St. Timothy's Hospital, Roxborough, Pa., is making preparations for the care of cases of contagious disease by having plans prepared for an isolation ward to be built upon its grounds.

The Hospital of the Good Shepherd, Syracuse, N. Y., has received $25,000 by the will of the late Mr. John Lyman. Among other institutions that benefit by the same will are the Women's and Children's Hospital, the St. Joseph's Hospital, and the Visiting Nurses' Association, which receive $5,000 each.

The Visiting Hospital Physicians of San Francisco, Cal., have been reassigned as follows: Dr. Boskewitz, Dr. Stephens, and Dr. Pinkham will visit the Harbor Hospital; Dr. Wilson, Dr. Herzog, and Dr. Kucich will attend at the Park Hospital; and Dr. Hill, Dr. Pawlicke, and Dr. Millar will visit the Central Emergency Hospital.

The State Hospital of Colorado, at Boulder, has grown to such proportions that the authorities have decided to start a complete training school for nurses. A three years' course will be given, and after two months' instruction an allowance of $8.00 a month will be made to each student for laundry, etc.

The Medical and Chirurgical Faculty of Maryland has petitioned the State legislature for fifty thousand dollars to erect a fireproof building for the custody of their library. Originally the petition was for $100,000, but on learning the conditions of the State treasury, the committee voluntarily reduced the amount.

Tennessee Medical Society.—This body will meet at Chattanooga, April 12, 13, and 14, 1904. The present officers are. President, Dr. I. A. McSwain, of Paris; vice-president for West Tennessee, Dr. W. H. W. Sale, of Covington; vice-president for Middle Tennessee, Dr. Louis Leroy, of Nashville; vice-president for East Tennessee, Dr. C. P. Fox, of Greeneville. The local committee of arrangements is composed of: Dr. D. E. Nelson, chairman; Dr. B. S. Wert, Dr. J. W. Johnson, Dr. G. W. West, and Dr. Y. L. Abernethy.

San Francisco Charity Hospital.—Work has been begun on the charity hospital for the benefit of women and children to be erected on Guerrero and Market Streets out of funds left for the purpose by Mrs. Katie Johnson. Plans for the building are already drawn, and it is expected that it will be completed within a year. It is to be equipped with every modern convenience and appointment for the scientific treatment of disease, and the patients will be permitted to enjoy all its privileges free of charge.

The Lane Lectures in San Francisco.—The fifth of the series of the Lane Lectures for 1904, which, in conformity with the desire of their founder, Dr. Levi Cooper Lane, are given under the auspices of Cooper Medical College, was delivered on the evening of March 4th. The title of the lecture was Fermentation, which was given by Dr. Walter Garrey, professor of physiology in Cooper Medical College. The next lecture of the series will be delivered by Dr. George B. Somers on The Trained Nurse, April 1st.

First French Congress of Climatotherapy and Urban Hygiene.—President, Professor Chantemesse, Membre de l'Académie de Médecine.—We have stated in preceding numbers the questions that will form the objects of reports at this congress; the special reductions allowed from April 1st to 20th by railways, hotels, etc.; the fêtes, receptions, gala representations, and excursions that will be organized on the occasion of the congress. Subscription (20 francs, or $5.00) should be sent with a visiting card to Dr. Bonnal, general treasurer, 19, boulevard Victor-Hugo, Nice (Alpes-Maritimes). All other correspondence should be addressed to Dr. Hérard de Bessé, general secretary, 5, boulevard Central, Beaulieu-sur-Mer (Alpes-Maritimes). The members of the executive committee for England and the United States of America are as follows: Dr. G. H. Brandt, of Nice; Dr. Johnston Lavis, of Beaulieu; Dr. Linn. of Nice; Dr. Mac Dougall, of Cannes; Dr. Pryce Mitchell, of Monte Carlo; Dr. Stanley Rendall, of Mentone.

Utica, N. Y., General Hospital.—At the monthly meeting of the Board of Charities, the bill sent to the legislature to increase the special town fund from $13,000 to $16,000 was approved, and the committee on buildings and grounds was authorized to advertise for proposals for raising the wings of the general hospital, building a double pavilion for contagious diseases and constructing a laundry and boiler building on the grounds of the hospital.

The sketch of the double pavilion submitted by the architect shows two separate hospitals in one building, separated by a brick wall in the centre. The central portion, 30 by 50 feet, contains the nurses' dormitory and one day room, kitchen, laundry, patients' and nurses' bath rooms and clothes closet, is two stories in height, and is cut off from the patients 'dormitories on either side with brick partitions. The patients' dormitories are one story in height. The first story is 12 feet high and the second story 10 feet high. The patients' dormitories will accommodate six beds each, and have a large open fireplace, and a skylight to let in the sun. A private room with large open fireplace is also provided. At the end of each dormitory is a sun room, 12 by 30 feet, with glazed sides and doors to outside. The first floor window sill level is to be about six feet above the grade, so as to secure privacy and give thorough ventilation and light to the basement. The nurses' room has a small window to command view of ward, and is provided with a fireplace. All bath rooms have two outside windows, furnishing plenty of sunlight. Each hospital is to be provided with separate verandahs. All outside walls are to be made hollow by laying an eight foot outside wall, a four foot inside wall, and are to be held together by iron anchors. There will be no furring, as the plaster will be applied directly upon the brick wall. The roof is to be flat and of mill construction, two and one half inch boards laid on girders, one layer of asbestos and two and one half inch plank on top of this, and all to be covered with asphalt. The ceiling is to be plastered with hard wall plaster on metal lath, which is to follow the girder and roof boards closely, so as to leave no hollow space. The floors are to be of two and one half inch boards, one layer of asbestos and seven eighths inch hardwood floor on top. The windows are to extend to the ceiling. There is to be no wood used for casing, base or wainscoting in the building, and the exterior is to be of brick. The laundry and boiler building is to be one story in height, and is to include a laundry room 26 by 30 feet, an engine room 18 by 30 feet, a boiler room 26 by 30 feet and a coal room 14 by 22 feet. This structure is also to be of brick and 80 by 30 feet on the ground.

Pith of Current Literature.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT.

January 26, 1904.

1. Pathological Researches Into the Diseases of the Middle Ear, By K. GRUNERT.
2. Acute and Chronic Circumscribed Inflammation of the Large Intestine, Especially of the Sigmoid Flexure, By A. BITTORF.
3. Early Symptom of Severe Cases of Perityphlitis, By L. MOSZKOWICZ.
4. Acute Polymyositis, By J. BÆR.
5. Severe General Disturbance in Attention in Beginning Paralysis, By G. FISCHER.
6. Motor and Sensory Hemiparesis Due to Gun Shot Wound of the Brain, By A. KNAPP.
7. Changed Teeth in Congenital Syphilis, By GRÆFFNER.
8. Hæmorrhagic Renal Infarct, By R. T. MORRIS.
9. Tænia Cucumerina in an Infant, By O. KŒHL.
10. New Method of Quantitative Determination of Pepsin, By F. VOLHARD.

2. **Sigmoiditis.**—Bittorf is not certain that all acute inflammations of the sigmoid flexure are of catarrhal nature. as Ewald states, but thinks that the subacute and chronic phases of the disease may be. The symptomatology is fairly constant. There is always a more or less circumscribed area of sensitiveness with a resistance in the left iliac fossa. The temperature ranges between 101° and 103° F. There is constipation with irregular stools; sometimes general symptoms are prominent, including anorexia, nervousness, and sometimes spontaneous abdominal pain. The sensitiveness gradually disappears with laxatives, rest in bed and compresses of hot water, but the resistance disappears but slowly.

3. **Early Symptom of Severe Appendicitis.**—Moszkowicz draws attention to the fact that when the abdomen is opened in severe cases of appendicitis, a serous effusion is usually found. This statement does not include. of course, cases of purulent peritonitis. It occurred to him to see if this effusion could not be clinically demonstrated, and he has shown this to be the case by a change in the percutory resonance when the patient changes his position. He suggests for this fine procedure, percussing the index finger of the left hand with the middle finger of the right hand while the left thumb is kept upon the abdomen to receive the impulse of the fluid.

BERLINER KLINISCHE WOCHENSCHRIFT.

February 8, 1904.

1. Inoculation of Human Tuberculosis Upon Cattle. (*To be continued*), By J. FIBINGER, and C. O. JENSEN.
2. Medicinal Treatment of Neuralgias and Myalgias, By E. MEYER.
3. Paralysis of the Recurrent Laryngeal Nerve in Mitral Stenosis, By A. ALEXANDER.
4. Case of Bronchiectasis in a Patient with Situs Inversus Viscerum, By A. K. SIEWERT.

2. **Treatment of Neuralgia.**—Meyer has used hydroquinone in cases of neuralgia and myalgia, in doses of from fifteen to sixty grains in a day. In only one instance were there any disagreeable after effects. Its action seemed to be useless in articular rheumatism but in the other cases it was efficient in relieving pain when other drugs had failed to act.

3. **Paralysis of Recurrent Laryngeal Nerve.**—Alexander records a case in which from the symptoms of the disease it was evident that no aneurysm was present as the causative factor of the paralysis. The patient suffered from mitral stenosis and the author reaches the conclusion that the dilated left ventricle and the dilated pulmonary artery by rhythmic pressure upon the recurrent nerve, caused its paralysis.

4. **Situs Inversus Viscerum.**—Siewert records the case of a poorly nourished and puny individual with a bronchiectatic cavity in the upper lobe of the left lung, which, it could be demonstrated, was not of tuberculous character. It was probably congenital, a very rare occurrence. There was also a transposition of the viscera, and the author thinks that the broniectasis may have some relation to this abnormality.

February 15, 1904.

1. Tuberculous Infection of Children (*To be continued*), By WESTENHŒFFER.
2. Epithelioma Chorioectodermale (*To be concluded*), A Contribution to the Study of Congenital Tumors, By L. PICK.
3. Clinical Course of Epithelioma Chorioectodermale, By L. LANDAU.
4. Ficker's Sign of Typhoid Fever, By J. MEYER.
5. Antitoxines and Agglutinins in the Blood of Immunized Animals, By F. FIGARI.
6. Transmission of Human Tuberculosis to Cattle, By J. FIBIGER, and C. O. JENSEN.
7. Is Syphilis or Social Status of Greater Ætiological Importance in Tabes? By C. ROSENBACH.

2. **Epithelioma Chorioectodermale.**—Pick describes those congenital malignant tumors which originate in the ovary or testicle. They are derived from the three embryonic layers, but sometimes one of the layers develops so strongly as completely to destroy the identity of the others. It is for this reason that the genesis of these teratomata was formerly not understood. Pick reports a case, the tumor originating in the ovary of a girl of nine years of age, in which nerve cells were found with chorion cells. The author suggests the name above given for these very malignant growths which run their course like carcinomata, alveolar sarcomata. cystodenomata, etc., and form metastases through the blood current. The pressure of the three embryonic layers demonstrates the congenital origin of these teratomata.

3. **Chorioectodermal Epithelioma.**—Landau has observed five cases of this kind, and gives the clinical histories of three of them, all of them occurring among young subjects. All were subjected to operation, and all but one died following recurrence or metastases. The growths are decidedly malignant in character. The author believes that teratomata of the ovary of this nature are not so rare as has been hitherto believed. Landau scouts the notion of a parasitic origin or development of these neoplasms.

4. **Ficker's Diagnostic Sign of Typhoid.**—Meyer describes this as a fluid containing dead typhoid bacilli. Comparing the Widal reaction and Ficker's modification of it, Meyer concludes that the latter is reliable and useful. The two methods are equally trustworthy and the author recommends Ficker's as the easier for the clinician. In his experimental work, Meyer found that Ficker's preparation containing dead typhoid bacilli agglutinated only the serum of persons suffering from the disease and that it gave no reaction on the blood of those ill with some other disease or upon the blood of healthy animals.

5. **Antitoxines and Agglutinins.**—Figari concludes from his experimental studies that the antitoxines and agglutinins do not circulate uncombined in the blood. Sometimes in tuberculosis they are found free, but even then only in minimal quantity, and they are undoubtedly present in much larger quantity in the cellular elements of the blood. Figari believes that the production of the antitoxines and agglutinins rests largely with the leucocytes.

6. **Human and Bovine Tuberculosis.**—Fibiger and Jensen found that in about fifty per cent. of cases of human tuberculosis, the tubercle bacilli were capable, on inoculation, of evoking a progressive tuberculosis in calves. In five cases of primary gastrointestinal tuberculosis in children, the bacilli showed a particular virulence when inoculated into calves. Their experiments prove the necessity of continued watchfulness over dairies and their output. The authors point out, in conclusion, the great frequency of primary tuberculosis of the alimentary tract, especially in children. In their autopsies eleven per cent. of the cases showed this form of the disease.

PRESSE MEDICALE.

February 6, 1904.

Pneumotyphoid and *Bacillus Coli*,
By Ardel-Delteil and Rimbaud.

Pneumotyphoid.—Ardel-Delteil and Rimbaud detail a case with a pulmonary début, where bacteriological examination from the first disclosed eberth, bacillus, but no pneumococci. Abdominal symptoms did not appear for a week, when the Widal reaction was found. The preliminary pneumonia must have been due to the eberth bacillus, although this was not present in the sputum, while the colon bacilli were found in large numbers. The young authors suggest diffidently that one bacillus may be transformed into the other according to its habitat, and find this theory easier of belief than that of a simultaneous double infection of lung and intestine.

February 10, 1904.

The Speculum, By F. Jayle

The Speculum.—Jayle's article is an interesting and amusing history of the speculum from its use in India one thousand years before our era, in Pompeii at the time of the eruption of Vesuvius, in the Middle Ages when it received its present name from its use as a mirror, direct examination of the "pudendum" being probably forbidden, down to its rediscovery in the last century. The article has thirty-one interesting illustrations.

LYON MEDICAL.

February 14, 1904.

1. Bilateral Dermoid Cysts of the Ovary Complicating Pregnancy, By Condamin.
2. Acute Leucæmia, By Leclerc.

1. **Ovarian Cysts in Pregnancy.**—Condamin concludes that in women under forty years of age, an effort should always be made to save some of the genital apparatus when operating, not only to maintain menstruation, which is a useful function at this age, but to allow possible future pregnancies.

2. **Acute Leucæmia.**—Leclerc, from careful study, has deduced the existence of this affection with the following characteristics: A hæmoleucocytic formula which is generally a lymphocytosis; profound alterations in the red cells; great anæmia from the beginning; hæmorrhages; fever; hypertrophy of ganglia and spleen; sudden onset and rapid course.

SEMAINE MEDICALE.

February 3, 1904.

Diagnostic and Prognostic Value of Fever in Appendicitis,
By L. Cheinisse.

Fever in Appendicitis.—Cheinisse states that only in America now is immediate operation advised. In Europe the cases are individualized. Hyperleucocytosis is not absolutely diagnostic of pus. About 11 per cent. of cases show no fever and in any case fever seldom lasts over three days, and is usually moderate. The gravity of a case is generally in proportion to the intensity of the fever. A sudden rise with vomiting and a rapid pulse demand immediate intervention. An interesting phenomenon in pure suppuration is a considerable variation between the rectal and axillary temperatures. Rostootzer says that the purer the case, the later in the evening will be the extreme high temperature.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

January 17, 1904.

1. The Presence of the Tubercle Bacillus in the Urine, By V. Maragliano.
2. The Phenomenon of Hæmolysis in Nephritis, By F. Micheli.
3. Cephalopine and Cerebral Organotherapy, By M. Sciallero.

1. **The Tubercle Bacillus in the Urine.**—Maragliano concludes an experimental study of 12 cases of tuberculosis with a statement that even with the best methods of examination, tubercle bacilli are not found in the urine of persons in whom the infection is localized exclusively in the respiratory organs. This is especially interesting, in view of the fact that the presence of tubercle bacilli has been reported in cases in which the kidneys and other urinary organs were not attacked. In the cases studied by Maragliano all lesions of the kidney could be excluded, and in order to make the tests more certain he employed very large amounts of urine which was centrifugated repeatedly, decanted and again centrifugated after the addition of more urine. Slides were next smeared with the sediment, mixed with a solution of albumin and glycerin, fixed with heat and with alcohol, and ether in order to remove all fat and to prevent the staining of

smegma bacilli. The specimens were then stained with Ehrlich's solution and decolorized with hydrochloric acid. In none of the 12 cases did Maragliano find any tubercle bacilli.

He then had recourse to the method recommended by Jousset, which consisted in adding to the diluted urine some blood plasma and heating to 100° C., so as to promote coagulation. The coagulum was then separated and redissolved in artificial gastric juice. The last solution was centrifuged, and the sediment examined for tubercle bacilli. Even with this method he was unable to show any tubercle bacilli in the urine of these cases. The injection of the centrifuged sediment into guinea pigs gave negative results.

3. **Cephalopine, a New Organic Extract of the Brain Substance.**—Abstracted in this column March 5, 1904, page 466.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

January 24, 1904.

1. Spasm of the Arteries, By G. REALE.
2. A Case of Cerebral Tumor, By NICCOLO MARINI.
3. On the Epileptic Equivalents, By CESARE ORTALI.
4. Hæmoantitoxine for the Prevention and Treatment of Tuberculosis, By DR. FIGARI.
5. Contribution to the Surgery of the Stomach, By FRANCESCO FABRIS.
6. A Case of Hepatic Cirrhosis with Umbilical Hermia, Treated Surgically, By ANTONIO MORI.
7. A Case of Intestinal Obstruction Due to Meckel's Diverticulum, By DR. FERREN.

3. **Epileptic Equivalents.**—Ortali reports the case of a farm laborer, aged forty-five years, in whom epileptic seizures took an unusual form. At first the attacks were characterized by the regular signs of *grand mal*, with complete loss of consciousness and even with involuntary defæcation and urination. For the last ten years, however, the attacks came on suddenly with violent excitement, sometimes with chills and formication, and consisted in an uncontrollable tendency to run about in a circle, either in the room or about the country, covering at times a number of miles. The attacks were sometimes excited by some sudden emotion, as in one instance, fright at a number of worms. During his runs through the country he did not recognize any one, and did not answer when spoken to, and he could never remember anything that happened during the run. At times he also had a slight attack of convulsions at night, once or twice a month, during which he did not wake up. Hysteria was excluded in this case and the diagnosis was, epilepsy taking the form of an "equivalent." According to Boari "such cases represent the psychical equivalent of the convulsive attack, due to a lacuna in the continuity of consciousness, with a development of action directed by a hallucination." The cause of this particular form of neurosis is not known, and the lesions which produce this so-called "precursory" epilepsy cannot be demonstrated.

ROUSSKY VRATCH.

December 27, 1903.

1. The Ætiology of Cancer, By S. I. SERKOVSKI.
2. The Treatment of Centrally Located Placenta Prævia, By B. A. LIBOFF.

2. **Treatment of Central Placenta Prævia.**—Liboff says that it is difficult to formulate any prophylactic measures against the occurrence of placenta prævia, for the reason that the cause of this condition is so imperfectly known. The presence of an inflammation of the endometrium, causing a detachment of the placenta from its proper place, is usually acknowledged to be the cause in many cases, but as yet very little definite knowledge has been obtained as to the real cause of placenta prævia. According to Schoenwald, a placenta prævia may be expected if there were twins in the preceding gestation, or if placenta prævia has occurred before. In such cases one may speak of the necessity of terminating the pregnancy prematurely. In the treatment of placenta prævia with central implantation, two methods have been chiefly employed. First, the rupture of the placenta with the fingers through a partly dilated os, the introduction of the hand through the opening, and the bringing down of one foot, the rest being left to Nature. Second, the use of dilators to accomplish forced rapid delivery. All observers agree in condemning tamponing of the vagina and detachment of the placenta by means of the effused blood in cases of central placenta prævia. In a number of cases reported of late, Cæsarean section has been employed with good results in the treatment of a central placenta prævia, in view of the fact that the other two methods ordinarily used do not terminate favorably in a great percentage of cases. A number of Russian obstetricians have of late advocated Cæsarean section in these cases, and the present author endorses this view. He says that there is no reason why we should not perform a laparotomy in these extremely dangerous cases of central placenta prævia when we now do this in cases of extrauterine pregnancy, the difference being that in placenta prævia the hæmorrhage is external, while in extrauterine pregnancy, it is internal.

January 3, 1904.

1. The Surgery of the Bile Ducts and Gallbladder, By S. N. FIODOROFF.
2. On the Pathogenesis of the Socalled Hypertrophic Biliary Cirrhoses of the Liver, By N. N. KIRIKOFF.
3. The Bacteriological Diagnosis of Diphtheria, By B. N. TSCHERNO-SCHWARZ.
4. Complete Inversion of the Uterus Caused by a Large Fibroid Tumor. Operation, By V. D. KOLOTINSKI.
5. A Case of Perforating Ulceration of the Appendix with Abundant Bleeding Into the Peritoneal Cavity, By S. A. NIKONOFF.
6. On the Treatment of Some Eye Diseases by Means of Sea Baths, By S. P. ROSHTCHEVSKI.

3. **Bacteriological Diagnosis in Diphtheria.**—Tscherno-Schwarz says that a negative result of a bacteriological examination for Loeffler bacilli has a definite diagnostic value, provided the negative findings are reported repeatedly in the same case. There is no longer any doubt that pseudomembranous amygdalitis, laryngitis, and croup may occur without the presence of Loeffler's

germ. The positive result of the bacteriological examination is also of great value when the clinical diagnosis is diphtheria. On the other hand, when the clinical appearances do not show diphtheria, the positive finding of the germ is not of any definite value. In such cases bacteriology cannot do anything for the clinician until a method shall have been devised whereby we may not only know that the Loeffler germ is present, but also determine whether it is virulent or not; i. e., whether the organism is also poisoned by the diphtheritic toxines.

4. **Bleeding Into the Peritonæum in Perforative Appendicitis.**—Nikonoff reports a case of perforative appendicitis with acute symptoms, in which laparotomy revealed a peritoneal cavity filled with blood, without apparently any admixture of pus. A small stone was found in the peritoneal cavity and the blood had a distinct fæcal odor. The patient died of exhaustion from loss of blood a few days after the operation. The author calls attention to the rarity of finding blood in the peritonæum instead of pus in appendicitis. He thinks that the blood had come from a blood vessel in the appendix as the result of ulceration, but as there was no autopsy, he does not definitely know the origin of the hæmorrhage.

6. **Sea Bathing in Eye Diseases.**—Roshtchevski advocates sea bathing and climatic treatment in some affections of the eye, especially in the scrofulous diseases of the conjunctiva and in trachoma, in which the sea water is not only subjectively beneficial, but also acts as a mild antiseptic and removes secretions. He advocates the establishment of a system of climatic treatment for eye diseases of this sort. The irritation which is at first felt in the eyes after bathing in salt water is transient and insignificant.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 12, 1904.

1. Perforating Gastric Ulcer; Posterior Gastroenterostomy; Fowler's Position, By J. H. Musser, and W. W. Keen.
2. Bovine and Human Tuberculosis, By D. E. Salmon.
3. The Condition of the Blood in Patients Suffering from Pulmonary Tuberculosis, By John M. Swan.
4. The Present Conception of the Perirenal Fascia and Its Rôle in Fixation of the Kidney, By D. D. Lewis.
5. The Value of an Injury, By L. Sexton.

1. **Gastric Ulcer.**—Musser reports the medical history of the case and Keen the surgical history. (1) Medical history.—A woman, seventy years old, had been under treatment for one year for gastric ulcer when she came under the author's observation. He diagnosticated either pyloric obstruction due to a healed gastric ulcer or spasm of the pylorus due to an active gastric ulcer. Some days later hæmorrhage occurred and the patient was placed under rigid treatment. In a few more days perforation occurred. Operation was at once advised and accepted. (2) Surgical history.—Keen saw the patient two hours after the occurrence of perforation, concurred in the diagnosis, and operated three hours later. Fortunately the patient had not taken any food by the mouth for about fifty hours. Operation revealed a perforation in the middle of the pylorus anteriorly. This was closed and a posterior gastroenterostomy was done by means of a Murphy button. The patient made a good recovery. Up to the present time, over two months after the operation, the button has not passed, but it has not produced any trouble.

2. **Bovine and Human Tuberculosis.**—Salmon asserts that the uncertainty caused by Koch's various papers on the subject of bovine and human tuberculosis makes it advisable to continue the discussion of this important subject. A review of the experimental work and of the clinical observations that have been made in Germany and in this country shows that Koch's position is not well taken. It has now been abundantly proved that bovine tuberculosis may be transmitted to man.

3. **The Blood in Tuberculosis.**—Swan, in studying the blood counts he has made, has followed Grawitz's classification of tuberculosis. The disease is, for this purpose, divided into three stages. A first stage, in which there is a beginning affection of the apex, without cavity formation; a second stage, in which there are symptoms of cavity formation with slight fever or without fever; and a third stage, in which hectic fever is present. In all twenty-six cases were studied. The author formulates nine conclusions, of which we reproduce three, one abbreviated: (1) The blood picture in pulmonary tuberculosis is not constant, and the conditions described by Grawitz are by no means absolute. (2) Omitting the exceptional cases from consideration, however, the average case in the first stage of the disease presents a slightly reduced number of erythrocytes, a moderate reduction of the hæmoglobin and about a normal number of leucocytes. The average case in the second stage presents a varying degree of leucocytosis due to an increase in the number of multiforminuclear, neutrophile cells. The erythrocytes are present in about normal numbers, and the hæmoglobin is often normal in percentage. The average cases in the third stage will show a reduction in the number of erythrocytes, a moderate leucocytosis composed of the multiforminuclear, neutrophile cells and a high hæmoglobin percentage. (9) The absence of the eosinophile cells from the blood may be looked on as an unfavorable prognostic sign. The increase of these cells while the patient is under treatment may be taken as an indication that the progress of the disease has a tendency to become arrested.

BOSTON MEDICAL AND SURGICAL JOURNAL.

February 25, 1904.

1. The General Management of Diabetes, By Frederick C. Shattuck.
2. Medical Treatment of Diabetes, By W. H. Thomson.
3. A Comparison Between the Medical Uses of the X Rays and the Rays from the Salts of Radium, By Francis H. Williams.
4. The Prognosis of Idiopathic Pleurisy, By George G. Sears.

1. **Diabetes.**—Shattuck asserts that it is important to bear in mind, in the treatment of diabetes mellitus, that the presence of sugar in the urine must be regarded as a symptom and not as in itself

a disease. One must therefore treat the patient and not the symptom glycosuria. Diet is the most important means at our disposal by which to combat the condition. With the exception of cases that are very mild or severe in type it is best to enforce at once an absolute or nearly absolute diet. Very mild cases do not, probably, require very great restrictions. On the other hand, in severe cases, when acetone and diacetic acid are present a radical and rapid change in diet is dangerous. The quantity of food taken is only second in importance to the quality. Diabetic breads are not safe. Any diabetic bread which is palatable contains a large percentage of starch. The patient's general mode of life must be carefully atended to. Specific medication is of doubtful utility. With regard to prognosis the following may be said. In the young, treatment can at best only delay the fatal result. In those in the prime of life great service can generally be rendered, though actual cure occurs only in the minority of cases. In those past middle life the disease is usually well tolerated, and may be of comparatively little moment, provided that reasonable care be exercised; and yet, now and then we encounter cases the course of which proves other than first impressions would lead us to expect.

2. **Diabetes.**—Thomson's article was abstracted, February 27th, from *American Medicine,* February 20th.

3. **Radium.**—Williams bases his conclusions on the study of fifty cases, of various diseases, treated with radium bromide, in quantity about 50 milligrammes, and of a radioactivity of about 1,500,000. The author presents the following summary of his observations: (1) The rays from radium salts, unlike the x rays, are not serviceable in diagnosis either by means of radiographs or of fluoroscopic examinations. (2) The beta rays are useful as a therapeutic agent in certain skin diseases and new growths, if the diseased tissues are superficial or are not more than about 1.25 cm. (one-half an inch) below the surface of the skin or accessible mucous membranes. (3) The beta rays from radium salts will heal some cases of new growths that are not healed by the x rays, and they act more promptly, but not over so large a surface at one time as the x rays. (4) Radium salts of an activity of 8,000, or considerably more, are not sufficiently strong to be efficient. Pure radium salts, which have a radioactivity of about 1,500,000, are not too strong for the work to be done. (5) The radiation from radium salts, unlike that from the x ray tube, is uniform. (6) Great care should be exercised to avoid burns.

4. **Idiopathic Pleurisy.**—Sears's study is based on 439 cases of pleurisy which were treated in the Boston City Hospital between 1880 and 1895. These cases are all free from the suspicion that they were secondary manifestations of some process already existing. While it is difficult to draw unerring conclusions the following, of prognostic significance, seem justifiable: (1) About 10 per cent. of these cases are known to have developed tuberculosis. (2) Over 55 per cent. of all the cases which were followed to their death died from some form of tuberculosis. (3) Tuberculosis, when it occurred, developed within five years in over 50 per cent. and within ten years in over 70 per cent. (4) The danger, of evil consequences is much increased by a tuberculous family history or a personal history of some form of tuberculosis previous to the attack.

MEDICAL RECORD.

March 12, 1904.

1. Secondary Laparotomy, By H. C. COE.
2. Dry Superheated Air in Therapeutics, By CLARENCE EDWARD SKINNER.
3. Strangulated Hernia, By JOHN F. ERDMANN.
4. Some Points Regarding the Early Diagnosis and Some New Features in the Treatment of Pulmonary Tuberculosis, By W. FREUDENTHAL.
5. The Relation of Physical Defects to Mental Development, By GEORGE STOCKTON.
6. Mastoiditis, By E. H. POMEROY.
7. Remarks on the Preparation of Vaccine Virus, By JOHN F. ANDERSON.

1. **Secondary Laparotomy.**—Coe calls attention to the difference between "cure" as entered on the hospital chart after laparotomy and "cure" from the patient's point of view. Too frequently the patients' conditions are not materially bettered by their surgical experiences. The author discusses at length the various causes for the therapeutic failures and believes that not a few of them are due to conservative surgery. It is for the future to devise methods of operating which will reduce to a minimum, not only the immediate mortality of operative intervention, but also the necessity of secondary laparotomies.

2. **Dry Superheated Air.**—Skinner does not consider the technics of the dry superheated air method of treatment. His article is devoted to calling attention to the ultility of this method of therapeutic procedure, of which he is an enthusiastic advocate. Both "local" treatment and "general" or "body" treatment are considered and a number of cases are reported to illustrate the applicability and the efficiency of the method.

3. **Strangulated Hernia.**—Erdmann reports fifty-eight cases of strangulated hernia that have come under his observation during the past eight years. The cases are analyzed and, with the results thus obtained as a basis, the author gives his views on strangulated hernia.

4. **Tuberculosis.** — Freudenthal emphasizes the following points: (1) Diagnosis. *(a)* The condition of the upper air passages will frequently enable one to make a positive diagnosis of pulmonary tuberculosis when physical signs of trouble in the lungs are still lacking. *(b)* Injections of the old tuberculin of Koch will often clear up an obscure diagnosis. (2) Treatment. The blue light treatment, together with CO_2 administered by the rectum, has, in a number of cases treated during the past year, given encouraging results.

6. **Mastoiditis.** — Pomeroy emphasizes the fact that the proper treatment of mastoiditis is by surgical intervention. Yet when operation is refused good results often follow the administration of calcium sulphide in doses of from one-tenth to one-quarter grain three or four times a day.

MEDICAL NEWS.

March 12, 1904.

1. A Clinical Study of Sixty-two Cases of Intestinal Infection by the *Bacillus Dysenteriæ* (Shiga) in Infants, By LINNÆUS EDFORD LA FETRA, and JOHN HOWLAND.
2. A Factor in the Ætiology of Distorted Nasal Sæpta, By CHARLES E. QUIMBY.
3. On the Abortive Treatment of Gonorrhœa in the Male, By FREDERIC BIERHOFF.
4. Differential Diagnosis and Treatment of Chancroid and Chancre, By C. G. CLARK.
5. The Ocular Signs of Syphilis, By WENDELL REBER.
6. Diagnosis and Treatment of Syphilis of the Central Nervous System, By LUTHER C. PETER.
7. The Recognition and Treatment of Some of the Pharyngeal Lesions of Syphilis, By LEWIS S. SOMERS.
8. New Stain for Diphtheria Bacilli, By EDUARDO ANDRADE.

1. **Intestinal Infection.**—La Fétra and Howland report purely on the clinical aspects of the sixty-two cases they have studied. The material was drawn from an ordinary out patient service and the cases were not selected. The authors emphasize the following points: (1) The unexpectedly great prevalence of the dysentery organism in cases of diarrhœa in infants, at least during the summer months. (2) All types of diarrhœal disease, as characterized by their clinical symptoms, are to be found among these cases. (3) As compared with cases of "summer diarrhœa" of other years those in this series were in general much milder; and possibly this was due to two factors: *(a)* The cool summer. *(b)* The increasing knowledge among the tenement population of the care of infants and their food. (4) The striking number of breast-fed infants, 14 in 62 cases, more than 20 per cent. of all. (5) The serum treatment was not given in a sufficient number of cases to warrant any conclusions. While of apparent benefit in some cases, there were others in which no effect whatever was noticed. It may be that larger dosage is necessary; but, if so, the serum must be more concentrated than at present.

3. **Gonorrhœa.**—Bierhoff believes that gonorrhœa can be aborted. He reviews the literature of the subject at considerable length and then details his own plan of treatment. He has so far only thirty cases to report and feels that his conclusions must be tentative.

6. **Syphilis of the Central Nervous System.**—Peter gives the usual symptoms of cerebral and spinal syphilis. Nothing new can be said as to treatment. Mercury and potassium iodide are still the only specific drugs. The best way to give mercury is by inunctions. The hypodermic use of mercury has little to commend it and may be dangerous.

8. **New Stain for Diphtheria Bacilli.**—Andrade has devised a stain for the diphtheria bacillus which he believes to be better than the Löffler stain. It is as follows:

℞ Borrel's blue.................................1 c. c.;
Vesuvin, watery solution, $^1/_{100,000}$............50 c. c.

The method of staining is: Prepare films in the usual way: (1) Borrel's blue, 5 minutes; (2) wash in distilled water; (3) Lugol's iodine solution, 1 minute; (4) wash in distilled water; (5) decolorize in absolute alcohol until no more blue is given off; (6) wash in distilled water; (7) dry and mount.

AMERICAN MEDICINE.

March 12, 1904.

1. The Modern Pharmacology of Iron, By REYNOLD WEBB WILCOX.
2. Alopœcia Areata, By FREDERICK H. DILLINGHAM.
3. The Ætiology and Pathology of Arteriosclerosis, By H. B. ANDERSON.
4. The Diagnosis of Metapneumonic Empyema in Infancy and Early Childhood, By JOHN LOVETT MORSE.
5. Pure Olive Oil and Its Use in the Treatment of Chronic Dysentery and Allied Conditions, By HENRY H. RUTHERFORD.
6. The Mind as a Causative and Therapeutic Factor in Medicine, By BITTLE C. KEISTER.
7. A Comparative Study of Animal Blood, By EDWARD T. WILLIAMS.
8. The Scientific Basis of Mind Cure, By SELWYN A. RUSSELL.

1. **Iron.**—Wilcox gives his reasons for believing that the organic preparations of iron are to be preferred to the inorganic for therapeutic uses. In choosing a form of organic iron for internal administration one should be selected which (1) is of definite chemical composition; (2) does not precipitate with a silver nitrate solution; (3) does not give the blue-black color with MacCallum's test; (4) is not decomposed by the hydrochloric acid of the gastric juice; and (5) shows definite results in *(a)* an increase in the number of red blood corpuscles and *(b)* in the amount of contained hæmoglobin.

2. **Alopœcia Areata.**—Dillingham reviews the symptomatology and diagnosis of alopœcia areata. The treatment he has had the most success with follows: Every night for one week the affected spots should have well rubbed into them an ointment of chrysarobin, of a strength of from twenty grains to two drachms of the drug to one ounce of petrolatum. If the disease is not checked this treatment should be repeated. After the disease has stopped spreading, precipitated sulphur ointment (one to two drachms to the ounce) should be used. Severe or chronic cases may call for other measures.

5. **Olive Oil in Chronic Dysentery.**—Rutherford records the results that have been obtained, at the Presidio of San Francisco, in the treatment of dysentery with pure olive oil. Upwards of 75 patients have been treated, and the results have been so encouraging that at the present time all other forms of treatment have been practically abandoned. The author discusses the probable physiological effect of the olive oil, and gives, in detail, the routine method of treatment which his experience has proved to give the best results.

BRITISH MEDICAL JOURNAL.

February 27, 1904.

1. A Criticism of the Value of Hammerschlag's Method in Clinical Estimations of the Specific Gravity of the Blood. (Report No. LXXX to the Scientific Grants Committee of the B. M. A.), By E. P. BAUMANN.
2. Remarks on Temperature, By M. S. PEMBREY.
3. The Causes and Treatment of Chronic Rheumatism, By R. STOCKMAN.
4. A Case of Scurvy in an Infant Fed on Municipal "Humanized" Sterilized Milk, By H. ASHBY.

5. Some Notes on the Urine in Beri Beri, By H. E. DURHAM.
6. *Mycosis Fungoides* or Alibert's Disease, By J. REID.
7. Injuries to the Eyes in Relation to the Workman's Compensation Act, By J. J. EVANS.
8. On Removal of the Crystalline Lens in High Degrees of Myopia, as Illustrated in Sixty Cases, By S. SNELL.

1. **Specific Gravity of Blood.**—Baumann has investigated the value of Hammerschlag's method of determining the specific gravity of the blood, viz., suspension of a drop of the blood in a mixture of chloroform and benzol, the density of the fluid being varied until it corresponds with that of the drop of blood; the specific gravity of the fluid being then taken by means of a hydrometer. His conclusions are: (1) Provided the same hydrometer is used, Hammerschlag's method of estimating the specific gravity of the blood is clinically easily applied, and yields both in health and disease, results which are uniform and reliable. (2) An error is associated with the use of this method, which is always in the direction of an excess. The excess is, however, uniform and constant. (3) As was shown by A. G. Levy, the error may readily be obviated by the use of a specially standardized hydrometer, or by the application of the rough method of correction suggested by Baumann.

2. **Temperature.**—Pembrey reviews the subject of the temperature of man and other warm blooded animals. The power of regulating temperature is incompletely developed in the newly born, the regulation of the loss of heat and of its production being imperfect. Cold to such infants is not a stimulant, but a depressant. The internal temperature of a healthy man ranges from 96.8° F. to 100.0° F. Rectal temperatures are most accurate; next those of urine taken as leaving the body. Domesticated animals have a wider range of temperature than man. Muscular exercise causes a marked rise in temperature, but it is beneficial rather than injurious. Heat stroke and heat exhaustion are due to a disturbance of the nervous control of temperature. Climate has little or no effect on human temperature, but if the natural response to a change of temperature is defective, cold will be injurious. Alcohol in large doses paralyzes the nervous control of temperature; exposure to cold then produces a decrease in combustion and the bodily temperature steadily falls. The lowest recorded temperatures appear in drunkards. Anæsthetics also rapidly paralyze the nervous regulation of temperature; this paralysis plays an important part in the production of shock. From a physiological point of view anæsthesia is often too deep and prolonged. Under pathological conditions the temperature of man shows a range of about 39° F.—from 75.2° F. to 114.8° F. Higher and lower temperatures have, however, occurred in moribund cases. A very high temperature is usually rapidly followed by death, whereas a very low temperature may be compatible with life for a long time.

3. **Chronic Rheumatism.**—Stockman states that the essential pathological lesion of chronic rheumatism consists in inflammation and hyperplasia of the white fibrous connective tissue. Once these fibrous swellings form they are liable to become painful under the influence of various conditions—cold, damp, etc. They may be small and nodular, or so extensive as to involve a whole aponeurosis. If superficial they can be very distinctly felt, and are usually tender. Among the causes are acute rheumatism, influenza, and sore throat; once established, many conditions influence them markedly. The symptoms are pain and tenderness, with fatigue and often sleepiness. While medicines give relief, it is only temporary, and attacks recur again and again. The only special and definite means of treatment are three. (1) Massage, specially directed to any palpable nodules or thickenings. General massage is no use. The dispersion of all the indurations must be complete, and six or twelve months may be required. Stretching exercises are also of value. (2) Faradaism, applied over each region five minutes daily. (3) Injection of ten minims or less of a one per cent. solution of chromic acid into the indurations. Mild purging is useful when intestinal indigestion is present. Recent cases may be cured by a course of hydrotherapy. In diet the broad rule is to avoid gastrointestinal fermentation. When nodules remain hard and cannot be dispersed by massage, they may be removed surgically. In severe cases recovery is hopeless.

5. **Urine in Beri Beri.**—Durham's observations of the urine in beri beri show that the metabolism is seriously diminished. The amounts of urea, phosphoric, and sulphuric acids may be very greatly reduced. The conjugated sulphuric acids and the neutral sulphur are but little changed. The purin bodies were abundant in the critical urination of a highly œdematous case.

6. **Mycosis Fungoides.**—Reid reports a case of *Mycosis fungoides*, or Alibert's disease, occurring in a woman aged thirty-eight years. When first seen there were present round, sharply defined erythematous patches on the cheeks—these were regarded as eczema. They left no marks, but shortly recurred—also on the chest—and assumed the irregular shapes so characteristic of the disease. After three months the patches became infiltrated plaques, with nodules over the face, head, back, and chest, of a reddish brown color. Later the fungoid stage very quickly came on, with the characteristic tomato like tumors on the face and scalp only. Attention is specially called to the following four features of the case: (1) Intense perspirations and exudations of a serous nature from the body. (2) The appearance of the patient was repulsive, and the exhalations in the highest degree fœtid. (3) An entire absence of itching, yet with no loss of sensation. (4) The tumors were permanent, and contained no fibrous tissue.

The patient's life was a short one, the fœtid growth producing cachexia, from which she died. Treatment was very unsatisfactory. Use of the x rays or high frequency currents was not available.

St. Timothy's Hospital, Roxborough, Pa., is making preparations for the care of cases of contagious disease by having plans prepared for an isolation ward to be built upon its grounds.

The Hospital of the Good Shepherd, Syracuse, N. Y., has received $25,000 by the will of the late Mr. John Lyman. Among other institutions that benefit by the same will are the Women's and Children's Hospital, the St. Joseph's Hospital, and the Visiting Nurses' Association, which receive $5,000 each.

The Visiting Hospital Physicians of San Francisco, Cal., have been reassigned as follows: Dr. Boskewitz, Dr. Stephens, and Dr. Pinkham will visit the Harbor Hospital; Dr. Wilson, Dr. Herzog, and Dr. Kucich will attend at the Park Hospital; and Dr. Hill, Dr. Pawlicke, and Dr. Millar will visit the Central Emergency Hospital.

The State Hospital of Colorado, at Boulder, has grown to such proportions that the authorities have decided to start a complete training school for nurses. A three years' course will be given, and after two months' instruction an allowance of $8.00 a month will be made to each student for laundry, etc.

The Medical and Chirurgical Faculty of Maryland has petitioned the State legislature for fifty thousand dollars to erect a fireproof building for the custody of their library. Originally the petition was for $100,000, but on learning the conditions of the State treasury, the committee voluntarily reduced the amount.

Tennessee Medical Society.—This body will meet at Chattanooga, April 12, 13, and 14, 1904. The present officers are. President, Dr. I. A. McSwain, of Paris; vice-president for West Tennessee, Dr. W. H. W. Sale, of Covington; vice-president for Middle Tennessee, Dr. Louis Leroy, of Nashville; vice-president for East Tennessee, Dr. C. P. Fox, of Greeneville. The local committee of arrangements is composed of: Dr. D. E. Nelson, chairman; Dr. B. S. Wert, Dr. J. W. Johnson, Dr. G. W. West, and Dr. Y. L. Abernethy.

San Francisco Charity Hospital.—Work has been begun on the charity hospital for the benefit of women and children to be erected on Guerrero and Market Streets out of funds left for the purpose by Mrs. Katie Johnson. Plans for the building are already drawn, and it is expected that it will be completed within a year. It is to be equipped with every modern convenience and appointment for the scientific treatment of disease, and the patients will be permitted to enjoy all its privileges free of charge.

The Lane Lectures in San Francisco.—The fifth of the series of the Lane Lectures for 1904, which, in conformity with the desire of their founder, Dr. Levi Cooper Lane, are given under the auspices of Cooper Medical College, was delivered on the evening of March 4th. The title of the lecture was Fermentation, which was given by Dr. Walter Garrey, professor of physiology in Cooper Medical College. The next lecture of the series will be delivered by Dr. George B. Somers on The Trained Nurse, April 1st.

First French Congress of Climatotherapy and Urban Hygiene.—President, Professor Chantemesse, Membre de l'Académie de Médecine.—We have stated in preceding numbers the questions that will form the objects of reports at this congress; the special reductions allowed from April 1st to 20th by railways, hotels, etc.; the fêtes, receptions, gala representations, and excursions that will be organized on the occasion of the congress. Subscription (20 francs, or $5.00) should be sent with a visiting card to Dr. Bonnal, general treasurer, 19, boulevard Victor-Hugo, Nice (Alpes-Maritimes). All other correspondence should be addressed to Dr. Hérard de Bessé, general secretary, 5, boulevard Central, Beaulieu-sur-Mer (Alpes-Maritimes). The members of the executive committee for England and the United States of America are as follows: Dr. G. H. Brandt, of Nice; Dr. Johnston Lavis, of Beaulieu; Dr. Linn. of Nice; Dr. Mac Dougall, of Cannes; Dr. Pryce Mitchell, of Monte Carlo; Dr. Stanley Rendall, of Mentone.

Utica, N. Y., General Hospital.—At the monthly meeting of the Board of Charities, the bill sent to the legislature to increase the special town fund from $13,000 to $16,000 was approved, and the committee on buildings and grounds was authorized to advertise for proposals for raising the wings of the general hospital, building a double pavilion for contagious diseases and constructing a laundry and boiler building on the grounds of the hospital.

The sketch of the double pavilion submitted by the architect shows two separate hospitals in one building, separated by a brick wall in the centre. The central portion, 30 by 50 feet, contains the nurses' dormitory and one day room, kitchen, laundry, patients' and nurses' bath rooms and clothes closet, is two stories in height, and is cut off from the patients 'dormitories on either side with brick partitions. The patients' dormitories are one story in height. The first story is 12 feet high and the second story 10 feet high. The patients' dormitories will accommodate six beds each, and have a large open fireplace, and a skylight to let in the sun. A private room with large open fireplace is also provided. At the end of each dormitory is a sun room, 12 by 30 feet, with glazed sides and doors to outside. The first floor window sill level is to be about six feet above the grade, so as to secure privacy and give thorough ventilation and light to the basement. The nurses' room has a small window to command view of ward, and is provided with a fireplace. All bath rooms have two outside windows, furnishing plenty of sunlight. Each hospital is to be provided with separate verandahs. All outside walls are to be made hollow by laying an eight foot outside wall, a four foot inside wall, and are to be held together by iron anchors. There will be no furring, as the plaster will be applied directly upon the brick wall. The roof is to be flat and of mill construction, two and one half inch boards laid on girders, one layer of asbestos and two and one half inch plank on top of this, and all to be covered with asphalt. The ceiling is to be plastered with hard wall plaster on metal lath, which is to follow the girder and roof boards closely, so as to leave no hollow space. The floors are to be of two and one half inch boards, one layer of asbestos and seven eighths inch hardwood floor on top. The windows are to extend to the ceiling. There is to be no wood used for casing, base or wainscoting in the building, and the exterior is to be of brick. The laundry and boiler building is to be one story in height, and is to include a laundry room 26 by 30 feet, an engine room 18 by 30 feet, a boiler room 26 by 30 feet and a coal room 14 by 22 feet. This structure is also to be of brick and 80 by 30 feet on the ground.

Pith of Current Literature.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT.

January 26, 1904.

1. Pathological Researches Into the Diseases of the Middle Ear, By K. Grunert.
2. Acute and Chronic Circumscribed Inflammation of the Large Intestine, Especially of the Sigmoid Flexure, By A. Bittorf.
3. Early Symptom of Severe Cases of Perityphlitis, By L. Moszkowicz.
4. Acute Polymyositis, By J. Bær.
5. Severe General Disturbance in Attention in Beginning Paralysis, By G. Fischer.
6. Motor and Sensory Hemiparesis Due to Gun Shot Wound of the Brain, By A. Knapp.
7. Changed Teeth in Congenital Syphilis, By Græffner.
8. Hæmorrhagic Renal Infarct, By R. T. Morris.
9. Tænia Cucumerina in an Infant, By O. Kœhl.
10. New Method of Quantitative Determination of Pepsin, By F. Volhard.

2. **Sigmoiditis.**—Bittorf is not certain that all acute inflammations of the sigmoid flexure are of catarrhal nature. as Ewald states, but thinks that the subacute and chronic phases of the disease may be. The symptomatology is fairly constant. There is always a more or less circumscribed area of sensitiveness with a resistance in the left iliac fossa. The temperature ranges between 101° and 103° F. There is constipation with irregular stools; sometimes general symptoms are prominent, including anorexia, nervousness, and sometimes spontaneous abdominal pain. The sensitiveness gradually disappears with laxatives, rest in bed and compresses of hot water, but the resistance disappears but slowly.

3. **Early Symptom of Severe Appendicitis.**—Moszkowicz draws attention to the fact that when the abdomen is opened in severe cases of appendicitis, a serous effusion is usually found. This statement does not include. of course, cases of purulent peritonitis. It occurred to him to see if this effusion could not be clinically demonstrated, and he has shown this to be the case by a change in the percutory resonance when the patient changes his position. He suggests for this fine procedure, percussing the index finger of the left hand with the middle finger of the right hand while the left thumb is kept upon the abdomen to receive the impulse of the fluid.

BERLINER KLINISCHE WOCHENSCHRIFT.

February 8, 1904.

1. Inoculation of Human Tuberculosis Upon Cattle. (*To be continued*), By J. Fibinger, and C. O. Jensen.
2. Medicinal Treatment of Neuralgias and Myalgias, By E. Meyer.
3. Paralysis of the Recurrent Laryngeal Nerve in Mitral Stenosis, By A. Alexander.
4. Case of Bronchiectasis in a Patient with Situs Inversus Viscerum, By A. K. Siewert.

2. **Treatment of Neuralgia.**—Meyer has used hydroquinone in cases of neuralgia and myalgia, in doses of from fifteen to sixty grains in a day. In only one instance were there any disagreeable after effects. Its action seemed to be useless in articular rheumatism but in the other cases it was efficient in relieving pain when other drugs had failed to act.

3. **Paralysis of Recurrent Laryngeal Nerve.**—Alexander records a case in which from the symptoms of the disease it was evident that no aneurysm was present as the causative factor of the paralysis. The patient suffered from mitral stenosis and the author reaches the conclusion that the dilated left ventricle and the dilated pulmonary artery by rhythmic pressure upon the recurrent nerve, caused its paralysis.

4. **Situs Inversus Viscerum.**—Siewert records the case of a poorly nourished and puny individual with a bronchiectatic cavity in the upper lobe of the left lung, which, it could be demonstrated, was not of tuberculous character. It was probably congenital, a very rare occurrence. There was also a transposition of the viscera, and the author thinks that the broniectasis may have some relation to this abnormality.

February 15, 1904.

1. Tuberculous Infection of Children (*To be continued*), By Westenhœffer.
2. Epithelioma Chorioectodermale (*To be concluded*), A Contribution to the Study of Congenital Tumors, By L. Pick.
3. Clinical Course of Epithelioma Chorioectodermale, By L. Landau.
4. Ficker's Sign of Typhoid Fever, By J. Meyer.
5. Antitoxines and Agglutinins in the Blood of Immunized Animals, By F. Figari.
6. Transmission of Human Tuberculosis to Cattle, By J. Fibiger, and C. O. Jensen.
7. Is Syphilis or Social Status of Greater Ætiological Importance in Tabes? By C. Rosenbach.

2. **Epithelioma Chorioectodermale.**—Pick describes those congenital malignant tumors which originate in the ovary or testicle. They are derived from the three embryonic layers, but sometimes one of the layers develops so strongly as completely to destroy the identity of the others. It is for this reason that the genesis of these teratomata was formerly not understood. Pick reports a case, the tumor originating in the ovary of a girl of nine years of age, in which nerve cells were found with chorion cells. The author suggests the name above given for these very malignant growths which run their course like carcinomata, alveolar sarcomata. cystodenomata, etc., and form metastases through the blood current. The pressure of the three embryonic layers demonstrates the congenital origin of these teratomata.

3. **Chorioectodermal Epithelioma.**—Landau has observed five cases of this kind, and gives the clinical histories of three of them, all of them occurring among young subjects. All were subjected to operation, and all but one died following recurrence or metastases. The growths are decidedly malignant in character. The author believes that teratomata of the ovary of this nature are not so rare as has been hitherto believed. Landau scouts the notion of a parasitic origin or development of these neoplasms.

4. **Ficker's Diagnostic Sign of Typhoid.**—Meyer describes this as a fluid containing dead typhoid bacilli. Comparing the Widal reaction and Ficker's modification of it, Meyer concludes that the latter is reliable and useful. The two methods are equally trustworthy and the author recommends Ficker's as the easier for the clinician. In his experimental work, Meyer found that Ficker's preparation containing dead typhoid bacilli agglutinated only the serum of persons suffering from the disease and that it gave no reaction on the blood of those ill with some other disease or upon the blood of healthy animals.

5. **Antitoxines and Agglutinins.**—Figari concludes from his experimental studies that the antitoxines and agglutinins do not circulate uncombined in the blood. Sometimes in tuberculosis they are found free, but even then only in minimal quantity, and they are undoubtedly present in much larger quantity in the cellular elements of the blood. Figari believes that the production of the antitoxines and agglutinins rests largely with the leucocytes.

6. **Human and Bovine Tuberculosis.**—Fibiger and Jensen found that in about fifty per cent. of cases of human tuberculosis, the tubercle bacilli were capable, on inoculation, of evoking a progressive tuberculosis in calves. In five cases of primary gastrointestinal tuberculosis in children, the bacilli showed a particular virulence when inoculated into calves. Their experiments prove the necessity of continued watchfulness over dairies and their output. The authors point out, in conclusion, the great frequency of primary tuberculosis of the alimentary tract, especially in children. In their autopsies eleven per cent. of the cases showed this form of the disease.

PRESSE MEDICALE.

February 6, 1904.

Pneumotyphoid and *Bacillus Coli*,
By Ardel-Delteil and Rimbaud.

Pneumotyphoid.—Ardel-Delteil and Rimbaud detail a case with a pulmonary début, where bacteriological examination from the first disclosed eberth, bacillus, but no pneumococci. Abdominal symptoms did not appear for a week, when the Widal reaction was found. The preliminary pneumonia must have been due to the eberth bacillus, although this was not present in the sputum, while the colon bacilli were found in large numbers. The young authors suggest diffidently that one bacillus may be transformed into the other according to its habitat, and find this theory easier of belief than that of a simultaneous double infection of lung and intestine.

February 10, 1904.

The Speculum, By F. Jayle

The Speculum.—Jayle's article is an interesting and amusing history of the speculum from its use in India one thousand years before our era, in Pompeii at the time of the eruption of Vesuvius, in the Middle Ages when it received its present name from its use as a mirror, direct examination of the "pudendum" being probably forbidden, down to its rediscovery in the last century. The article has thirty-one interesting illustrations.

LYON MEDICAL.

February 14, 1904.

1. Bilateral Dermoid Cysts of the Ovary Complicating Pregnancy, By Condamin.
2. Acute Leucæmia, By Leclerc.

1. **Ovarian Cysts in Pregnancy.**—Condamin concludes that in women under forty years of age, an effort should always be made to save some of the genital apparatus when operating, not only to maintain menstruation, which is a useful function at this age, but to allow possible future pregnancies.

2. **Acute Leucæmia.**—Leclerc, from careful study, has deduced the existence of this affection with the following characteristics: A hæmoleucocytic formula which is generally a lymphocytosis; profound alterations in the red cells; great anæmia from the beginning; hæmorrhages; fever; hypertrophy of ganglia and spleen; sudden onset and rapid course.

SEMAINE MEDICALE.

February 3, 1904.

Diagnostic and Prognostic Value of Fever in Appendicitis,
By L. Cheinisse.

Fever in Appendicitis.—Cheinisse states that only in America now is immediate operation advised. In Europe the cases are individualized. Hyperleucocytosis is not absolutely diagnostic of pus. About 11 per cent. of cases show no fever and in any case fever seldom lasts over three days, and is usually moderate. The gravity of a case is generally in proportion to the intensity of the fever. A sudden rise with vomiting and a rapid pulse demand immediate intervention. An interesting phenomenon in pure suppuration is a considerable variation between the rectal and axillary temperatures. Rostootzer says that the purer the case, the later in the evening will be the extreme high temperature.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

January 17, 1904.

1. The Presence of the Tubercle Bacillus in the Urine, By V. Maragliano.
2. The Phenomenon of Hæmolysis in Nephritis, By F. Micheli.
3. Cephalopine and Cerebral Organotherapy, By M. Sciallero.

1. **The Tubercle Bacillus in the Urine.**—Maragliano concludes an experimental study of 12 cases of tuberculosis with a statement that even with the best methods of examination, tubercle bacilli are not found in the urine of persons in whom the infection is localized exclusively in the respiratory organs. This is especially interesting, in view of the fact that the presence of tubercle bacilli has been reported in cases in which the kidneys and other urinary organs were not attacked. In the cases studied by Maragliano all lesions of the kidney could be excluded, and in order to make the tests more certain he employed very large amounts of urine which was centrifugated repeatedly, decanted and again centrifugated after the addition of more urine. Slides were next smeared with the sediment, mixed with a solution of albumin and glycerin, fixed with heat and with alcohol, and ether in order to remove all fat and to prevent the staining of

smegma bacilli. The specimens were then stained with Ehrlich's solution and decolorized with hydrochloric acid. In none of the 12 cases did Maragliano find any tubercle bacilli.

He then had recourse to the method recommended by Jousset, which consisted in adding to the diluted urine some blood plasma and heating to 100° C., so as to promote coagulation. The coagulum was then separated and redissolved in artificial gastric juice. The last solution was centrifuged, and the sediment examined for tubercle bacilli. Even with this method he was unable to show any tubercle bacilli in the urine of these cases. The injection of the centrifuged sediment into guinea pigs gave negative results.

3. **Cephalopine, a New Organic Extract of the Brain Substance.**—Abstracted in this column March 5, 1904, page 466.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

January 24, 1904.

1. Spasm of the Arteries, By G. Reale.
2. A Case of Cerebral Tumor, By Niccolo Marini.
3. On the Epileptic Equivalents, By Cesare Ortali.
4. Hæmoantitoxine for the Prevention and Treatment of Tuberculosis, By Dr. Figari.
5. Contribution to the Surgery of the Stomach, By Francesco Fabris.
6. A Case of Hepatic Cirrhosis with Umbilical Hermia, Treated Surgically, By Antonio Mori.
7. A Case of Intestinal Obstruction Due to Meckel's Diverticulum, By Dr. Ferren.

3. **Epileptic Equivalents.**—Ortali reports the case of a farm laborer, aged forty-five years, in whom epileptic seizures took an unusual form. At first the attacks were characterized by the regular signs of *grand mal,* with complete loss of consciousness and even with involuntary defæcation and urination. For the last ten years, however, the attacks came on suddenly with violent excitement, sometimes with chills and formication, and consisted in an uncontrollable tendency to run about in a circle, either in the room or about the country, covering at times a number of miles. The attacks were sometimes excited by some sudden emotion, as in one instance, fright at a number of worms. During his runs through the country he did not recognize any one, and did not answer when spoken to, and he could never remember anything that happened during the run. At times he also had a slight attack of convulsions at night, once or twice a month, during which he did not wake up. Hysteria was excluded in this case and the diagnosis was, epilepsy taking the form of an "equivalent." According to Boari "such cases represent the psychical equivalent of the convulsive attack, due to a lacuna in the continuity of consciousness, with a development of action directed by a hallucination." The cause of this particular form of neurosis is not known, and the lesions which produce this so-called "precursory" epilepsy cannot be demonstrated.

ROUSSKY VRATCH.

December 27, 1903.

1. The Ætiology of Cancer, By S. I. Serkovski.
2. The Treatment of Centrally Located Placenta Prævia, By B. A. Liboff.

2. **Treatment of Central Placenta Prævia.**—Liboff says that it is difficult to formulate any prophylactic measures against the occurrence of placenta prævia, for the reason that the cause of this condition is so imperfectly known. The presence of an inflammation of the endometrium, causing a detachment of the placenta from its proper place, is usually acknowledged to be the cause in many cases, but as yet very little definite knowledge has been obtained as to the real cause of placenta prævia. According to Schoenwald, a placenta prævia may be expected if there were twins in the preceding gestation, or if placenta prævia has occurred before. In such cases one may speak of the necessity of terminating the pregnancy prematurely. In the treatment of placenta prævia with central implantation, two methods have been chiefly employed. First, the rupture of the placenta with the fingers through a partly dilated os, the introduction of the hand through the opening, and the bringing down of one foot, the rest being left to Nature. Second, the use of dilators to accomplish forced rapid delivery. All observers agree in condemning tamponing of the vagina and detachment of the placenta by means of the effused blood in cases of central placenta prævia. In a number of cases reported of late, Cæsarean section has been employed with good results in the treatment of a central placenta prævia, in view of the fact that the other two methods ordinarily used do not terminate favorably in a great percentage of cases. A number of Russian obstetricians have of late advocated Cæsarean section in these cases, and the present author endorses this view. He says that there is no reason why we should not perform a laparotomy in these extremely dangerous cases of central placenta prævia when we now do this in cases of extrauterine pregnancy, the difference being that in placenta prævia the hæmorrhage is external, while in extrauterine pregnancy, it is internal.

January 3, 1904.

1. The Surgery of the Bile Ducts and Gallbladder, By S. N. Fiodoroff.
2. On the Pathogenesis of the Socalled Hypertrophic Biliary Cirrhoses of the Liver, By N. N. Kirikoff.
3. The Bacteriological Diagnosis of Diphtheria, By B. N. Tscherno-Schwarz.
4. Complete Inversion of the Uterus Caused by a Large Fibroid Tumor. Operation, By V. D. Kolotinski.
5. A Case of Perforating Ulceration of the Appendix with Abundant Bleeding Into the Peritoneal Cavity, By S. A. Nikonoff.
6. On the Treatment of Some Eye Diseases by Means of Sea Baths, By S. P. Roshtchevski.

3. **Bacteriological Diagnosis in Diphtheria.**—Tscherno-Schwarz says that a negative result of a bacteriological examination for Loeffler bacilli has a definite diagnostic value, provided the negative findings are reported repeatedly in the same case. There is no longer any doubt that pseudomembranous amygdalitis, laryngitis, and croup may occur without the presence of Loeffler's

germ. The positive result of the bacteriological examination is also of great value when the clinical diagnosis is diphtheria. On the other hand, when the clinical appearances do not show diphtheria, the positive finding of the germ is not of any definite value. In such cases bacteriology cannot do anything for the clinician until a method shall have been devised whereby we may not only know that the Loeffler germ is present, but also determine whether it is virulent or not; i. e., whether the organism is also poisoned by the diphtheritic toxines.

4. **Bleeding Into the Peritonæum in Perforative Appendicitis.**—Nikonoff reports a case of perforative appendicitis with acute symptoms, in which laparotomy revealed a peritoneal cavity filled with blood, without apparently any admixture of pus. A small stone was found in the peritoneal cavity and the blood had a distinct fæcal odor. The patient died of exhaustion from loss of blood a few days after the operation. The author calls attention to the rarity of finding blood in the peritonæum instead of pus in appendicitis. He thinks that the blood had come from a blood vessel in the appendix as the result of ulceration, but as there was no autopsy, he does not definitely know the origin of the hæmorrhage.

6. **Sea Bathing in Eye Diseases.**—Roshtchevski advocates sea bathing and climatic treatment in some affections of the eye, especially in the scrofulous diseases of the conjunctiva and in trachoma, in which the sea water is not only subjectively beneficial, but also acts as a mild antiseptic and removes secretions. He advocates the establishment of a system of climatic treatment for eye diseases of this sort. The irritation which is at first felt in the eyes after bathing in salt water is transient and insignificant.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 12, 1904.

1. Perforating Gastric Ulcer; Posterior Gastroenterostomy; Fowler's Position, By J. H. Musser, and W. W. Keen.
2. Bovine and Human Tuberculosis, By D. E. Salmon.
3. The Condition of the Blood in Patients Suffering from Pulmonary Tuberculosis, By John M. Swan.
4. The Present Conception of the Perirenal Fascia and Its Rôle in Fixation of the Kidney, By D. D. Lewis.
5. The Value of an Injury, By L. Sexton.

1. **Gastric Ulcer.**—Musser reports the medical history of the case and Keen the surgical history. (1) Medical history.—A woman, seventy years old, had been under treatment for one year for gastric ulcer when she came under the author's observation. He diagnosticated either pyloric obstruction due to a healed gastric ulcer or spasm of the pylorus due to an active gastric ulcer. Some days later hæmorrhage occurred and the patient was placed under rigid treatment. In a few more days perforation occurred. Operation was at once advised and accepted. (2) Surgical history.—Keen saw the patient two hours after the occurrence of perforation, concurred in the diagnosis, and operated three hours later. Fortunately the patient had not taken any food by the mouth for about fifty hours. Operation revealed a perforation in the middle of the pylorus anteriorly. This was closed and a posterior gastroenterostomy was done by means of a Murphy button. The patient made a good recovery. Up to the present time, over two months after the operation, the button has not passed, but it has not produced any trouble.

2. **Bovine and Human Tuberculosis.**—Salmon asserts that the uncertainty caused by Koch's various papers on the subject of bovine and human tuberculosis makes it advisable to continue the discussion of this important subject. A review of the experimental work and of the clinical observations that have been made in Germany and in this country shows that Koch's position is not well taken. It has now been abundantly proved that bovine tuberculosis may be transmitted to man.

3. **The Blood in Tuberculosis.**—Swan, in studying the blood counts he has made, has followed Grawitz's classification of tuberculosis. The disease is, for this purpose, divided into three stages. A first stage, in which there is a beginning affection of the apex, without cavity formation; a second stage, in which there are symptoms of cavity formation with slight fever or without fever; and a third stage, in which hectic fever is present. In all twenty-six cases were studied. The author formulates nine conclusions, of which we reproduce three, one abbreviated: (1) The blood picture in pulmonary tuberculosis is not constant, and the conditions described by Grawitz are by no means absolute. (2) Omitting the exceptional cases from consideration, however, the average case in the first stage of the disease presents a slightly reduced number of erythrocytes, a moderate reduction of the hæmoglobin and about a normal number of leucocytes. The average case in the second stage presents a varying degree of leucocytosis due to an increase in the number of multiforminuclear, neutrophile cells. The erythrocytes are present in about normal numbers, and the hæmoglobin is often normal in percentage. The average cases in the third stage will show a reduction in the number of erythrocytes, a moderate leucocytosis composed of the multiforminuclear, neutrophile cells and a high hæmoglobin percentage. (9) The absence of the eosinophile cells from the blood may be looked on as an unfavorable prognostic sign. The increase of these cells while the patient is under treatment may be taken as an indication that the progress of the disease has a tendency to become arrested.

BOSTON MEDICAL AND SURGICAL JOURNAL.

February 25, 1904.

1. The General Management of Diabetes, By Frederick C. Shattuck.
2. Medical Treatment of Diabetes, By W. H. Thomson.
3. A Comparison Between the Medical Uses of the X Rays and the Rays from the Salts of Radium, By Francis H. Williams.
4. The Prognosis of Idiopathic Pleurisy, By George G. Sears.

1. **Diabetes.**—Shattuck asserts that it is important to bear in mind, in the treatment of diabetes mellitus, that the presence of sugar in the urine must be regarded as a symptom and not as in itself

a disease. One must therefore treat the patient and not the symptom glycosuria. Diet is the most important means at our disposal by which to combat the condition. With the exception of cases that are very mild or severe in type it is best to enforce at once an absolute or nearly absolute diet. Very mild cases do not, probably, require very great restrictions. On the other hand, in severe cases, when acetone and diacetic acid are present a radical and rapid change in diet is dangerous. The quantity of food taken is only second in importance to the quality. Diabetic breads are not safe. Any diabetic bread which is palatable contains a large percentage of starch. The patient's general mode of life must be carefully atended to. Specific medication is of doubtful utility. With regard to prognosis the following may be said. In the young, treatment can at best only delay the fatal result. In those in the prime of life great service can generally be rendered, though actual cure occurs only in the minority of cases. In those past middle life the disease is usually well tolerated, and may be of comparatively little moment, provided that reasonable care be exercised; and yet, now and then we encounter cases the course of which proves other than first impressions would lead us to expect.

2. **Diabetes.**—Thomson's article was abstracted, February 27th, from *American Medicine,* February 20th.

3. **Radium.**—Williams bases his conclusions on the study of fifty cases, of various diseases, treated with radium bromide, in quantity about 50 milligrammes, and of a radioactivity of about 1,500,000. The author presents the following summary of his observations: (1) The rays from radium salts, unlike the x rays, are not serviceable in diagnosis either by means of radiographs or of fluoroscopic examinations. (2) The beta rays are useful as a therapeutic agent in certain skin diseases and new growths, if the diseased tissues are superficial or are not more than about 1.25 cm. (one-half an inch) below the surface of the skin or accessible mucous membranes. (3) The beta rays from radium salts will heal some cases of new growths that are not healed by the x rays, and they act more promptly, but not over so large a surface at one time as the x rays. (4) Radium salts of an activity of 8,000, or considerably more, are not sufficiently strong to be efficient. Pure radium salts, which have a radioactivity of about 1,500,000, are not too strong for the work to be done. (5) The radiation from radium salts, unlike that from the x ray tube, is uniform. (6) Great care should be exercised to avoid burns.

4. **Idiopathic Pleurisy.**—Sears's study is based on 439 cases of pleurisy which were treated in the Boston City Hospital between 1880 and 1895. These cases are all free from the suspicion that they were secondary manifestations of some process already existing. While it is difficult to draw unerring conclusions the following, of prognostic significance, seem justifiable: (1) About 10 per cent. of these cases are known to have developed tuberculosis. (2) Over 55 per cent. of all the cases which were followed to their death died from some form of tuberculosis. (3) Tuberculosis, when it occurred, developed within five years in over 50 per cent. and within ten years in over 70 per cent. (4) The danger, of evil consequences is much increased by a tuberculous family history or a personal history of some form of tuberculosis previous to the attack.

MEDICAL RECORD.

March 12, 1904.

1. Secondary Laparotomy, By H. C. COE.
2. Dry Superheated Air in Therapeutics, By CLARENCE EDWARD SKINNER.
3. Strangulated Hernia, By JOHN F. ERDMANN.
4. Some Points Regarding the Early Diagnosis and Some New Features in the Treatment of Pulmonary Tuberculosis, By W. FREUDENTHAL.
5. The Relation of Physical Defects to Mental Development, By GEORGE STOCKTON.
6. Mastoiditis, By E. H. POMEROY.
7. Remarks on the Preparation of Vaccine Virus, By JOHN F. ANDERSON.

1. **Secondary Laparotomy.**—Coe calls attention to the difference between "cure" as entered on the hospital chart after laparotomy and "cure" from the patient's point of view. Too frequently the patients' conditions are not materially bettered by their surgical experiences. The author discusses at length the various causes for the therapeutic failures and believes that not a few of them are due to conservative surgery. It is for the future to devise methods of operating which will reduce to a minimum, not only the immediate mortality of operative intervention, but also the necessity of secondary laparotomies.

2. **Dry Superheated Air.**—Skinner does not consider the technics of the dry superheated air method of treatment. His article is devoted to calling attention to the ultility of this method of therapeutic procedure, of which he is an enthusiastic advocate. Both "local" treatment and "general" or "body" treatment are considered and a number of cases are reported to illustrate the applicability and the efficiency of the method.

3. **Strangulated Hernia.**—Erdmann reports fifty-eight cases of strangulated hernia that have come under his observation during the past eight years. The cases are analyzed and, with the results thus obtained as a basis, the author gives his views on strangulated hernia.

4. **Tuberculosis.** — Freudenthal emphasizes the following points: (1) Diagnosis. *(a)* The condition of the upper air passages will frequently enable one to make a positive diagnosis of pulmonary tuberculosis when physical signs of trouble in the lungs are still lacking. *(b)* Injections of the old tuberculin of Koch will often clear up an obscure diagnosis. (2) Treatment. The blue light treatment, together with CO_2 administered by the rectum, has, in a number of cases treated during the past year, given encouraging results.

6. **Mastoiditis.** — Pomeroy emphasizes the fact that the proper treatment of mastoiditis is by surgical intervention. Yet when operation is refused good results often follow the administration of calcium sulphide in doses of from one-tenth to one-quarter grain three or four times a day.

MEDICAL NEWS.

March 12, 1904.

1. A Clinical Study of Sixty-two Cases of Intestinal Infection by the *Bacillus Dysenteriæ* (Shiga) in Infants, By Linnæus Edford La Fetra, and John Howland.
2. A Factor in the Ætiology of Distorted Nasal Sæpta, By Charles E. Quimby.
3. On the Abortive Treatment of Gonorrhœa in the Male, By Frederic Bierhoff.
4. Differential Diagnosis and Treatment of Chancroid and Chancre, By C. G. Clark.
5. The Ocular Signs of Syphilis, By Wendell Reber.
6. Diagnosis and Treatment of Syphilis of the Central Nervous System, By Luther C. Peter.
7. The Recognition and Treatment of Some of the Pharyngeal Lesions of Syphilis, By Lewis S. Somers.
8. New Stain for Diphtheria Bacilli, By Eduardo Andrade.

1. **Intestinal Infection.**—La Fétra and Howland report purely on the clinical aspects of the sixty-two cases they have studied. The material was drawn from an ordinary out patient service and the cases were not selected. The authors emphasize the following points: (1) The unexpectedly great prevalence of the dysentery organism in cases of diarrhœa in infants, at least during the summer months. (2) All types of diarrhœal disease, as characterized by their clinical symptoms, are to be found among these cases. (3) As compared with cases of "summer diarrhœa" of other years those in this series were in general much milder; and possibly this was due to two factors: *(a)* The cool summer. *(b)* The increasing knowledge among the tenement population of the care of infants and their food. (4) The striking number of breast-fed infants, 14 in 62 cases, more than 20 per cent. of all. (5) The serum treatment was not given in a sufficient number of cases to warrant any conclusions. While of apparent benefit in some cases, there were others in which no effect whatever was noticed. It may be that larger dosage is necessary; but, if so, the serum must be more concentrated than at present.

3. **Gonorrhœa.**—Bierhoff believes that gonorrhœa can be aborted. He reviews the literature of the subject at considerable length and then details his own plan of treatment. He has so far only thirty cases to report and feels that his conclusions must be tentative.

6. **Syphilis of the Central Nervous System.**—Peter gives the usual symptoms of cerebral and spinal syphilis. Nothing new can be said as to treatment. Mercury and potassium iodide are still the only specific drugs. The best way to give mercury is by inunctions. The hypodermic use of mercury has little to commend it and may be dangerous.

8. **New Stain for Diphtheria Bacilli.**—Andrade has devised a stain for the diphtheria bacillus which he believes to be better than the Löffler stain. It is as follows:

℞ Borrel's blue	1 c. c.;
Vesuvin, watery solution, $^{1}/_{100,000}$	50 c. c.

The method of staining is: Prepare films in the usual way: (1) Borrel's blue, 5 minutes; (2) wash in distilled water; (3) Lugol's iodine solution, 1 minute; (4) wash in distilled water; (5) decolorize in absolute alcohol until no more blue is given off; (6) wash in distilled water; (7) dry and mount.

AMERICAN MEDICINE.

March 12, 1904.

1. The Modern Pharmacology of Iron, By Reynold Webb Wilcox.
2. Alopœcia Areata, By Frederick H. Dillingham.
3. The Ætiology and Pathology of Arteriosclerosis, By H. B. Anderson.
4. The Diagnosis of Metapneumonic Empyema in Infancy and Early Childhood, By John Lovett Morse.
5. Pure Olive Oil and Its Use in the Treatment of Chronic Dysentery and Allied Conditions, By Henry H. Rutherford.
6. The Mind as a Causative and Therapeutic Factor in Medicine, By Bittle C. Keister.
7. A Comparative Study of Animal Blood, By Edward T. Williams.
8. The Scientific Basis of Mind Cure, By Selwyn A. Russell.

1. **Iron.**—Wilcox gives his reasons for believing that the organic preparations of iron are to be preferred to the inorganic for therapeutic uses. In choosing a form of organic iron for internal administration one should be selected which (1) is of definite chemical composition; (2) does not precipitate with a silver nitrate solution; (3) does not give the blue-black color with MacCallum's test; (4) is not decomposed by the hydrochloric acid of the gastric juice; and (5) shows definite results in *(a)* an increase in the number of red blood corpuscles and *(b)* in the amount of contained hæmoglobin.

2. **Alopœcia Areata.**—Dillingham reviews the symptomatology and diagnosis of alopœcia areata. The treatment he has had the most success with follows: Every night for one week the affected spots should have well rubbed into them an ointment of chrysarobin, of a strength of from twenty grains to two drachms of the drug to one ounce of petrolatum. If the disease is not checked this treatment should be repeated. After the disease has stopped spreading, precipitated sulphur ointment (one to two drachms to the ounce) should be used. Severe or chronic cases may call for other measures.

5. **Olive Oil in Chronic Dysentery.**—Rutherford records the results that have been obtained, at the Presidio of San Francisco, in the treatment of dysentery with pure olive oil. Upwards of 75 patients have been treated, and the results have been so encouraging that at the present time all other forms of treatment have been practically abandoned. The author discusses the probable physiological effect of the olive oil, and gives, in detail, the routine method of treatment which his experience has proved to give the best results.

BRITISH MEDICAL JOURNAL.

February 27, 1904.

1. A Criticism of the Value of Hammerschlag's Method in Clinical Estimations of the Specific Gravity of the Blood. (Report No. LXXX to the Scientific Grants Committee of the B. M. A.), By E. P. Baumann.
2. Remarks on Temperature, By M. S. Pembrey.
3. The Causes and Treatment of Chronic Rheumatism, By R. Stockman.
4. A Case of Scurvy in an Infant Fed on Municipal "Humanized" Sterilized Milk, By H. Ashby.

5. Some Notes on the Urine in Beri Beri,
By H. E. DURHAM.
6. *Mycosis Fungoides* or Alibert's Disease, By J. REID.
7. Injuries to the Eyes in Relation to the Workman's Compensation Act, By J. J. EVANS.
8. On Removal of the Crystalline Lens in High Degrees of Myopia, as Illustrated in Sixty Cases,
By S. SNELL.

1. **Specific Gravity of Blood.**—Baumann has investigated the value of Hammerschlag's method of determining the specific gravity of the blood, viz., suspension of a drop of the blood in a mixture of chloroform and benzol, the density of the fluid being varied until it corresponds with that of the drop of blood; the specific gravity of the fluid being then taken by means of a hydrometer. His conclusions are: (1) Provided the same hydrometer is used, Hammerschlag's method of estimating the specific gravity of the blood is clinically easily applied, and yields. both in health and disease, results which are uniform and reliable. (2) An error is associated with the use of this method, which is always in the direction of an excess. The excess is, however, uniform and constant. (3) As was shown by A. G. Levy, the error may readily be obviated by the use of a specially standardized hydrometer, or by the application of the rough method of correction suggested by Baumann.

2. **Temperature.**—Pembrey reviews the subject of the temperature of man and other warm blooded animals. The power of regulating temperature is incompletely developed in the newly born, the regulation of the loss of heat and of its production being imperfect. Cold to such infants is not a stimulant, but a depressant. The internal temperature of a healthy man ranges from 96.8° F. to 100.0° F. Rectal temperatures are most accurate; next those of urine taken as leaving the body. Domesticated animals have a wider range of temperature than man. Muscular exercise causes a marked rise in temperature, but it is beneficial rather than injurious. Heat stroke and heat exhaustion are due to a disturbance of the nervous control of temperature. Climate has little or no effect on human temperature, but if the natural response to a change of temperature is defective, cold will be injurious. Alcohol in large doses paralyzes the nervous control of temperature; exposure to cold then produces a decrease in combustion and the bodily temperature steadily falls. The lowest recorded temperatures appear in drunkards. Anæsthetics also rapidly paralyze the nervous regulation of temperature; this paralysis plays an important part in the production of shock. From a physiological point of view anæsthesia is often too deep and prolonged. Under pathological conditions the temperature of man shows a range of about 39° F.—from 75.2° F. to 114.8° F. Higher and lower temperatures have, however, occurred in moribund cases. A very high temperature is usually rapidly followed by death, whereas a very low temperature may be compatible with life for a long time.

3. **Chronic Rheumatism.**—Stockman states that the essential pathological lesion of chronic rheumatism consists in inflammation and hyperplasia of the white fibrous connective tissue. Once these fibrous swellings form they are liable to become painful under the influence of various conditions—cold, damp, etc. They may be small and nodular, or so extensive as to involve a whole aponeurosis. If superficial they can be very distinctly felt, and are usually tender. Among the causes are acute rheumatism, influenza, and sore throat; once established, many conditions influence them markedly. The symptoms are pain and tenderness, with fatigue and often sleepiness. While medicines give relief, it is only temporary, and attacks recur again and again. The only special and definite means of treatment are three. (1) Massage, specially directed to any palpable nodules or thickenings. General massage is no use. The dispersion of all the indurations must be complete, and six or twelve months may be required. Stretching exercises are also of value. (2) Faradaism, applied over each region five minutes daily. (3) Injection of ten minims or less of a one per cent. solution of chromic acid into the indurations. Mild purging is useful when intestinal indigestion is present. Recent cases may be cured by a course of hydrotherapy. In diet the broad rule is to avoid gastrointestinal fermentation. When nodules remain hard and cannot be dispersed by massage, they may be removed surgically. In severe cases recovery is hopeless.

5. **Urine in Beri Beri.**—Durham's observations of the urine in beri beri show that the metabolism is seriously diminished. The amounts of urea, phosphoric, and sulphuric acids may be very greatly reduced. The conjugated sulphuric acids and the neutral sulphur are but little changed. The purin bodies were abundant in the critical urination of a highly œdematous case.

6. **Mycosis Fungoides.**—Reid reports a case of *Mycosis fungoides*, or Alibert's disease, occurring in a woman aged thirty-eight years. When first seen there were present round, sharply defined erythematous patches on the cheeks—these were regarded as eczema. They left no marks, but shortly recurred—also on the chest—and assumed the irregular shapes so characteristic of the disease. After three months the patches became infiltrated plaques, with nodules over the face, head, back, and chest, of a reddish brown color. Later the fungoid stage very quickly came on, with the characteristic tomato like tumors on the face and scalp only. Attention is specially called to the following four features of the case: (1) Intense perspirations and exudations of a serous nature from the body. (2) The appearance of the patient was repulsive, and the exhalations in the highest degree fœtid. (3) An entire absence of itching, yet with no loss of sensation. (4) The tumors were permanent, and contained no fibrous tissue.

The patient's life was a short one, the fœtid growth producing cachexia, from which she died. Treatment was very unsatisfactory. Use of the x rays or high frequency currents was not available.

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CONSOLIDATED.

A Weekly Review of Medicine

VOL. LXXIX, NO. 13. SATURDAY, MARCH 26, 1904 WHOLE NO. 1321.

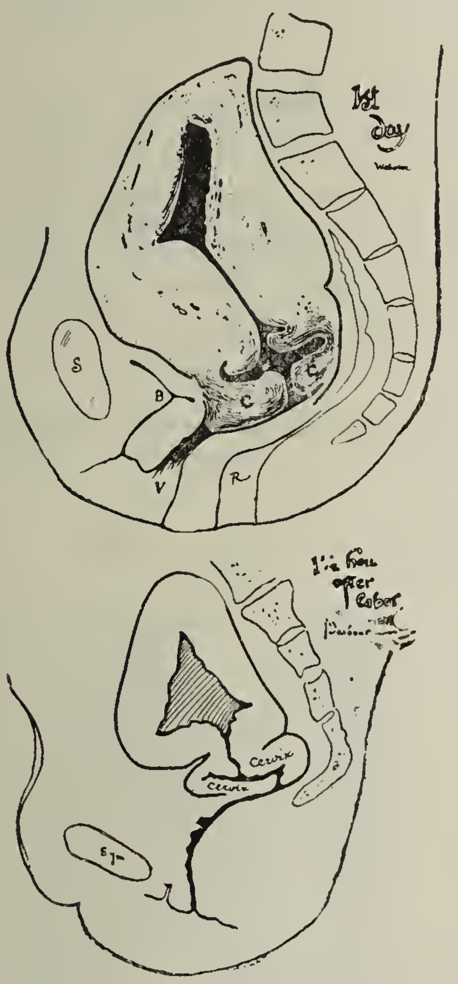
Original Communications.

THE BEST TIME FOR REPAIRS OF LACERATION OF THE CERVIX.*

By ROBERT L. DICKINSON, M. D.,
NEW YORK.

There are two periods when the conditions for repair of the torn cervix are as wrong as they can be. These are the times when repair is usually undertaken. The first is just after delivery; the second, months or years later.

Just after delivery the cervix is swollen, distorted, and stretched beyond recognition. Accuracy in coaptation is impossible, because exact identification of parts is out of the question (Figs. 1 and 2).



FIGS. 1 and 2.—The swollen, distorted, and infolded cervix of the first day. Identification and accurate coaptation are impossible.

Months or years after delivery the cervix that has been torn is deformed and altered by contraction, or by eversion and chronic inflammation. Again, accurate coaptation is impossible, because reproduction by denudation of raw surfaces representing with certainty the sides of the original tear is out of the question.

There is a time, however, when neither deformity from trauma nor distortion from defective healing is present. This is the desirable time to repair the cervix.

The conditions of the cervix immediately following delivery are most interesting and without parallel elsewhere. A canal guarded by non-striped muscle, measuring only half an inch in diameter, has opened to the extent of four inches in diameter, and, having yielded, has not regained its tone. Few men whose hands pass through this circle in search of the placenta have stopped to study its ungainly flabbiness and shapeless pocketings. Only by pulling it out through the vulva can one appreciate its condition. Flaps nearly an inch thick and three inches long[1] lie doubled and contorted, blackened, bruised, puffed, and livid. There is no portion of the body that receives such severe traumatism and

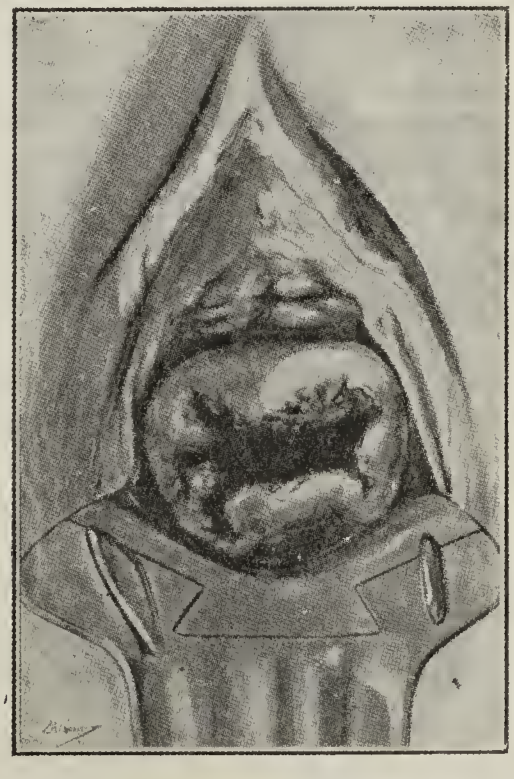


FIG. 3.—At the close of labor, when the cervix is drawn to the vulva, it is impossible to determine with certainty which is tear and which abraided infolding.

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* Read before the Associated Physicians of Long Island, June 21, 1902.

[1] Varnier. *Obstét. Journalière*, Paris, 1900, p. 312, footnote; Webster, *Researches in Female Pelvic Anatomy*. Edinburgh.

yet recovers its normal condition. One section of the circle always receives more injury than the remainder, and this part is more deformed and swollen. After it has been caught for hours between bone and bone the whole edge and inner face of the external os become flayed and shaggy, and it is almost out of the question to determine which is tear and which abrasion (Fig. 3). As to which was which, I have done my share of guessing in thirty-seven cases of which I have notes, and in more of which there is no record. Even Webster, the expert pathologist and obstetrician, could not make out "the position of the os externum" in his section of a woman who died five minutes after delivery. His section, with the others that have been found soon after labor (Barbour, Stratz, and Varnier), is presented to make clear the difficulties of even sufficient exactness for practical purposes (Fig. 4); and the rapid shrinkage is also demonstrated in further sections. Barbour's fifth-day case is excluded, as probably showing subinvolution from sepsis.

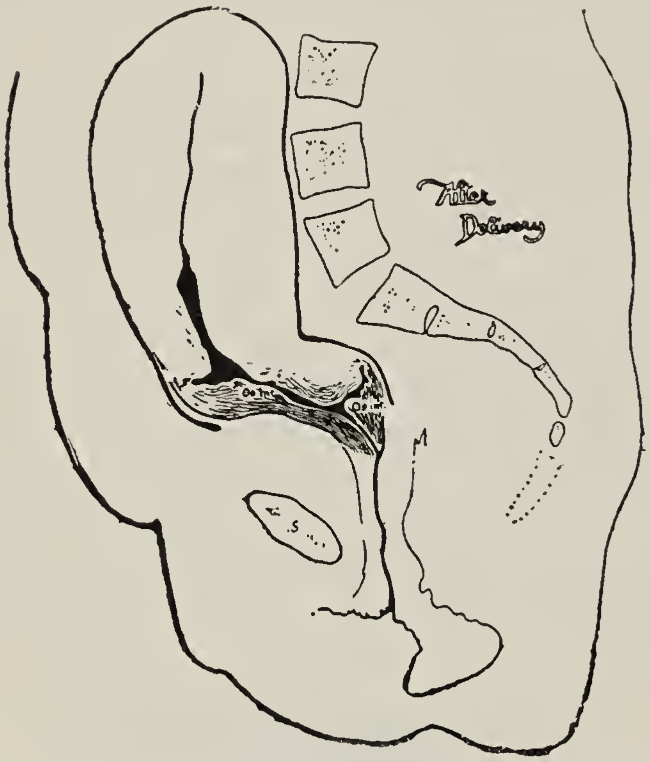

FIG. 4.—By comparison of the portions labeled "internal os" it will be seen that correct adjustment at this stage is impossible.

Source.	Period after delivery.	Thickness of anterior lip.		Thickness of posterior lip.	
		Inch's	cm.	in.	cm.
Webster Fem. Pelvic Anat. Plate I.....	5 minutes after delivery......	13/16	2	5/8	1.6
Barbour Atlas Anat. Lab	1 1/2 hours.....	1/2	1.2	3/4	2
Webster, Plate III..	Second day....	1 1/4	3.1	5/8	1.6
Varnier, p. 287......	68 hours........	3/8	1	3/8	1
Varnier, O. J., p. 286.	72 hours........	3/4	2	5.8	1.6
Webster, Plate IX..	4th day.......	3/4	1.8	5 16	.75
Webster, Plate XII.	6th day	3/8?	1	3/8?	1
Webster, Plate XVII	15th day.......	1/8	.4	1/2	1.3

A second valid objection to immediate repair is that bleeding obscures the work, notwithstanding the fact that it is measurably arrested by strong downward traction on the cervix.

A third objection lies in the fact that deliberation and due care are impossible, because one is giving pain to the patient. Anæsthesia should not be employed to relieve the distress of the dragging open of the vulva, because ether or chloroform relaxes the uterus and causes, or at any rate favors, post partum hæmorrhage. The light is poor; the patient is too tired to put on the table, where alone careful work can be done; a weighted speculum is not at hand, and good work is hardly to be looked for.

The last objection is as strong as the first. Sutures cannot be placed in badly contused and swollen tissues so as to hold satisfactorily after the swelling subsides, particularly if that subsidence is rapid. The great œdema of the cervix, affecting particularly the anterior lip, makes us very uncertain how much tension to put on a stitch, in order that it may hold well for a day or two (Figs. 5 and 6). I have seen these stitches lying as loose loops three days after their introduction. That they do good is owing to the first few hours' approximation—the all important hours in the sealing of the skin stitch or the glueing of peritoneal layers—but all too short a period on wet mucous membranes like the mouth or vagina.

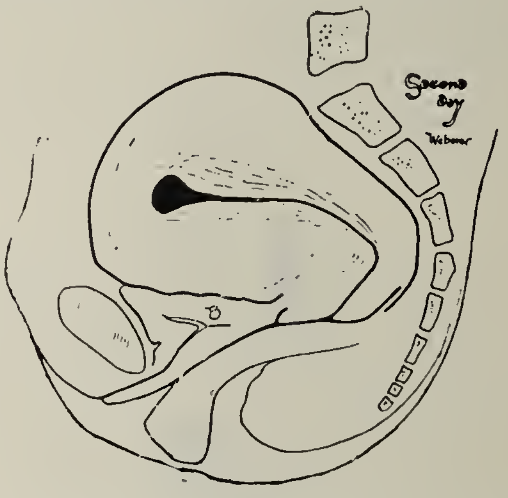

FIG. 5.—On second day the lips of the cervix are still of large size.

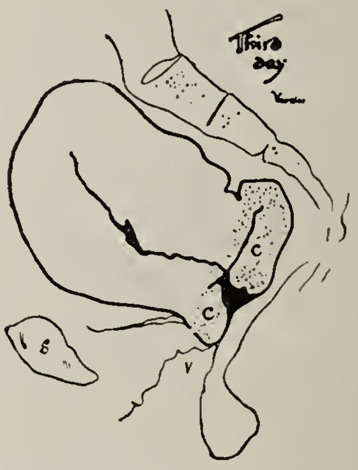

FIG. 6.—Lips still shapeless on third day and difficult to suture intelligently.

Incidentally, it may be mentioned that Nature repairs very many cervical injuries, at least so far as function is concerned. This is a fair argument against routine suture post partum. The exceptions will be stated later.

In the *Brooklyn Medical Journal*, September, 1890, I published a method for immediate primary repair of cervical injuries. A Skene double tenaculum is hooked into the circumference of the external os on each side of the tear, and the two instruments are caught in one hand, or else both near corners of the tear are grasped in the prongs of one instrument. Thus, the whole injury can be drawn to or through the vulva and seen as a straight line, and each stitch can be swung across the two sides of the tear in a single bite. The stitches may lie ½ to ¾ of an inch apart on this stretched surface.

It is my present judgment that this operation need only be done to check bleeding from cervical vessels, that is, post partum hæmorrhage not controlled by ergot, the hot douche, or the tampon. Whenever the uterus is contracted into a rigid globe and yet active bleeding goes on, the cervix should be sutured. This constitutes the limited field of immediate suture.

For restoration of the cervix the second undesirable period is months or years after the occurrence of the injury. Such distortion has occurred that it is within bounds to assert that it is never possible to determine the exact extent and location of the original injury. Partial healing, with or without overlapping, with or without the plug of scar tissue, has taken place. Eversion and long standing inflammation of the surfaces may have developed, chronic hyperplastic processes may have thickened one lip or both. Cysts form, scars contract and displacements distort. Although most of our restorations are symmetrical and happy, yet a lopsided result now and then teaches even a careful and skillful follower of Emmet that the identification of the original injury is uncertain.

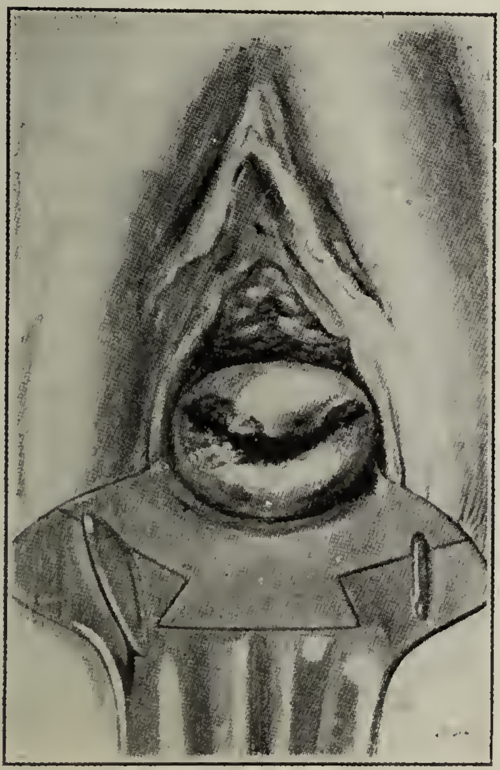

FIG. 7.—Four days after labor identification presents no difficulty. Compare with Fig. 3.

Let us, then, look for a period when swelling has subsided and the parts are fairly normal in contour and proportion if not in size; when ether can be given; when bleeding will be slight; when the surfaces are yet raw and ready to unite; when no contractions or inflammatory processes have altered the structures, and when patient and doctor are ready for unhurried work. Such favoring conditions are to be found from the third or fourth to the fourteenth day, more or less, after delivery (Figs. 7, 8, and 9).

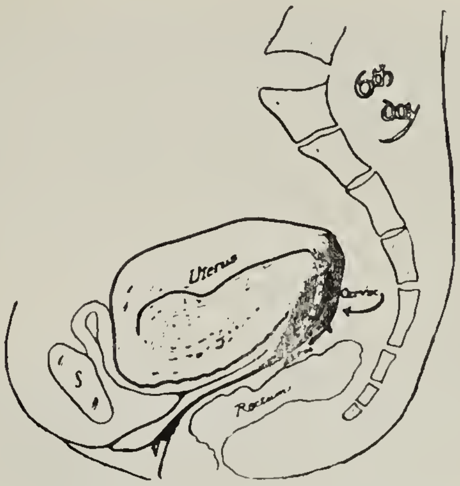

FIG. 8.—The cervix is thin, the lips in balanced apposition, correct adjustment easy, the relations of parts visible. This holds good *after* the third or fourth day.

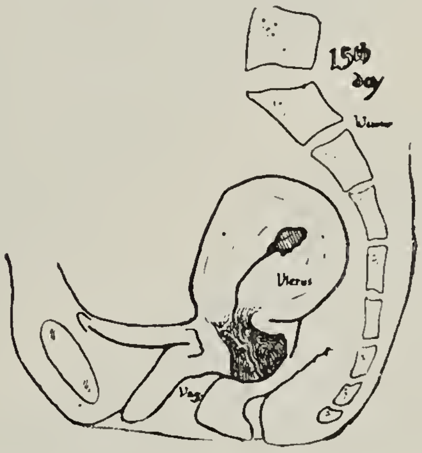

FIG. 9.—Involution is far advanced, and the relation of parts still more easily identified by the fifteenth day.

The number of cases in which such a time is to be chosen is, happily, small. When the cervix injury is causing post partum hæmorrhage it is sewed at once. Most cervical tears do not call for attention at the time when perineal lacerations are sewed at the close of labor. Therefore, the operation here advocated is needed for only two classes of cases:

1. Cases of extensive laceration of the cervix running up into the body of the uterus or out on to the vaginal wall, or complete bilateral tears.

2. Patients with these or lesser cervical injuries who have suffered perineal injury: (*a*) running

through the sphincter; (*b*) well up the vagina; (*c*) in any complicated or deep variety; (*d*) with very considerable œdema, and *(e)* in the presence of exhaustion or shock.

A perineal injury that falls in one of these five classes should be repaired, not at the close of labor, but in the first or second week thereafter, and the cervix should be done at the same time. For such perineal operations there are required, to do good work and to secure perfect coaptation, certain things which can rarely be had at the end of that variety of labor which causes bad tears, namely:

Measurable absence of swelling.
Measurable absence of bleeding.
Anæsthesia, and time.
Good light.
Adequate assistance to expose injuries.
Table, and other outfit.

That union occurs in late suturing is proved on over thirty tears going through the sphincter, repaired from two days to fourteen after delivery, with only four failures, of which one was due to general sepsis, one to violent straining. (*American Journal Obstetrics,* May, 1895.)

The only reason for setting the time early—that is, within three or five days—is that the dread of the operation may be off the mind of the family. Of course, one prefers, personally, to clean up all the mess and have done, when he has done, at the end of a labor. But the interests of the patient are the only consideration. Time was when the doctor slurred perineal injuries. Now he faces the matter frankly.

The operation: Any time between the third and the fifteenth day will do, but after the tenth day granulation tissue makes the original injury harder to outline accurately, and a curette is needed after the seventh day to clear the wound surfaces. Earlier, a bit of gauze in a forceps or covering the "stick sponge" will clear the raw surface effectively. Nearly restored to its original shape, but of a size to handle easily through a vulva still well relaxed, the cervix is in the best condition possible. The needles slip through softened tissues and approximation is readier and quicker than at any other period of the career of a tear. Chromicized catgut of a trustworthy make has given satisfaction at this stage, although it may not always do so if used just after labor, because soaking and softening can open even a triple tie. Plain gut is best not used here. As further involution will occur, the tied sutures should sink a little into the tissues.

Fig. 10 is a diagram of a bilateral injury following manual dilatation in a patient who, at the *fifth* month, had six quarts and a half of liquor amnii and two fœtuses in the uterus. The immature cervix tore at the version. The patient was in no condition for operation after labor. Ten days later the finger received the sensation of a deep double-sided injury. After curetting away the granulations, which were folding in the edges and angles—the most difficult parts to locate—the extent of the damage was clear. It was evident that this cervix, left alone, would have healed into one of the typical crescentic forms with one œdematous or everted, and eroded, or cystic lip. The ultimate result of such an injury is shown in the last figure. At an easy full time delivery, two years later, only one side gave way—the side opposite to the chief damage of the first labor. Of such late primary repairs I have had at least twenty.

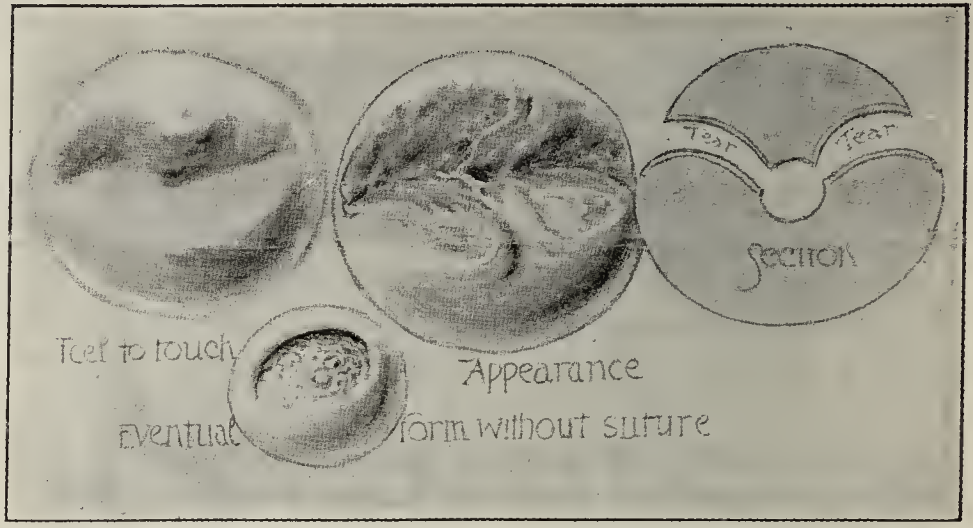

Fig. 10.—A bilateral tear; the sensation imparted to the examining fingers before curetting, ten days after delivery; the appearance on inspection after scraping the surfaces; section showing that the lips are unequal in bulk; and lastly, the condition left by the above form of injury as seen a year afterward—namely, a crescentic deformity difficult to restore to symmetry.

My present practice is, therefore, (*a*) to suture cervical injuries at the close of labor when they seem to be the cause of post partum hæmorrhage; (*b*) to sew up all cervical tears in the first week in conjunction with the perineal operation when the pelvic floor injury is of such character that a few days delay is desirable, and (*c*) to restore severe injuries to the cervix from the third to the tenth day after delivery.

Endowment as Memorial in Washington, D. C.—The Washington Hospital for Foundlings has received from Representative William Connell, of Pennsylvania, an endowment of $3,000 for a bed in the institution. The gift is intended as a memorial to Mrs. Connell, who died about a year ago. She was much interested in the work of the hospital, and often consulted its president, Dr. Sowers, concerning matters of administration.

St. Joseph's German Hospital, of Baltimore, Md., has benefited to the extent of $1,000 by the will of the late Mr. George Brehm.

A CASE OF CEREBRAL DIPLEGIA (SO-CALLED "SPASTIC SPINAL PARAPLEGIA") WITH PSEUDO-HYPERTROPHY.*

By P. W. NATHAN, M. D.,

NEW YORK.

Dr. Clark, at whose request I present the photographs and history of this case, has made a careful study of pseudohypertrophy in the infantile cerebral palsies.[1] He has reported a number of cases and reviewed the literature of the cases thus far under observation. The case under discussion differs somewhat from those previously recorded, and for this reason, if for no other, is of interest.

CASE.—W. G., ten years old, native of United States. The family history is negative; nervous or chronic constitutional disease is said not to have existed in the ascendants. Parents are well and have three healthy children besides the patient. The pregnancy was normal, but the labor was somewhat protracted and there was asphyxia neonatorum.

The boy has never had any illness, except scarlet fever, measles and the present affection. The latter dates back to six weeks after birth, when he had convulsions. These recurred at the age of one and one half years; and from that time until the seventh year he was subject to attacks of a peculiar and constant character, which appeared at varying intervals of from one week to several months. The attack was ushered in by vomiting; this was accompanied or soon followed by a marked rise in temperature, and after a short time by convulsions. From the seventh year to the present time he has been free from attacks, and during that time he has much improved in health.

He began to walk at three years of age; but his gait was always peculiar, and very unsteady until the attack referred to above ceased, when, as the mother says, his gait improved somewhat. Recently, however, his power of walking has grown less and less, and now he is unable to walk at all.

The anterior fontanelle did not close until the second year of age, and he did not talk connectedly until he was four years old.

Status præsens.—Large, well developed boy. Stands with the feet in the equinovarus position, and appears very unsteady and unwilling to remain erect without support. When standing there is a decided lordosis of the spine, though he is able to hold the spine erect when sitting, and there is no apparent atrophy of the muscles of the pelvic girdle. When lying down he is apparently unable to raise himself. The calf muscles stand out prominently and are evidently hypertrophied, which, together with the lordosis, gives him very much the appearance of a patient with pseudohypertrophic paralysis. There is, however, no apparent atrophy of the muscles elsewhere. He has good power in the hands, and can flex the thighs without difficulty. The heel cords are contracted, and there is a tendency to spasm of the flexors of the leg and the adductors of the thigh.

Although the mother states he cannot walk, he was induced to do so after a little urging. While on his feet he is very nervous and unsteady, but is able to keep erect for some little distance, walking with a typical spastic atactic gait. The reflexes are exaggerated, as is the electrical reaction to both currents.

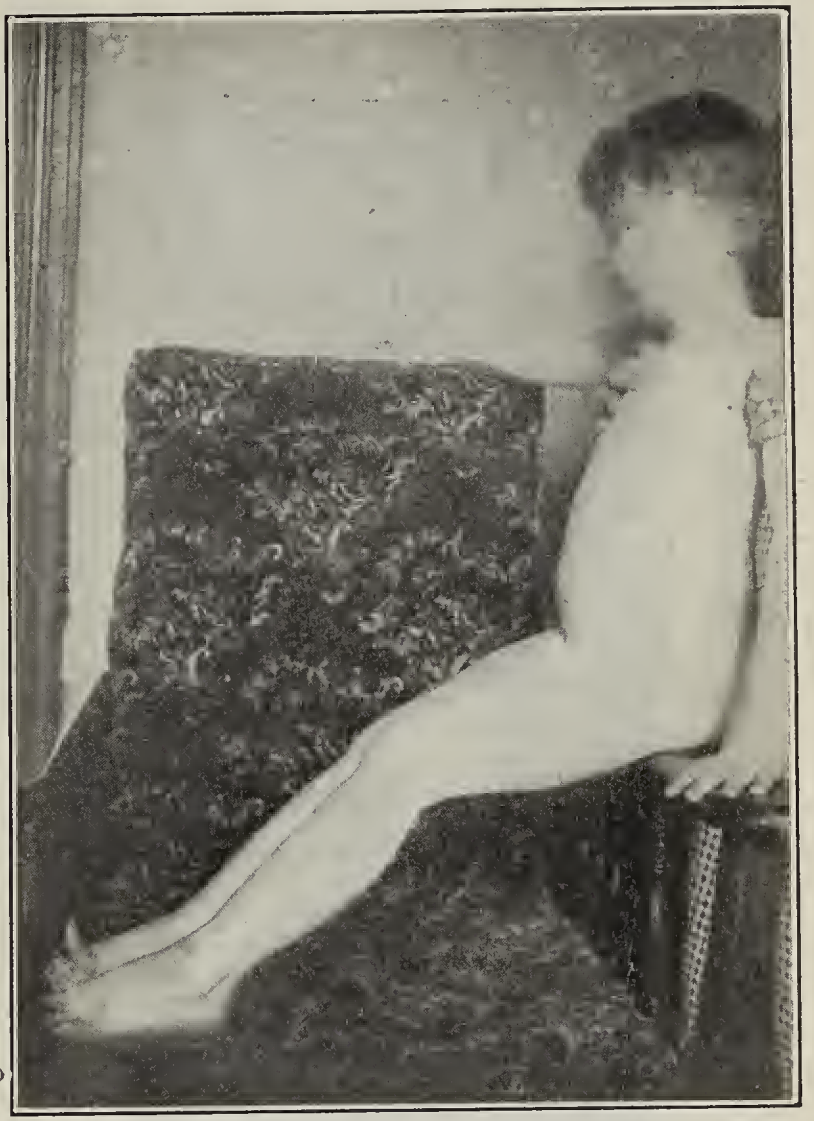
FIG. 1.—Dr. Nathan's case of cerebral diplegia with pseudohypertrophy.

He speaks slowly and with slightly imperfect articulation, and his mental development is nil, though this is more from neglect than from an absolute mental defect.

The differential diagnosis between pseudohypertrophic paralysis an,d spastic spinal paraplegia in this case is apparently not easy if the patient is only superficially examined. The history and careful examination, however, readily clear up any doubt, and there can be no question as to the nature of the disease. The case differs from the cases of pseudohypertrophy in infantile cerebral paralysis previously reported in several respects. So far as I can determine, this is the only case on record in which the pseudohypertrophy occurred in a case of so called spastic spinal paralysis; all the previously reported cases were hemiplegias. With the exception of Clark's cases, all others had athetosis or athetoid movements; these were absent in my case.

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* Presented before the New York Neurological Society.

[1] Clark, *Arch. of Neurology and Psychopathology*, Vol. II; *Journal of Nervous and Mental Diseases*, 1902.

The photographs were difficult to obtain, as the patient was very nervous, and could not be held quietly in an advantageous position. They, therefore, do not show the pseudohypertrophy as distinctly as could be desired. The measurements given below, however, show that the circumference of the calves of the leg is markedly increased; and that there is also a difference between the two sides of the body. Thus the circumferences of the left side are greater than those of the right, in the thigh 1 inch, in the arm ⅛ inch, and in the forearm ¼ inch. Besides this, the left foot in ⅛ of an inch longer than the right.

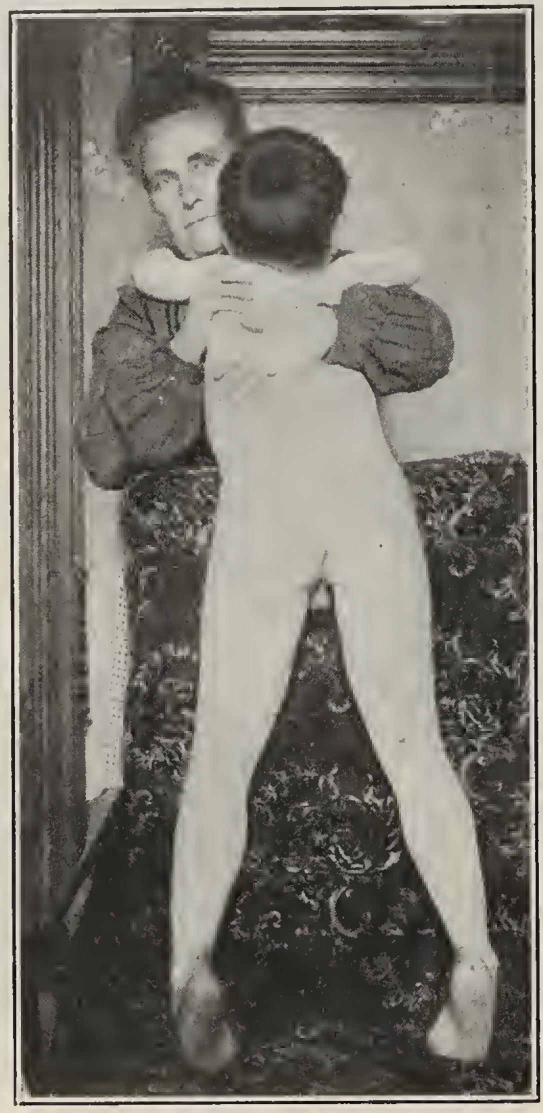

Fig. 2.—The Same.

Clark was able to demonstrate the involvement of the deeper tissues by x ray and microscopical examination of the muscle tissue, in his cases. This was not possible in my case, because the parents of the child refused to permit him to be skiagraphed, or to have the muscle tissue removed. To judge from appearances, however, the deeper tissues were involved; at any rate the hypertrophy was not due to lymphatic disturbance or local exaggeration of the subdermal tissues.

Many of the cases of infantile cerebral palsy present trophic disturbances, but these, as far as my own experience goes, are of a very mild character. There is usually atrophy of the muscle on the affected side; and thus the case presented is quite unusual, not alone on account of the hypertrophy of the calves, but also because of the difference between the circumferences of the two sides of the body, which apparently were similarly affected by the palsy.

The measurements are as follows:

Length of body, 46½ inches.
Right ant. sup. spine to ankle, 23½ inches.
Left ant. sup. spine to ankle, 23½ inches.
Right thigh, 14¾ inches.
Left thigh, 15¾ inches.
Right knee, 10 inches.
Left knee, 10 inches.
Right calf, 11 inches.
Left calf, 11 inches.
Right foot, 7½ inches.
Left foot, 7⅝ inches.
Right acromion to ext. condyle, 8½ inches.
Left acromion to ext. condyle, 8½ inches.
Right ext. condyle to Proc. radius, 7½ inches.
Left ext. condyle to Proc. radius, 7½ inches.
Circumference of arm, right, 7⅜ inches.
Circumference of arm, left, 7½ inches.
Circumference of forearm, right, 6¾ inches.
Circumference of forearm, left, 7 inches.
Length of femur, right, 13 inches.
Length of femur, left, 13 inches.
Length of tibia, right, 11 inches.
Length of tibia, left, 11 inches.
Circumference of body under arms, 22½ inches,
Circumference of body under waist, 23¼ inches.
Circumference of head, 22⅛ inches.

112 East Sixty-first Street.

Tennessee State Board of Medical Examiners.—In our issue of March 5th a news item regarding the condition of the medical profession in Tennessee contained some inaccuracies. We are told by a competent authority that the number of unlicensed physicians there is much less than 1,000. The officers of the State board are as follows: President, Dr. Robert Pillow, of Columbia; vice-president, Dr. W. H. Halbert, of Nashville; secretary-treasurer, Dr. T. J. Happel. of Trenton. Other members are: Dr. W. L. McCreary, of Knoxville, and Dr. F. S. Raymond, of Memphis.

Flint Medical College, New Orleans, La.—The fifteenth annual commencement exercises of the Flint Medical College were held at the New Orleans University on March 11th. There were five graduates in medicine and one in pharmacy. Dr. F. H. Knight presented the diplomas to Ella N. Prescott, W. H. Dorsey, J. R. Sheppherd, J. A. Hardin, and F. M. Nelson, and H. W. Taylor in pharmacy. The dean, H. Clements, awarded the prizes as follows: May prize, Dr. Sheppherd; Speed prizes, Dr. Dorsey and Dr. Sheppherd.

THE EFFECT OF VIOLET RAYS ON NEBULÆ.

By ALFRED W. HERZOG, M. D.,

NEW YORK.

The purpose of this short article is to draw the attention of the profession to the phenomena occurring when a nebula, as produced by one of the numerous nebulizers on the market, is passed around a vacuum electrode in action. The instrument used by me has been designed by J. W. Hughes, to whom I must give credit for the idea.

The tube, of which there is a drawing given below, is used in the following manner: The closed end of the instrument is placed in a handle made for vacuum tube electrodes, and thereby connected with one of the Leyden jars of the static machine or with one of the poles of the hyperstatic. The smaller, open end, which is near the handle, is connected by means of a rubber tube with the nebulizing apparatus.

The patient is to inhale the vapor from the large open end. If now the poles of the static machine are brought in close contact, so that no current passes through the vacuum electrode, and the nebula is turned on, the strength and volume of the vapor may be observed. It may thus be noticed in what volume the vapor is developed, and whether it is inclined to sink to the floor or stay in the middle of the room.

If now the poles of the static machine are separated, so that the current passes through the vacuum electrode, it will be observed that the cloud of vapor, the nebula, develops with much greater rapidity, in greater volume, and, instead of falling to the floor or filling the middle regions of the room, rises to the ceiling and floats around the room, moved to and fro by the slightest waving of the hand.

This shows, that the "violet rays" subdivide the nebula in such a manner as to cause it to be of much greater fineness. This in itself, without considering other beneficial effects, which the action of the "violet rays" may have on the patient, seems to me to be a discovery of some importance, as it will be conceded, that the finer the nebula, the easier the absorption by the respiratory organs of the medicaments which it carries.

PRIMARY TRACHELORRHAPHY: A RE-STATEMENT.*

By GEORGE H. DONAHUE, A. B., M. D.,

NORTHPORT, L. I.

At a meeting of the Queens Nassau Medical Society, in February, 1901, I presented a paper with the title As to the Advisability of the Immediate Repair of Lacerated Cervices, in which I took the affirmative, electing twenty-four to thirty-six hours after labor as the most favorable time for the operation.

I was not a little surprised at the opposition which the paper evoked, but was more impressed by the character of the criticism on which this opposition was based. It was a fair inference from my paper that I held these lacerations primarily responsible for most cases of post partum subinvolution and their sequelæ, while my critics contended that the conditions and symptoms which I essayed to describe were primarily due to "a modified form of sepsis," and further contended that successful operative interference at this time was inherently improbable because of the increase of liability resulting therefrom to septic infection.

My object to-day is to re-present, in part and with some amplifications, the original paper in the hope of obtaining a fuller expression of opinion from the Associated Physicians of Long Island.

It was during my life as an interne in the Charity and Maternity Hospitals, on Blackwell's Island, in 1883 and 1884, that I began to study from experience the causes of post partum subinvolution.

During my first period of service in the Maternity Hospital, as junior assistant, a very fatal epidemic of puerperal fever was prevailing. This epidemic was abruptly brought to a close by Dr. H J. Garrigues, during my term of service as senior assistant, some six months later. The service, when I became house physician after another six months, was smooth running and uneventful, and quite favorable for the study of the class of cases under consideration.

It was a part of the routine duties of the internes to note and to keep a record of the progress of involution. In the first period of service sepsis was the all shadowing feature. So virulent was the unknown poison in many cases that long before the dreaded chill and subsequent fever, the palpating hand could detect by its suspicious, persistent softness the beginning demoralization of the uterus. Later, it seemed literally to be undergoing a kind of liquefaction; to be melting away. Palpation became useless; the organ was lost.

In the less severe cases that did not proceed to a fatal termination, the same softness and lack of tone was noted, though in lesser degree. These uteri were always large and soft and flabby until the diseased cells began to respond to remedial measures.

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* Read before the Associated Physicians of Long Island, June 21, 1902.

In the second period, after the stamping out of the sepsis, an altogether different kind of uterus presented itself for study. Something still thwarted the process of involution in many women, but these uteri were possessed of character; they had tone, and under manipulation could easily be made to feel almost as hard as croquet balls. The fault seemed just to lie in their being too large. Every cell had to be conceived as being in a comparatively high state of functional activity.

During this time, by request of Dr. Garrigues, no examinations were made for diagnostic purposes after the completion of the first vulvar toilet. It was merely noted that there were marked differences in the rapidity of involution in different women.

The Maternity Hospital is an adjunct of Charity. The lying-in woman lived in the general hospital. At the onset of labor the patient was transferred for confinement to a pavilion used only for that purpose. After confinement the patient was again transferred to one of a number of pavilions also set aside for this purpose. After all the beds in any one pavilion had been used once, the building was sealed as tightly as possible and thoroughly fumigated and disinfected before being again used. At the end of eight or nine days, that is, at the end of the strictly clinical puerperium, the patients were transferred back to the general hospital, whence they had been wont to leave for their homes after a few days.

When I became house physician I obtained the consent of my visiting surgeon, the late Dr. Paul Mundé, to make an examination of every patient before she was finally transferred back to the general hospital.

The position of the fundus in every case was carefully noted every day, always after the bladder had been emptied, and an enema given, if necessary, to empty the bowels. On the eighth day, the examination was made with a Sims speculum, depressor, tenaculum, and uterine sound.

These examinations were not carried on a great while, before my attention was arrested by the fact that in every case of subinvolution there coexisted a laceration of the cervix.

As the examinations progressed, so intimate seemed this relationship to me that if a patient showed day after day a rapidly involuting uterus I became accustomed to remark, " Here is an uninjured cervix, or a comparatively uninjured cervix, or a cervix which, if injured, will be likely to heal spontaneously; " and, *per contra,* if an unusual degree of subinvolution characterized the puerperium I felt no hesitation in asserting that the surgical repair of the cervix would prove to be a necessity, and I do not recall that I erred much in my prognoses.

In short, the injury to the cervix seemed to be a necessary antecedent to the subinvolution and seemed to stand " in that peculiar relation which we call physical causation."

In a period covering six weeks (the services were rotating and at that time were of that duration) about seventy-five women were confined. Of these seventy-five, two, on the eighth day, showed no sign whatsoever of laceration of the cervix. These two left the hospital for their homes within a few days presenting no abnormity resulting from parturition. In their cases the process of involution was preeminently rapid and satisfactory. The other seventy-three were transferred to the general hospital as gynæcological cases, and as many as could be brought to consent were treated and prepared for operation.

As a result of local treatment, all but eighteen were finally discharged as not requiring operation. These eighteen women were operated on, on an average of about six weeks after delivery. In every instance the postoperative process of involution was appreciably more rapid, as carefully noted at the time of the removal of the stitches, than had obtained during the corresponding period of preparatory treatment.

After I left the hospital and entered private practice I adopted, as far as possible, the same general course of procedure.

My obstetric patients were advised that their future physical well-being depended in no small degree on the preservation of the integrity of the genital tract; that lacerations of the perinæum and vagina could be, and ought to be, repaired immediately, and lacerations of the cervix uteri about six or eight weeks later, or as soon thereafter as possible or practicable.

This practice I continued until a few years ago. In September, 1898, I delivered a patient of her second child. Subinvolution markedly characterized the puerperium. The position of the fundus was always very much higher in the abdominal cavity than I had hoped to find it. The lochia were excessive and continued a bright red an unusually long time. Long after getting up, the discharge persisted, and the linen was always stained a dirty red or brown. For weeks I treated this patient for the annoying symptoms, subjective and objective, and finally, after nearly three months of post partum suffering, trachelorrhaphy was consented to and the patient relieved.

Two years later this patient was delivered by me of her third child; but before this event took place the prospective mother wanted to know "why, if this operation had to be performed, it could not be done and over while she had to remain in bed, any way?"

I told her I should be glad to suture the torn surfaces twenty-four to thirty-six hours after childbirth, and I did so. The result was all that could be desired.

The whole character of the puerperium as compared with the previous confinement was changed; involution proceeded rapidly; subjective and objective symptoms were of the happiest kind; the stitches, of silkworm gut, were removed about the eighth day; the patient was sitting up on the tenth and thereafter was independent of medical or surgical aid.

Since that time I have deemed it my duty to urge on primiparæ and on multiparæ in whose cases previous lacerations had been repaired, the wisdom of the primary repair of these injuries.

My experience, it is true, has not been very extensive, but it has been happy enough to convince me that in the near future primary repair of lacerated cervices will be as incumbent on the obstetrician as is now the immediate repair of the lacerated perinæum or vagina.

Now I will read from the original paper which called forth the criticism. It appeared in the *New York Lancet* for May, 1901:

Why is this uterus involuting so slowly? is a question which probably every obstetrician, now and then, anxiously puts to himself, when, in the clinical puerperium, he finds, by daily palpation of the abdominal wall, a degree of involution pronouncedly incommensurate to the degree of involution that ought to have taken place during the time that has elapsed since the completion of the third stage of labor.

The question implies that there is normally, in the very early puerperium, a daily average rate of rapidity to this process, any marked failure to approximate which means the existence within the patient of some pathological factor or factors. As a matter of fact we have all been agreeably surprised at the rapidity of the process in some patients, and been made grievously anxious because of its slowness in others.

Immediately after the expulsion of the placenta the uterus ought to be felt, both in primiparæ and in multiparæ, in whom any previous cause of subinvolution has been removed, as a very firm, hard body, the upper border of which extends to a point about midway between the symphysis pubis and the umbilicus. This lasts only a short time, a few hours at most, and is recognized as a stage of over-contraction and is by no means devoid of prognostic significance. Twenty-four hours later, at the time of the usual first visit after the confinement, the fundus will have risen nearly or quite to the umbilicus. After another twenty-four hours it will be perhaps an inch below the umbilicus. At the end of seventy-two hours it may again be found, in exceptionally fortunate cases, halfway to the symphysis. On the fifth day it is scarcely an inch above the symphysis, and the beginning of the second week finds it sinking below and behind the symphysis.

I am making no effort to be painstakingly exact in these figures. I am simply trying to emphasize and to help to make vivid the fact that in normal puerperæ the degree of involution, day by day, is so considerable and so easily appreciated as to constitute a very important factor in diagnosis and prognosis.

In the type of cases thus described, the puerperal phenomena approach the purely physiological in character. Almost immediately after the expulsion of the placenta, and nothwithstanding the previous prolonged and unwonted exertions, the pulse-rate sinks to the normal or below it, and is full soft and strong. The patient, as soon as permitted, lapses into a restful slumber. The loss of blood at the time is inconsiderable, the subsequent loss inconsequential; the lochia in a few days cease to be much tinged with blood, and the attending physician shortly discontinues his visits with a feeling of assurance as to the well-being of his patient that is profoundly satisfactory to a conscientious and busy practitioner.

Recall now to your minds a class of cases in which an entirely opposite condition obtains. From the very beginning of the puerperium these cases do badly. After the placenta is expelled, with membranes, you are sure, intact, you feel compelled to knead the uterus an unusually long time to control —not an alarming, but exceedingly annoying hæmorrhage. No constitutional signs of grave danger impending are present, yet your patient is not restful; her pulse is not so slow as it ought to be, nor so regular, nor so full and strong. There is an air of slight constitutional disquiet. The patient wishes that she could get asleep, but is restless; and a pain like a toothache in the small of the back, a keen sense of dragging and weight in the loins and pelvis will not permit it. You go through the routine measure of administering your patient a full dose of ergot. You remain by the bedside considerably longer than the usually allotted half hour or hour, and, before departure, deem it wise to leave instruction with the nurse as to massage of the uterus; the uses of ergot in emergency, the cautious use of an opiate, etc.

The next day you call and, though the bladder has just been emptied, the fundus projects above the umbilicus. The nurse tells you there has been rather a free discharge of blood. That pain in the back is still there and also that dragging feeling in the loins and the sense of weight and fulness in the pelvis. You increase somewhat the ergot, and continue the cautious use of the opiate. The days go by and your patient feels only slightly better; the uterus remains disquietingly large; the vaginal discharges are more like a menstrual flow than like lochia. The general tone of the patient is lowered; the secretion of the milk is apt to be delayed and scanty.

The patient has a "bad getting up." Again the pain in the back, the sense of weight in the pelvis and dragging in the loins, and again loss of blood seemingly following every exertion, loss of weight, anæmia, etc., etc. The general significance of these markedly contrasting conditions is well known to every practitioner of medicine. The uterus, which is sinking below and behind the symphysis in the beginning of the second week after parturition, is a healthy, a comparatively uninjured, and a thoroughly emptied uterus undergoing normal involution.

The uterus undergoing a tedius and tardy involution is, *ipso facto,* a diseased uterus. What is the probable cause? Not infrequently the attending physician is never given an opportunity to answer the question positively.

Prudential considerations deter him from seeking an answer during the early days of the puerperium, unless accompanying symptoms strongly point to septic infection (a well recognized cause of subinvolution), in which case, of course, immediate investigation and prompt and appropriate treatment are imperative. But, in a vast majority of the cases under consideration, there will have been nothing to indicate sepsis.

Ergot and strychnine, with ferruginous preparations and quinine, will be prescribed, and, unquestionably, with beneficial results, but the subinvolution and the distressing symptoms of subinvolution obstinately persist.

A certain percentage of these patients, especially among the intelligent classes, will sooner or later demand to know the cause of their sufferings, and you make an examination perhaps a month or six weeks after confinement. In almost every instance the cause of all these symptoms will be found to be a laceration of the cervix uteri, a laceration which shows no tendency to heal spontaneously. With the aid of a speculum the laceration is clearly visible; the cervix swollen and purplish-red in color; the torn surfaces of the lips a brighter red and eroded-looking; and from the os is pouring forth an abundant discharge of mucus, glairy and tenacious, sometimes looking like the white of an egg, but oftener tinged a dirty red or a chocolate color.

In these cases an operation for the repair of the injury to the cervix is imperative. Such patients can never get well without resort to surgery. When is the best time to operate? I answer from twenty-four to thirty-six hours after confinement. The torn surface will then still be fresh enough to obtain perfect union. I always choose this time, and have never failed to obtain good union. Right after delivery the cervix is so soft and swollen and œdematous, as to be distinguishable from the vaginal wall only with difficulty. Twenty-four to thirty-six hours later it will have regained its individuality, and the os and the canal will be easily recognized. Yet why not wait to see what Nature will do? It is well known that a very large percentage of these cases heal spontaneously, observers of acknowledged competency say fully three-fourths.

It is argued, too, in behalf of delay, that it is inconsiderate and unwise so to add to the severe trials of labor unless the case be one of necessity, and not of election—as, for instance, to stop bleeding in persistent hæmorrhage from the divided circular artery. I do not think this argument ought to carry much weight—no more weight than if advanced against a similar operation on the perinæum or vagina. With proper precaution, antiseptic and otherwise, the operation at this time is well borne; it is safe; it is easy to perform and it is likely to be successful. If successful it assures normal involution with all its health promoting consequences as against possible subinvolution with its interminable and baneful sequelæ.

Some one has likened the bacterial invasions of our organisms to the wounding and killing of soldiers on the field of battle. As the soldiers who altogether escape happen not to have been in the path of flying projectiles, so freedom from disease means either that our immediate environment has been free from unicellular organisms of the pathogenic type or that we have been lucky enough to have avoided them. Of course, this conception of the origin of disease is quite too crude to merit anything but a smile. But in view of the fact that the assertion is often made that the exposure incident to the immediate repair of these injuries increases the liability to infection, the question not unnaturally arises, What are, in general, the antecedent conditions which initiate the onset of disease?

We all know that, with like exposure, some take infection not at all; some are very slightly affected; some are affected seriously; some fatally. These differences are more and more being explained, tentatively, as being due to "differences in the physical condition of individuals."

One of the most striking features of recent medical literature is the increasing frequency of such expressions as: "favorable soil," "pathological predisposition," "individual susceptibility to bacterial invasion," "susceptibility due to time of life," etc. Every one of these expressions implies that the conditions which determine the onset of disease inhere not in the bacillus itself and merely as such (as the power resides in a projectile to maim or kill when it strikes the body with sufficient impact), but in the invaded organism.

"The healthy man is not attractive to the microbe."

"The human body is, by virtue of the properties of all its constituents, a nutritive medium little suited for the development and multiplication of the animate infective agents."

"Some depression of vital force" is "the first step."

"Some physical deterioration" induces the "proclivity to disease."

"Integrity of structure" and "adequacy of function" are what is meant by our "powers of resistance."

The pathogenic germ, to get a foothold, must find some breach of continuity in the histological relation of our tissues or in their normal metabolic processes. These lacerations furnish such initial antecedent conditions. At first simple solutions of continuity, they become, through nervous and vascular and metabolic reactive disturbances, the cause always of subinvolution and all too frequently of septic infection.

Their successful repair, at this early period, reduces to a minimum these reactive disturbances and leads to a prompt restoration to the normal local puerperal phenomena.

LAPAROTOMY FOR GUNSHOT WOUNDS OF THE ABDOMINAL VISCERA, WITH REPORT OF FIVE SUCCESSFUL CASES.*

By ROBERT W. JOHNSON, M. D.,

BALTIMORE,

PROFESSOR OF PRINCIPLES AND PRACTICE OF SURGERY, BALTIMORE MEDICAL COLLEGE.

There are certain operations, such as hysterectomy and the removal of the Gasserian ganglion, that will always greatly excite the admiration of the surgical spectator, as well as give a sense of *bien d'être* to the operator if successful, but I know no operation more a touchstone of a surgeon's capacity, as far as judgment and technique go, than laparotomy for wounds of abdominal viscera.

In the ordinary removal of tumor or tubes, etc., the surgeon makes or controls the conditions; he chooses his time, place, and incision, and deals in the main with aseptic tissue or sepsis so hedged about by Nature's prophylaxis, that his wound is clean. Not so with traumatism. The vulnerating body is dirty; the clothes it passes through, and perhaps transports, are dirty; some ignorant bystander, professional or lay, sticks in his dirty finger or equally dirty rag to stop the blood; the viscera themselves, when perforated, often flood the cavity of the abdomen with the worst kind of infection, and when we have to deal with gangrenous gut, the abdomen is virtually a Pandora's box that we open, not to let disease escape for others, but to remove it from the unfortunate owner.

The cases which I wish to present to you all occurred within the last five months, and represent a more or less typical experience that the surgeons of our hospitals are meeting with from time to time, with results more or less successful than my own.

Taking the cases in the order of their severity from above downward, the first one I call your attention to is:

Case I.—*Gunshot Wound of Stomach and Liver; Laparotomy; Recovery.*

Florence Girdy, mulatto, eighteen years old, was shot by her husband (see Case IV) about 10 a. m. The police patrol brought her three miles over the rough pavements, reaching the hospital about 11 a. m., just as I reached there myself. On examination I found that a ball, .32 calibre, had penetrated her abdomen near the median line. There was a second pistol wound in the upper and outer side of the right thigh, which was washed superficially with H_2O_2, not probed, and dressed antiseptically. Her belly was scrubbed after the anæsthetic, the wound washed out with H_2O_2, and an incision, passing through the wound, was made into the abdominal cavity. Taking out the stomach, I found that the ball had ploughed its way through the greater curvature, slitting the stomach and opening it for about two inches. The stomach contents fortunately, principally mucous and gastric secretion, were extruded and there was some bleeding from the sides of the wound. The wound was closed by interrupted Lembert suture, turning the serous coat well in, and the further course of the ball was explored. There was a perforation of the liver about an inch from the lower edge of the right lobe, which was bleeding more profusely than the wound in the stomach. This was sewn up with catgut. Further search for the ball was unavailing and the abdominal incision was closed with silkworm gut sutures, dressed with iodoform gauze, bichloride gauze, and cotton, and was firmly compressed with adhesive strip. No drain was introduced. She had a nutrient enema every four hours and albumen on the third day, later coming to milk, soft diet, and finally solid food in eighteen days. The sutures remained until the fifteenth day. Highest temperature 102.8° F. on fourth day. Bowels moved regularly. On the twenty-first day she was discharged well. Some of the contributing causes for her recovery, I think, were the facts that she had an empty stomach when shot, my early arrival at the hospital, and the care of my nurses and assistants. Neither ball was ever located and so far they are quiescent.

Case II.—*Gunshot Wound of Liver; Laparotomy; Recovery.*

R. Foote, colored, single, twenty-two years of age, laborer, was shot near Sparrows Point, about 9 p. m., April 11th. He was seen by my assistant, Dr. Woodward, who put on first aid dressing and shipped him three hours later to the Maryland General Hospital, where he arrived at midnight. As his condition was reported as good, I operated the next day, twenty-seven hours after the injury, the patient then beginning to show signs of peritonitis. I found a bullet wound, .38 calibre, in the right side, about the junction of the cartilage of the tenth rib. Making a median incision, I drew out the stomach, etc., to find no perforation, except through the liver, which was left alone because bleeding had stopped. There

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* Read before the Southern Surgical and Gynæcological Association, at Atlanta, Ga., December 17, 1903.

was a considerable amount of blood in the abdominal cavity, which was cleaned out and the abdomen flushed and filled with salt solution. He was allowed liquid food, as his rectum refused to retain the enema, and, from the fact that no perforation had occurred, I deemed it best to support him in that way. The patient did well, retaining food, with a moderate rise of temperature from time to time. Stitches were removed on the eleventh day when I found a slight stitch abscess and some pus about the wound of entrance. On the twelfth day he developed an abscess of the lung on his right side, his temperature going up to 104° F., but subsided with the expectoration of a rather free discharge of pus and blood. His temperature and general condition having remained normal for ten days, he was discharged from the hospital, recovered, on his thirty-sixth day.

Case III.—*Gunshot Wound of Liver; Laparotomy; Recovery.*

Frank Bocato, aged twelve years, Italian, with good family and personal record, was admitted to the Maryland General Hospital, at noon, April 27, 1903, with a history of having been shot by a playmate an hour before. Examination showed a bullet wound, .38 calibre, in the right side between ninth and tenth ribs anteriorly.

His condition was fair, with no marked shock, temperature, 99.8° F.; pulse, 100; respiration, 26. Vomited matter contained no blood. Twelve hours later, temperature, 102° F.; pulse, 100; respiration, 32. Enemata and stimulant retained. No marked pain. Twenty-four hours after injury, temperature up to 102.2° F.; pulse, 140; respiration, 40. He was anæsthetized; the track of the bullet was found to enter the abdominal cavity, and, after cleansing the track, I made an incision into the abdomen along the lower border of the ribs. Introducing my hand to a point opposite the bullet wound, I found that the liver had been furrowed, and following that line, located the bullet in the upper surface of the liver, under the diaphragm. I removed the bullet with my fingers and washed out the abdominal cavity with salt solution without suturing the liver, as hæmorrhage was not marked. I left a quantity of salt solution in the cavity and sewed it up with silkworm gut without drain. (No wounds of intestines or stomach were found). Enemata and stimulant per rectum retained. Record, four hours after operation, temperature, 99° F.; pulse, 120; respiration, 32. Some vomiting during night, same character as the first. Uninterrupted recovery with slight variation of temperature. Liquid diet began early, as there was no contraindication in this case due to wound of stomach or intestines, followed by soft food on the fourth day and solid food on the twentieth day. Sutures were removed on the fourteenth day and the patient was discharged, May 19th, twenty-four days, after injury.

Case IV.—*Gunshot Wound of Intestine; Laparotomy; Recovery* (This case is the mate of Case I, as the man that shot her then shot himself).

James Matthews, colored, aged twenty-three years, with good personal and family history, was brought three miles in the patrol wagon to the Maryland General Hospital, January 30, 1903, together with his victim. A .32 calibre ball had entered the abdominal cavity in the right iliac region. There was not much shock. Tracing the wound back into the abdomen, I made another incision in the median line and through it examined the patient, going carefully over all the organs presenting, and found only one place where the ball had ploughed across the gut without entering the lumen; everything else was uninjured. Having searched thoroughly, I brought the edges of the furrow together with Lembert silk sutures, washed out the belly with salt solution, and inserted an iodoform gauze drain, in case the gut gave way at the point of injury. The abdominal wound was closed with silk and aseptic dressing applied. Ball not found. Six hours after operation, temperature, 103° F.; pulse, 98; respiration, 24. Rectal feeding for three days. Milk on third day. Drain removed on second day. Solid food on fifteenth day. The patient made an uninterrupted recovery in twenty-one days, and is now in jail serving a two years' term.

Case V.—*Gunshot Wound of Intestines; Seventeen Perforations of gut, eleven of mesentery; Laparotomy; Suture; Recovery.*

Richard Curtis, colored, male, single, aged seventeen years, was brought to the Maryland General Hospital, May 5, 1903, with the following history:

Family history good, except that his father had died of heart disease and one brother from blood poisoning; had had gonorrhœa three years previously, but otherwise had been strong and healthy; just prior to this accident had eaten ice cream and cake.

While standing looking on at an election row, he was shot in the abdomen. When put on the table he presented the appearance of a strong, well developed negro, composed in manner, but suffering from profound shock. There was no pulse at the wrist, and collapse seemed imminent. Salt solution was injected in the thigh and strychnine given hypodermically. A wound from a .32 calibre ball was found in the left side, just above Poupart's ligament, which, after washing, was found to lead directly into the abdominal cavity. A median incision was made below the umbilicus and the belly found to be full of blood. Through this incision the gut was drawn out into warm towels and seventeen perforations of the small intestine and eleven of the mesentery were successively closed by silk Lembert sutures. No gut or mesentery was excised, though in some places the perforations were very near together. From these openings blood and fæcal matter poured out; while there was considerable hæmorrhage from the wounds of the mesentery. After the whole length of the gut obtainable had been gone over and sewn up, the abdominal cavity was freed of the clots and fæces, first, by ladling out more than a quart of extravasation by hand, and then by flushing it with gallons of hot salt solution. It required two hours and a half to close all the perforations, the patient's strength being maintained by stimulants and salt solution hypodermically. The small intestine was the only gut injured and no other organ was involved. Washing off the gut, it was replaced in the belly and the cavity filled with hot salt solution. An iodoform gauze drain was kept in for forty-eight hours, the abdominal wound being otherwise closed with silk and antiseptic dressing. Ball not found. Nutrient enemata every six hours. Morphine and salt solution hypodermically, as needed.

Condition after operation: Temperature, 98.2° F.; pulse, 120; respiration, 40. The highest temperature during illness was 101.4° F., twelve hours after operation; the rest of the time the record shows his condition nearly normal. He had no setback, and was discharged three weeks after injury was received.

THE USE OF INJECTIONS OF SODIUM CINNAMATE IN LOCOMOTOR ATAXIA.

By PAUL BARTHOLOW, M. D.,

PHILADELPHIA.

Sodium cinnamate, or hetol, as it is called by Landerer (1), is a remedy that recent experience has shown to have a special value, characteristic in many respects of the base out of which it is formed and the peculiar acid that forms it. Of cinnamic acid little has been written, but its natural history is both interesting and instructive. For example, it has long been known to possess antiseptic properties, which, though not believed to be very active, were found by Koch sufficient slowly to destroy bacteria. A certain amount of antiseptic power inheres, also, in an aqueous solution of sodium cinnamate. In many ways, cinnamic acid resembles benzoic acid, and, like other acids of the aromatic series, is found in the balsams of Tolu and Peru, and in storax—the chief source of supply for commerce. It is said by a French writer (2) that the cinnamon of Ceylon contains cinnamic acid in combination with sodium and calcium, a statement which is possibly true, but which does not seem founded on adequate evidence. It is true, however, of storax, from which the salt is procured, or it is made synthetically (3). As regards the sodium cinnamate exclusively—for it has almost entirely superseded the acid nowadays—we wish to direct the eye of the reader to two remarkable properties it possesses, namely, its stimulant effect on the digestive tract and its power of increasing the number of leucocytes in the blood.

For our present purpose we may take the fact of this great increase of the multinuclear leucocytes—a fact satisfactorily established by the researches of Professor Landerer, of Richter, and of Spiro—as of chief importance in explaining the special action of sodium cinnamate in cases where it has been employed, viz., that of seeming to modify directly, by mechanical forces as it were, the morbid process. With respect, certainly, to that large class of cases in which, up to the present, it has acted almost entirely as an agent of repair—and its use thus circumscribed in the various forms of tuberculosis—the phenomenon which guided Landerer, Heusser (4) and others, is this marked proliferation of leucocytes by virtue of which the tuberculous area is surrounded by their growing masses, as by a wall, and gradually enclosed by the coarctation. In other words, through the activity of the leucocytes we have the elements of cellular growth, the materials for a state of vascularization, for the construction of new vessels and new connective tissue. It may be conjectured, too, that the discovery of Kossel of an acid substance with strong antiseptic properties in the nuclei of the leucocytes is significant here, as enabling us to take a further step in our theory of the action of sodium cinnamate. This action, in fact, partakes largely of the nature of a chemical process, in which the ultimate result is the setting free of nucleinic acid. Of this acid the most salient property is that it hardens diseased cells, but leaves healthy ones intact (5). And here we might profitably inquire whether this affinity of sodium cinnamate for nucleinic acid and the leucocytes, this power it has of setting a current of the latter in the direction of any local exacerbation of disease, could not usefully be employed in any conditions marked by atrophy of connective tissue and cell?

Proceeding on this hypothesis, we have substituted sodium cinnamate for other remedies in several cases of locomotor ataxia, with results, so far, of a gratifying kind. By way of administration, instead of the intravenous injection advised by Landerer, it seemed preferable to employ the simpler and less objectionable method of subcutaneous injection. The site of operation was the interscapular space. The formula used follows:

℞ Sodium cinnamate............................10 parts;
Sterilized water..............................100 parts.
M.

This ratio represents about the maximum degree of solubility of this salt. The solution is, therefore, in reality a saturated one. It should be kept in dark-colored bottles, or be freshly prepared for each injection. Scarcely any pain, unless a slight smarting (which soon passes) can be called such, attends these injections; nor have we seen any abscesses or nodules form. As a rule, three injections a week were deemed sufficient; sometimes, though rarely, one was given daily until some evidence of excess appeared, as indicated by a temporary irritability of the stomach. The injections were given in gradually increasing doses. Beginning with twenty minims, the amount was slowly raised to sixty. More could doubtless be administered, for there is little reason to apprehend toxic symptoms, and none so far as we know, have ever been observed (6).

The cases of locomotor ataxia selected for this treatment were examples of long standing disease, in which the degeneration in the cord had advanced even to the lateral columns. Under such conditions, to hold the disease in check was the object that seemed most feasible, but one which from our conception of the activities of the remedy we were not without hopes of attaining. Hence, the almost immediate effects of the injections—a decided gain in body weight and strength—though possibly to be expected from the known influence of the cinnamic compounds on digestion, amply justified this view. Secondly, some of the nervous phenomena diminished in severity, phenomena such as the lightning pains, which are often coincident with disorders of the alimentary tract and are supposed to have a casual relation with them; and it was noticeable that coordinate movements were performed with more vigor and accuracy. The impression upon the mind made by these favorable changes was of such an encouraging nature that some patients went to unusual trouble to receive the injections, and acknowledged that they experienced a greater cheerfulness and sense of mental power than was habitual. Passing in review these and more subtle signs of improvement, we may deduce from them the conclusion that sodium cinnamate benefits the organism in two ways chiefly:

(1) By promoting appetite and digestion and, consequently, nutrition;

(2) by setting up chemical changes in the outlying regions of degeneration, in the cells and connective tissue of the nerve substance.

To penetrate more deeply into the causes behind these changes would require too much space. The practical results, however, are so unequivocal in their meaning that it is impossible to escape the inference that sodium cinnamate is a trustworthy and important addition to the therapy of locomotor ataxia.

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5. Kossel. *Encyklopädie der Therapie.* Bd. 3, Abth. 1, p. 174. Kobert. *Lehrbuch der Pharmakotherapie*, 1, p. 156.
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The Antispitting Crusade in Chicago, Ill., resulted on March 5th in the arrest of forty-one breakers of the law. Most of the offenders were fined the costs of court. Among the violators, it is alleged, was the physician who was principally instrumental in having the ordinance passed.

SKIAGRAPHIC ERRORS: THEIR CAUSES, DANGERS, AND PREVENTION.*

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SKIAGRAPHER TO THE ROOSEVELT HOSPITAL.

Some time ago my attention was called to this subject by seeing several skiagraphs that did not agree with the physical examination of the parts skiagraphed. One was a picture of a fracture of the radius in a child after the deformity had been reduced and the arm put up in splints. The picture showed a marked lateral convexity (bowing) as compared with the skiagraph of the normal arm. The splints were removed. The contour was perfect and apposition of fragments was good, as made out by palpation. The splints were reapplied and recovery was complete without any visible deformity or limitation of active or passive motion.

Another case was one of fractured tibia, showing overriding, which I shall describe later.

Shortly after this I was asked to examine two skiagraphs which were presented as evidence to a jury by a plaintiff's lawyer. One was said to represent the normal foot and the other the injured foot of the same man.

On examination of the skiagraphs I found they were both of the same foot, with the tube and the foot in different positions during the two exposures.

The lawyer was explaining that the light spot in the skiagraph between the os calcis and astragalus (when the foot was in extension) represented " a fracture in the bones of the foot," and that this light spot did not occur in the normal foot (which was a skiagraph of the same foot in flexion). I called the court's and jury's attention to the fact that the big toe was on the same side in both skiagraphs. Whether this occurred accidentally or maliciously we do not know, but that it may occur unless great care is taken is what I want to prove.

In order to ascertain some of the causes of skiagraphic errors we first removed the soft parts, except the ligaments, from the arm of a cadaver, and arranged a dark lantern so that its rays should fall perpendicularly from an aperture the size of the anode of a tube, placing the dark lantern, bones, and drafting paper as we should arrange the tube, arm, and plate for a skiagraph, and then studied the shadows cast by these bones.

Having marked the location of the bony prominences on the paper, I made silhouettes of the bones, having the light, bones, and paper in various positions, and noted the following:

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* Read before the New York County Medical Society, December 20, 1902.

1. The distance of light from paper.
2. The direction of light from paper.
3. The distance of light from bones.
4. The direction of light from bones
    - a, directly above.
    - b, laterally.
    - c, distally.
    - d, proximally.
5. The distance of bones from paper.
6. The relation of one bone to the other.
7. The relation of part skiagraphed to body as a whole.
8. The angle at which the rays strike the plate.

Being able to move the light and bones about freely, and changing the angle of the paper, I was able to compare the silhouettes with the bony prominences as marked on the paper, and to note how great a change in the silhouettes, slight changes in the positions of light, bones, or paper could make.

All kinds of ideas exist in the minds of laymen, lawyers, and even physicians themselves, as to what a skiagraph or radiograph is. I have heard some say they thought an x ray picture was one taken with a regular camera and an x ray light. Others that it was simply a silhouette or shadow cast on a photographing plate or fluorscope. A skiagraph unfortunately is not as instructive as the former would be, but is far more satisfactory than the latter.

A skiagraph is the registration on a photographing plate of the rays that penetrate the parts of the body exposed.

The following principles may help one to read and understand a skiagraph:

I.—The rays radiate from the anode and are absorbed by the different parts of the body in proportion to the amount of solids contained therein. The bones contain more solids than the muscles, the muscles more solids than the fats, and the fats more than the blood. Then a well-timed skiagraph should show, not only the fact that light penetrates some substances more than others, but how much each absorbs as compared with another.

II.—The higher the vacuum of the tube the greater its power of penetration. The converse is also true. A tube with high vacuum penetrates all the soft parts, and to a greater or less extent the bones, while a low vacuum tube gives detail showing, not only the outline of the bone, but the structure of the bone, the muscles, and in some cases, connective tissue and fat.

III.—The further the solid is from the plate, the larger and more diffuse will be the shadow (rays obstructed by the solid) as registered on the plate.

This is shown in comparing a skiagraph of the wrist in pronation with one in supination. In the former, the pisiform being nearer the plate than the cuneiform, it casts a shadow with clearer cut edges and more detail.

In the latter, the cuneiform being nearer the plate, its shadow has more clearly cut edges and more detail than the pisiform.

IV.—The rays that strike a plate perpendicularly to the plane of its surface are more powerful than those that strike it at an angle, and the greater the angle the less powerful the rays.

This is shown in a skiagraph of a hand with the tube directly above the tips of the fingers. The rays falling perpendicularly nearly obliterate the phalanges, while the bones of the wrist and forearm cast a very dense shadow.

When the tube is over the wrist the rays falling perpendicularly through the wrist cast a shadow of nearly the same density as those passing at an angle through the phalanges, which are much smaller bones.

Information gained by a skiagraph in cases of fracture:

First.—In cases of doubtful diagnosis, to show whether or not there is a fracture, and if so, what it is.

Secondly.—To show the position of the fragments of the fractured bones as compared with the normal bones.

I.—Up to the present time it has been the height of the skiagrapher's ambition to show a fracture with the greatest amount of deformity, separation, overriding or displacement of the fragments. To do this the operator moves the tube, the limb, the fluorscope or plate, or the patient about until he gets " the best possible picture of the fracture," and then makes an exposure that may prove to the surgeon that the old way of diagnosticating fractures is unreliable, and that he (the surgeon) cannot detect through the soft parts even marked displacements of the fragments. This results in the surgeon's taking down the dressing only to find the contour of the parts good and, on mensuration, no shortening or lengthening of the fractured bone, and that the fragments are in good apposition, as can be made out by palpation. He may then put up the part as it was before and get rapid union with no deformity.

But, perhaps, influenced by the skiagraph, he may try to correct the deformity as shown in the picture, regardless of the contour of the part or palpation of the fractured ends; and find in the course of six or eight weeks that he has delayed union or has union with deformity.

If the surgeon uses his own judgment and the fracture unites with little or no deformity, the limb is as good as ever; but the plaintiff has a skiagraph which he carefully saves, to demonstrate in court that actual deformity and permanent injury exist. He refuses an examination by the defendant's surgeon, and when the case comes before the jury he produces this skiagraph, which shows not only a fracture—which nobody questions—but even a fracture with deformity and permanent injury, which really never has existed.

Admitting that this manipulation of the tube, plate, injured part, and body as a whole must be done to detect a fissure fracture or a complete fracture with absolutely no deformity, it should not be done in cases where there is a slight displacement of the fragments to exaggerate that deformity and show " a better picture of the fracture."

Under no circumstances should a skiagraph so made be presented to show the correct relative positions of the fractured fragments.

Some skiagraphers have gone a step further and made a skiagraph of a normal part corresponding to the injured one. This is a step in the right direction, but as they are not trying to show a fracture in this part, the positions of tube, plate, normal part and body as a whole will be different from those of the skiagraph of the injured part.

II.—To show the relative positions of the bones that are fractured compared with the normal part.

A surgeon never thinks of examining an injured limb for a fracture, without comparing it with the normal limb; but how often he accepts a skiagraph of an injured limb without having anything with which to compare it; and how much less familiar he is with a skiagraph than with the part itself. But unless the following principles are observed the danger of comparing the two is greater than when only one is shown.

If the following principles are heeded, however, and the tube, plate, part of the body to be skiagraphed, and the body itself are in exactly the same positions in the skiagraph of the normal as in that of the injured part, the slightest deformity or malposition may be shown, but not exaggerated.

The results of these skiagraphs are not so startling, but are far more satisfactory to the surgeon, showing only the actual positions of the bones and not exaggerating any slight deformity that may exist.

The errors may occur in either skiagraph, and may be simple or complex.

I have classified the errors that occur in skiagraphy according to their causes as follows:

I. Varying distance of tube from plate.
II. Varying direction of tube from plate.
III. Varying distance of tube from body.
IV. Varying direction of tube from body
    a, directly above.
    b, laterally.
    c, distally.
    d, proximally.
V. Varying distance of body from plate.
VI. Varying relation of one bone to another.
VII. Varying relation of the part skiagraphed to the body as a whole.
VIII. Varying the angle at which the rays strike the plate by tipping the plate.

I will try to demonstrate these errors diagrammatically, describing each diagram and noting, for example, the most common occurrences of these errors, and in most instances showing skiagraphs to prove that these errors really do occur.

(To be continued.)

NORMAL SALINE SOLUTION. A REVIEW OF SOME OF ITS CLINICAL USES.*

By E. PAYNE PALMER, M. D.,

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We, as physicians, are too prone to stray off after " false gods "—the proprietary article—in looking for remedies to meet our demands, and to overlook the more simple and cheaper remedies that will better fulfill our therapeutic requirements. In normal saline solution we have a therapeutic agent of inestimable value. Its ingredients are to be found in every household, and, because of its facility of preparation, it is always at our command.

Normal saline solution is a solution containing 6 or 7 parts of sodium chloride to 1000 of sterilized water. Various strengths of the sodium chloride have been used, but experience has taught that a solution of 0.6 or 0.7 per cent. of sodium chloride in water is the solution of choice to get the best results. " A 5 per 1000 produces the same physiologic action and possesses the same therapeutic effects as a 7 per 1000 solution. However, the physiologic effects which we consider the most important, as diuresis and thermic reaction, are not as rapidly produced nor as marked when the former solution is used as when the 7 per 1000 is employed " (Basc and Vedel). When the urgency of the case demands its immediate use, a solution of reasonable accuracy can be prepared by adding a heaping teaspoonful of sodium chloride to a quart of boiled and filtered water.

Physiological Effect.—Within a short time after the solution is administered the pulse becomes fuller, stronger, and more regular, the respirations are deeper, the skin becomes moist, and free perspiration usually follows. Blood pressure is raised, resulting in an increase in the force of the heart action, and a markedly increased diuresis, which hastens the elimination of toxines from the system. The increase in diuresis is noted in from three to five minutes after the solution is administered.

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* Read at the eleventh annual session of the Arizona Medical Association, held at Phœnix, Arizona, May 27, 28, 1903.

Indications.—The indications for the use of normal saline solution are numerous, and the sphere of usefulness increases as one becomes familiar with its action.

The most frequent indication for normal saline solution is to combat the effects of hæmorrhage. It is indicated in all forms of hæmorrhage, traumatic, operative, postoperative, postpartum, pulmonary, gastric, and intestinal. The hæmostatic action following the injection of normal saline solution is due to excitation of vasomotor constriction of the ruptured arterioles. As a hæmostatic in pulmonary, gastric, and intestinal hæmorrhage, where the source of hæmorrhage is not accessible, not more than 150 to 200 c. c. should be transfused at a time, and this transfusion may be repeated three or four times in twenty-four hours.

In shock, normal saline solution is a most valuable aid, especially so because of its stimulative effect on the heart and arterioles and its ability to raise the body temperature. Its timely use in this condition will save many lives.

In uræmia and puerperal eclampsia the frequently repeated injection of about 200 c. c. of normal saline solution will assist in stimulating the kidneys and skin to activity and will promote the excretion of toxines from the system. In no other conditions is the use of normal saline solution followed by more satisfactory results. The marked improvement in the pulse, temperature, and mental condition, with the disappearance of the toxic symptoms and the increase in the secretion of urine and sweat, will show how important this remedy is in the treatment of these two conditions.

In uræmia and puerperal eclampsia excellent results have been obtained by the so-called " depletory infusion," in which a vein is opened for the escape of the poisoned blood, a quantity of normal saline solution, equal to the amount of blood simultaneously withdrawn, being at the same time infused into the vein.

The " depletory infusion " has also given good results in lessening the toxic effects of poisoning from carbonic oxide, carbonic acid, chloroform, ether, chloral, belladonna, opium, and morphine. In such cases the saline solution dilutes the poison in the blood and furthers the elimination of the toxic substance through its diuretic and diaphoretic action.

In cholera, cholera morbus, cholera infantum, gastroenteritis and enterocolitis, where the bowel movements are so frequent and profuse as to drain the system and impair the strength, by the timely use of this remedy the excessive loss of the body fluids will be replaced and the strength of the patient improved.

In diabetic coma the transfusion of a litre of normal saline solution at a temperature of 100° F. will frequently restore consciousness for a short time and prolong life.

In renal congestion and suppression of urine the judicious use of normal saline solution is beneficial.

In severe burns, in which there is shock and great destruction of red blood corpuscles, normal saline solution may prove of service.

In the local treatment of burns, gauze saturated with normal saline solution makes an excellent dressing.

Prior to operations on anæmic patients it is well to infuse from 500 to 1000 c. c. of normal saline solution. It will enable them to withstand the shock and loss of blood incident to the operation.

An infusion apparatus and normal saline solution ready for use should be at hand at every major operation. If, during the operation, there is collapse or an unusual amount of hæmorrhage, the saline solution should be infused.

After operations resulting in the loss of a quantity of blood, where there is surgical shock and great weakness, about one litre of normal saline solution at a temperature of about 115° F. should be infused into the circulation.

A good practice to follow after prolonged operations is to give a high colon injection of about two litres of warm normal saline solution. Especially is this valuable when operating under septic conditions and in those cases of damaged kidneys where anæsthesia is absolutely necessary, and after which the kidneys may fail to perform their function properly or at all, the failure resulting in suppression of urine. You will find that when the high colon injection of warm normal saline solution is given thirst is not so intense, shock is lessened, the patient regains consciousness and strength more rapidly, and the kidneys act sooner and more freely, thereby ridding the system of the anæsthetic sooner than otherwise.

Because of its freedom from irritation to the tissues and non-interference with their physiological action, it commends itself as an inexpensive irrigating fluid for flushing out the body cavities during and after operations when necessary, for irrigating the urethra, bladder, vagina, uterus, and rectum, and for cleansing wounds.

In acute prostatitis the frequently repeated rectal irrigation, with normal saline solution at a temperature of 115° to 120° F., using from two to four litres at a time, will be followed by satisfactory results.

In acute and chronic ileocolitis, irrigation of the colon is one of our most valuable means of treatment. At least four litres of normal saline solution, at a temperature of 105° to 110° F., should be injected high into the colon through a rectal tube, and the injection should be repeated two or three times in twenty-four hours.

It is useful as a vehicle for remedies used subcutaneously and in the rectum, and also as a vehicle for nutrient enemata.

To render the urine bland prior to operations, give 200 c. c. of normal saline solution every three hours during the day for three days.

In chronic gastric catarrh a large glassful of hot normal saline solution, taken a half hour before each meal, will cleanse the stomach of an excess of mucous and increase its motility.

Temperature.—The temperature of the solution used must vary from 98° to 115° F., to suit conditions. In most cases the temperature of the solution should be about the same as the blood temperature. In shock and other conditions where we have a subnormal temperature the solution injected should have a temperature of 105° to 115° F. To prevent cooling of the normal saline solution as it passes through the tube, and to obtain an even temperature as it is injected, the lower end of the tube through which the solution passes should be placed in a vessel containing water of the same temperature as the normal saline solution. The temperature of the water in the vessel can be kept at the desired point by the gradual addition of hot water.

Quantity.—As with reference to the temperature, the quantity used must also vary to meet conditions. The usual amount given to adults should be from one half to one litre; to children the amount used should be in proportion to the age and weight. According to Hildebrand, the maximum quantity of normal saline solution that will be taken care of by the kidneys every fifteen minutes is one drachm of the solution to one pound of body weight. As before stated, we can have no fixed rule as to the quantity of solution administered, but Hildebrand's rule will frequently assist in fixing the dose. The pulse is our best guide as to the quantity to administer, and should always be closely watched during the administration of the solution.

Number of Injections.—It is often necessary to repeat the injections from one to three or four times in twenty-four hours, depending upon the conditions for which they are indicated.

Administration.—I will refer briefly to the advantages of the two principal routes of introducing normal saline solution into the system, taking for granted that each of you is familiar with the operation necessary for their proper performance, which must be done under strict aseptic precautions.

The Intravenous Route.—Because of the greater rapidity of action and the certainty of the solution entering the general circulation at once, the intravenous route is to be preferred in many cases, especially in urgent cases where the rapidity of action is desired.

The Subcutaneous Route, or Hypodermoclysis.—The subcutaneous route offers many advantages over the intravenous, and has to a great degree superseded it. This method of administration is more simple and does not look so much like an "operation" to the patient. It is devoid of some of the dangers which may follow the intravenous route. As the fluid must first be taken up by the lymphatics and enter the general circulation slowly, the danger of sudden and forcible stimulation of the heart and sudden increase in the blood pressure is avoided. There is no reaction following hypodermoclysis when done under strict aseptic precautions and followed by gentle massage, and it is ordinarily quite as effectual as the intravenous route; but as it is not so rapid in its action, it is not to be depended upon in desperate cases, where immediate action is necessary. The solution should be allowed to flow slowly and massage of the resulting tumor should be continued until the solution is absorbed.

23 EAST ADAMS STREET.

Minneapolis, Minn., City Hospital.—The addition to the city hospital will face Sixth Street and will stand immediately back of the administration building, which eventually will be erected, between two ward wings and on the site of the present Brackett house. The sum of $40,000 has been set aside to build the addition, with the exception of the clinical operating room. Bids have been invited about March 20th. The addition is to be two stories, with a high basement. It will be 45 by 161 feet, of St. Louis light brick and thorough fireproof construction. It will be connected on the basement level with the buildings now standing. It will hold the kitchen, laundry, dynamo, and engine room, quarters for nurses, cells for inebriates and insane patients, and a modern operating amphitheatre. This will not be completed at once. The kitchen will have slate floors, six foot tile wainscoting and light on two sides. The board contemplates the installation of two dynamos, each of which will operate 1,000 lights and the three electric elevators.

SOME CLINICAL FEATURES OF DISEASES OF THE GALLBLADDER AND BILE DUCTS DUE TO GALLSTONES, AND THE INDICATIONS FOR THEIR SURGICAL TREATMENT.*

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During the last five years there have been great advances in our knowledge of cholelithiasis and its complications. We are beginning to recognize that many cases of indefinite gastric and intestinal symptoms are really due to diseases of the gallbladder, and medical opinion is travelling along the same road that it did a decade or so ago in the case of the vermiform appendix, when a large number of irregular intestinal symptoms were finally recognized as being caused by disease of that organ. The indications for operative interference have also been much extended, but there is not, as yet, a full agreement on the limitations of medical and the indications for surgical treatment. The following short paper is based upon cases, seen upon the second surgical service of Dr. Lilienthal, at the Mount Sinai Hospital, and in my private practice, during the past two years.

The gallbladder shares the fate of the stomach, the bladder, the pelvis of the kidney, and the vermiform appendix. So long as there is nothing which prevents these organs from emptying themselves of their contents, they are very apt to remain normal; lack of the power to do so is often followed by infection and inflammation.

In the case of the appendix the best surgical treatment is the removal of the diseased and useless organ, if possible, and medical men are becoming more and more convinced that the interval between the diagnosis of appendicitis and an operation must often be a very short one. The question might well be asked, Why not remove the gallbladder early? The body can do perfectly well without it; the removal of the organ at an early stage of disease will prevent recurrent attacks, the danger of a possible severe attack, the possibility and probability of the passage of stones from the gallbladder into the common bile duct with its increased dangers. It will do away with the well-known tendency to carcinoma of the gallbladder in later life. Some writers (Riedel, Park, Winiwarter) believe that cholecystectomy should always be done early, in most cases soon after the first symptoms of stone in the gallbladder. While few will agree with them in this extreme—and up to the present time unjustified—view, most operators are beginning to believe that the indications for the removal of the gallbladder should be much extended.[1] The mortality from primary cholecystectomy in acute disease of that organ is as small as that of cholecystotomy and drainage, and in disease limited to the gallbladder and cystic duct, is no larger than that of appendicectomy in acute appendicitis. Thus, twenty-four cholecystectomies for uncomplicated acute or chronic disease were done on the second surgical service of Dr. Lilienthal, at Mt. Sinai Hospital, during the past eighteen months without a death.

The cases upon which this paper is based are arranged in the following classes:

I. *Cases Seen in the First Mild Attack.*—In these patients the indications for surgical treatment are very limited. If the symptoms are of mild character, and very slight or no symptoms of peritoneal irritation appear, medical treatment is usually indicated. Very few of these patients are seen by the surgeon, most of them remain in the hands of the internal practitioner. Under medical treatment the attack usually yields, the inflammation in the gallbladder subsides, the stones—if present—either pass into the intestine, or (in about 70 per cent. of the cases) remain in the cystic duct or drop back into the gallbladder and remain quiescent, and the swollen gallbladder disappears. Probably 10 per cent. of these patients remain permanently well. Jaundice occurs in less than one third of the cases, and when present is due to the inflammatory swelling of the mucous membrane of the common bile duct. In many of these patients we used formerly to diagnosticate their trouble as gastric or intestinal colics, but we now recognize them in their true light as gallstone colics.

II. *Cases Seen First in a Subsequent Mild Attack.*—Some patients are seen in a mild attack and give the history of having had a large number of mild attacks in some of which they perhaps passed a small stone or several stones. In these cases it is allowable to wait a long time before recommending surgical interference—especially if the intervals between the attacks are considerable and the patient is able to follow out the medical treatment prescribed for him. Cases of this class most often remain under the care of the internist, but the surgeon will see quite a number of these patients, will be asked as to the advisability of an operation, and will often have to give the weight of his opinion against operation. Although we know that it is very possible that the patient will have further and more severe attacks in the future, we must advise delay, as it is perfectly possible that in this last attack the stone was passed, and that the patient will thereafter remain perfectly well. The time may not be far distant, however, when most cases of this kind will be promptly and permanently cured by the removal of the gallbladder.

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* Read at a meeting of the Harlem Medical Association, May, 1903.

[1] It need hardly be mentioned that cholecystectomy should never be done unless the common bile duct is patent or has been rendered patent.

III. *Cases with Repeated Severe Attacks.*—In a third class of cases the attacks of colic or pain are so frequent that the patient is either incapacitated from doing his work or the general health is markedly affected. In these patients the frequent use of morphine may be necessary, and there is the danger that a drug habit may be acquired. Cholecystectomy is the operation of choice, and by the removal of the organ every advantage will be gained that is to be obtained by the removal of a diseased appendix vermiformis giving rise to recurring attacks of appendicular trouble. The following case is an example:

CASE I.—H. C., married, mother of eleven children, admitted to the second surgical service of Mt. Sinai Hospital on September 19, 1902, with a history of frequent attacks of pain in the right hypochondriac region for the last thirty years. For one year the attacks had occurred every few weeks and were sometimes accompanied by jaundice. The patient had become a chronic invalid. The last attack was of two days' standing. The gallbladder was enlarged and very tender, there was slight icterus T., 102.2° F.; P., 98. Operation was recommended, and at the operation I removed a very large and thickened gallbladder containing four large and numerous small stones. The patient made a rapid and uninterrupted recovery and has remained well up to the present time (May 1st).

IV. *Prolonged Cases with Sudden Change of Character.*—In some patients the disease runs the course of a mild attack for a few days, but the symptoms are prolonged until they gradually or suddenly change their character. The fever remains more or less continuous, the tenderness over the gallbladder becomes more marked, the pulse begins to rise, and signs of invasion of the peritonæum appear. In these patients it is sometimes difficult to differentiate the disease from acute appendicitis. There is a rapid pulse, more or less fever, marked rigidity of the right rectus muscle or of both recti, pain and tenderness along the right side of the abdomen—perhaps below the level of the umbilicus—vomiting, etc. These cases always require early operative interference. The gallbladder and more or less of the cystic duct will usually be found to be much diseased; these organs may contain a greater or less number of calculi, and thin or thick infectious bile or more or less purulent fluid. The walls of the gallbladder may be the seat of a variety of pathological changes, from slight inflammatory thickening to localized or extensive necrosis of the mucous membrane or of the entire walls of the organ. There are usually fresh adhesions to the neighboring structures—pylorus, duodenum, hepatic flexure of the colon. The following is the history of a case of this class:

CASE II.—R. H., admitted July 19, 1902, discharged August 23, 1902. For four days patient, a very stout woman, had had severe colicky pain in the region of the gallbladder without jaundice. It was her first attack of this kind. She had a severe chill a few hours before her admission to the hospital. On admission, T. 101.4° F.; P. 128; a large distended and very tender gallbladder was to be felt; the right rectus muscle was distinctly rigid; there was slight tenderness over the entire right side of the abdomen. Operation was done at once, and a large distended gallbladder, with numerous deep ulcerations of the mucous membrane and with a large calculus in the cystic duct, was removed by me. The patient made a rapid recovery and was discharged cured about four weeks after the operation.

If operation is delayed in these cases, perforation of the gallbladder may occur with formation of a pericholecystic abscess, perforation into one of the neighboring organs, or rupture into the general peritoneal cavity with resulting peritoneal infection, or infection of the liver itself. The clinical history of the following case shows that the patient should have been referred to the surgeon much earlier than was done:

CASE III.—Fanny H., admitted to hospital and operated on on April 13, 1903, in her third attack of gallstone disease of three weeks and a half's standing. For two and a half weeks the disease had run the course of a mild cholecystitis with occasional slight rises of temperature and without jaundice. One week before admission, the pain had become more severe and continuous, the fever remained continuous, and the patient had begun to look bad. Two days before admission, the abdomen had become distended and generally tender, the pulse had become more rapid, and the patient had begun to vomit. She had several chills followed by sweating. On admission, T. 102.8° F.; P. 130; abdomen much distended and very tender and rigid; liver enlarged to percussion and palpation; tenderness most marked in the right hypochondriac region where a small mass was to be indistinctly felt. At the operation, I found the gallbladder gangrenous and perforated, there was an abscess between the organ and the colon, which contained two large calculi, there was a communication between the gallbladder and the second portion of the duodenum. As the poor condition of the patient did not allow of extended manipulations, the calculi were removed and the abscess drained. During the first twelve hours, the patient's condition remained very poor. Improvement then began and continued. The communication between the gallbladder and the duodenum was closed at the expiration of six weeks.

V. *Patients with a Persistent Biliary Fistula from a Previous Operation.*—In these cases there is a discharge of either bile or mucus from the fistula.

If the discharge is mucous, the persistence of the fistula generally means persistent disease of the gallbladder or cystic duct, perhaps with obliteration of the cystic duct or obstruction of the same by a large calculus. If the discharge is biliary and there are clay-colored stools, there is probably a common duct obstruction; if the discharge is biliary but there are no clay-colored stools, there is persistent disease of the gallbladder or bile ducts. Although some patients will get along very well for considerable lengths of time with a biliary fistula, the discomfort from the continuous discharge is always very great, and the general health will suffer sooner or later. Hence—unless there are special contraindications—a biliary fistula which refuses to heal in spite of all treatment requires surgical interference. The operation that usually has to be done is removal of the gallblader and the calculus in the cystic duct, if there is one, or removal of the common duct stone by choledochotomy and drainage, perhaps with removal of the gallbladder. It need hardly be mentioned that the foregoing remarks do not refer to those cases in which the biliary fistula is due to malignant disease of the bile passages or head of the pancreas, or where the fistula has been made as a therapeutic measure in chronic interstitial inflammation of the head of the pancreas (Mayo Robson).

In one patient with a persistent fistula, I removed the gallbladder after dividing a large number of adhesions in which the organ was enveloped. Recovery from the operation was prompt, but the patient's family physician tells me that the patient has occasional attacks of pain in the gallbladder region, due to the adhesions. In a second case the fistula was due to a stone in the common bile duct; here the stone was removed by choledochotomy with drainage and the gallbladder was extirpated. The patient was a very stout woman; she died suddenly twenty-four hours after the operation from cerebral embolism.

VI. *Cases with Adhesions Between the Gallbladder and the Neighboring Organs Not Due to Disease of the Gallbladder.*—About one year ago I had occasion to operate upon a patient whose symptoms pointed toward chronic obstruction of the common bile duct. At the operation, the obstruction was found to be due to adhesions between the gallbladder and the anterior wall of the stomach. As the gallbladder appeared to be normal, the adhesions were simply divided between ligatures and the abdomen closed. The patient was well when last heard from—about six months after the operation.

VII. *Cases of Calculous Obstruction of the Common Duct.*—Thus far, mention has been made of only a few phases of disease of the gallbladder and cystic duct due to calculi. When the stone passes into the common bile duct, conditions at once become more serious, unless the stone passes through the common duct into the intestine. The stone may remain quiescent in the common duct for a long time, but this is not so apt to occur as with a stone in the gallbladder, for the continual passage of bile along the duct is a constant disturbing factor. The calculus may, on the other hand, cause a chronic obstruction of the common bile duct with the characteristic symptoms of colic, enlargement of the liver, jaundice, and clay-colored stools.

If the symptoms of obstruction of the common bile duct are acute, it is always advisable to treat the patient medically for at least from one to two weeks unless symptoms of sepsis or peritoneal infection appear. The obstruction may be mainly due to the traumatic inflammatory swelling of the mucous membrane of the duct. As soon as the swelling has decreased, the passage of the stone into the intestine may become possible. Or the stone had already passed through the duct, and the symptoms are due altogether to the inflammatory swelling of the common bile duct. If a case of this kind were operated upon, nothing would be found as a justification for the surgical interference.

In the majority of instances, the clinical picture of chronic obstruction of the common bile duct is quite different from that of obstruction due to neoplasm. The liver is usually enlarged and the gallbladder contracted and not palpable. Slowly increasing jaundice with a painless onset—especially if accompanied by ascites—must always give rise to the suspicion of new growth of the liver, bile ducts, or head of the pancreas. In common bile duct obstruction by stone, the operative indications are the removal of the stone or stones by incision of the common duct with drainage of the ducts, and treatment of the gallbladder according to the general principles previously mentioned. It is advisable to drain the common and hepatic ducts in most instances, as small stones might otherwise be left behind (Kehr).

Conclusions.—The space allowed this paper has necessitated the mention of only a few phases of gallstone disease, hence many points of importance have been omitted. I have attempted to bring out the questions in therapeutics most often encountered, and have attempted to formulate the indications for medical and for operative treatment. These indications might be summed up as follows:

No operation should be performed in

I. Cases with mild symptoms, especially if the diagnosis is in doubt.

II. Cases with recurrent mild attacks with long intervals of health.

III. Acute obstruction of the common bile duct.

IV. Any disease which would contraindicate a surgical operation of any kind unless under vital indications.

Operative interference is *indicated* in

I. Acute inflammatory diseases of the gallbladder with signs of severe infection or peritoneal invasion.

II. Cases with very frequent mild attacks, which incapacitate the patient from work, which are accompanied by much loss of flesh and strength, or in which the patient is in danger of acquiring the morphine habit.

III. Persistent biliary fistula.

IV. Rare cases in which the symptoms are due to adhesions of the normal gallbladder to neighboring organs.

V. Chronic obstruction of the common bile duct.

It is probable that, in the future, medical men will agree upon more early and more radical treatment of many cases of gallstone disease, and that the removal of the gallbladder—the *fons et origo* of gallstones in the vast majority of cases—will be done more often. The indications for cholecystectomy will hence be much extended, and operations upon the common bile duct become of necessity less frequent.

Madison Avenue and Sixty-third Street.

THE INFLUENCE OF TYPHOID FEVER ON THE NERVOUS SYSTEM.*

By C. C. HERSMAN, M. D.,
PITTSBURGH, PA.

Typhoid fever is caused by the introduction of a specific poison. The disease is most likely derived from preexisting cases, impure air, food, and water, the latter by far the most prolific cause.

This poison in most cases attacks the nervous system first, as evidenced by the prodromal aches and pains, that of the head being severest, sometimes uncontrollably so. The optic nerve is usually quite sensitive, photophobia being a prominent symptom.

Not infrequently we have the cardiac ganglion and nerve supply of the heart in general supercharged with the poison, causing a very rapid and weak heart, which greatly jeopardizes the chances of recovery.

The psychoses are the initial delirium, which may be a very early symptom, the febrile delirium which usually comes in the second or third week, which amounts to a confused condition of the mind, a melancholia, or a violent motor excitement, the low muttering delirium so common in fatal typhoid.

Convalescence may be disturbed by a delirium which is due to the exhausted condition. Mania and melancholia are often seen in the inherited neurotic type. Meningitis is a grave complication. I have treated two such cases within the last two years. A boy, four years old, at the end of the first week developed a slight pneumonia in the right lung, which cleared up promptly, to be followed by an attack on the left, slightly more severe. However, at the end of the third week the lungs were clear. A violent headache set in with the symptoms of a severe meningitis, finally resulting in a paralysis of the left side which was total for three days. The recovery was gradual and complete.

Mary N., thirteen years old, had meningitis when six years old, leaving her a weak, irritable, and very thin, slender child. After the second week of typhoid she developed a severe meningitis with maniacal delirium which was intense. This lasted about two weeks, when she died.

Friedländer, of Berlin, gives eighty per cent. deaths in typhoid meningitis.

Among the neuroses we find epilepsy, hysteria, tabes, multiple sclerosis, and typhoid spine, described by Gibney.

Friedländer also mentions infantile spinal paralysis, paralysis agitans, myotonia, chorea, tetany, and various types of anæsthesia, hyperæsthesia, neuralgia, besides trophic and vasomotor neuroses.

The hearing is often involved and sometimes seriously so. It is thought by some that typhoid otitis media is the usual cause of meningitis, but it was not the cause in the two cases reported. It is doubtful if middle ear disease is the cause, except in a minority of cases, that minority possibly small. A tuberculous predisposition in children is a fruitful source of typhoid meningitis, as is a chill which is predisposed to pneumonia.

I often find sore feet and calf muscles during convalescence, the sore feet continuing in many cases for some weeks after the patients are around. Hemiplegia is not an infrequent complication during convalescence.

Trephining is of doubtful benefit. Multiple neuritis is a complication which I have seen in several cases; three cases within as many years that involved both upper and lower extremities, rendering the patients almost helpless. The lower extremities suffer more than the upper.

Foot drop is almost always present, wrist drop occasionally.

I have seen several cases with less extensive involvement, but have never seen both lower extremities involved without the presence of foot drop. At the present time I have a patient in whom the ulnar nerves are involved. There is no pain, but there is a tingling, numb sensation and the ulnar nerves (crazy-bones) at the elbows are analgetic.

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* Read at a meeting of the West Virginia State Medical Society, at Parkersburg, May 22, 1902.

I have seen numerous cases of insanity brought to the hospitals with which I have been connected. If the insanity is free from hereditary taint the prognosis is favorable, otherwise not. At present I have a patient in St. Francis's Hospital suffering from acute dementia. There is an almost total loss of mentality. He is wholly incompetent to come to the table for his meals without attention. He is unable to carry on a conversation. It is even difficult to get a "yes" or a "no" from him, and then only in an undertone, so that without close attention it would not be understood.

Many other forms of neurotic tendencies are mentioned in the literature extant, but are not of sufficient frequency to interest the general practioner.

704 Hamilton Building.

Therapeutical Notes.

Tabes Dorsalis.—E. Fargues, in *Gazette médicale de Nantes,* for January 30, 1904, insists that tabes is curable by the use of strong and long continued hypodermic injections of mercury, and advises:

℞ Mercury benzoate	1 gramme (15 grains);
Ammonium benzoate	5 grammes (75 grains);
Sterilized water, enough to make	100 grammes ($3^1/_3$ ounces).

M. Inject deeply into buttock, beginning with 15 minims daily and increasing gradually to 2 drachms.

Mercury biniodide may be used:

℞ Mercury biniodide	1 gramme (15 grains);
Sodium iodide, enough to dissolve the mercury;	
Sterilized water, to make	100 grammes ($3^1/_3$ ounces).

M. Dose may be increased to 90 minims daily.

Calomel, says the author, is the most valuable of the mercury salts, and should be used in grave cases, notwithstanding the pain, abscesses, and other drawbacks to its injection.

Cough in Tuberculosis.—D. Barty King, in *Scottish Medical and Surgical Journal,* for March, 1904, gives several prescriptions. For excessive coughing in the morning, Dr. King recommends sipping slowly a cup of hot milk to which 15 to 30 grains of sodium chloride has been added. The pill of ipecac and squills, of the B. P., 5 grains, he has found to be the best remedy for cough during the night. The hot milk is efficacious also for the cough sometimes experienced on getting into bed, and the patient is recommended to recline half sitting up for a few moments before stretching out. For excessive cough during the day:

℞ Potassium citrate	15 grains;
Spirit of mindererus	2 drachms;
Tincture of squills	12 minims;
Wine of ipecac	10 minims;
Anise water, enough to make	1 ounce.

M. One dose.

Apomorphine is best in combination:

℞ Apomorphine hydrochloride	$^1/_{24}$ grain;
Morphine hydrochloride	$^1/_8$ grain;
Dilute hydrochloric acid	2 minims;
Oxymel	20 minims;
Glycerin	10 minims;
Water, enough to make	1 drachm.

M. One dose.

Another efficacious combination is:

℞ Apomorphine hydrochloride	$^1/_{24}$ grain;
Heroin	$^1/_{16}$ grain;
Pure terebene	10 minims;
Mucilage of acacia	1 drachm;
Syrup of tolu	1 drachm;
Camphor water, enough to make	½ ounce.

M. One dose.

Apocodeine was beneficial in this mixture:

℞ Apocodeine	$^1/_{10}$ grain;
Terebene	x minims;
Mucilage of acacia	1 drachm;
Camphor water, enough to make	½ ounce.

M. One dose.

Dr. King has found that a cough that persists while the patient is at rest will often be greatly alleviated by moderate exercise. When patients can be cared for in a sanatorium, drugs are hardly needed.

For Symptomatic Relief in Cancer of the Stomach.—Dr. G. P. Coronulas *(Revue pratique d'obstétrique et de gynécologie)*, in a paper on radiotherapy in surgery, read before the *Société de médecine et de chirurgie pratiques*, found the following treatment of palliative value in a case of cancer of the stomach:

℞ Wine of pepsin	of each, equal parts.
Wine of papain	
Syrup of diacodium	

M. Three tablespoonfuls to be taken in the twenty-four hours.

This treatment, combined with oleonarcotic frictions of the abdominal walls, caused an amelioration of the morbid symptoms, but lost its action in a few months.

For Cholelithiasis.—Ἰατρικὴ πρόοδος for February 1st ascribes the following to Kraus:

℞ Calomel	50 centigrammes (7½ grains);
Podophyllin Euonymin } of each	25 centigrammes (3¾ grains);
Extract of belladonna	15 centigrammes (2¼ grains);
Licorice powder	q. s.

M. Make into 10 pills. One pill to be taken every night at bedtime.

For Dilatation of the Stomach.—Dr. J. Seymour Emans *(Post-Graduate,* February), in a discussion at the New York Post-Graduate Clinical Society on Dr. A. Rose's paper on Gastritis, said that as regarded the value of medical treatment in cases of dilated stomach, he recalled one case where the following method resulted in a gain of eight pounds in a single week:

℞ Calcined magnesia	1 drachm;
Bismuth subnitrate	½ drachm;
Sodium bicarbonate	2 drachms;
Extract of nux vomica	10 grains.

M. Sig. Half a teaspoonful before meals, and after meals 10 minims of dilute hydrochloric acid in wine of pepsin. In addition to this, the patient lived on a dry diet.

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AN IMPENDING INJUSTICE TO THE VOLUNTEER SURGEONS OF THE SPANISH WAR.

A medical officer of the army has called our attention to a proposed piece of legislation which seems to threaten the nullification of a certain reasonable privilege previously accorded to volunteer surgeons of the Spanish war and the Philippine service who have since entered the regular army. Concerning such men there was in an act that came into force in February, 1901, a provision to the effect that "the period during which any assistant surgeon shall have served as a surgeon or assistant surgeon of volunteers during the war with Spain or since shall be counted as a portion of the five years required to entitle him to the rank of captain." It was this provision, says our correspondent, that attracted many of the volunteer medical officers into the regular service. The benefit of the provision is in danger of being done away with by the enactment of a pending bill "to increase the efficiency of the Medical Department of the United States Army," which will require these few men to serve between seven and eight years—counting their volunteer service—for their captaincy.

We do not presume to say that there may not be reasons for not allowing the length of a man's volunteer service as a medical officer to count in the time required to elapse before he can be eligible for promotion, but it certainly does seem that this definite promise made in an act of Congress ought not to be annulled except, indeed, as may concern men who in the future enter the regular corps from the volunteer service.

BOVINE TUBERCULOSIS AND THE PUBLIC HEALTH.

For the last three years, in his capacity as chairman of the committee on animal diseases and animal food of the American Public Health Association, Dr. D. E. Salmon, chief of the Bureau of Animal Industry of the Department of Agriculture, has reported annually on the relations of tuberculosis disease in cattle to the public health. The three reports have now been collated and published by the bureau. In them the author considers the extent of bovine tuberculosis in Europe and the United States, the effect of products of diseased animals upon the health of consumers without reference to the direct transmission of a contagious disease, the accidental infection of man by inoculation with bovine bacilli, the infection of man by consuming the milk of tuberculous cows, and the results of scientific experiments with regard to the transmission of tuberculosis from man to bovine animals and vice versa.

We have not space for the consideration of all these features of Dr. Salmon's very careful work, but we may say in general terms that the practical conclusion to be drawn from his investigations is to the effect that the danger is real of infection of human beings from cattle, especially from cows with tuberculous udders. Quite a number of undoubted instances of the conveyance of tuberculous disease from the bovine animal to man are cited, but Dr. Salmon argues—and his contention, in our opinion, is thoroughly well founded—that even if such conveyance of specific disease had been shown to be impossible, it by no means follows that food products from tuberculous animals are harmless to man and their consumption allowable, although Koch's utterances on the distinctions between human and bovine tuberculosis have already been used to excuse the sale of tuberculous meat and milk. Regardless of the communicability of the specific disease from the quadruped to man; such products should not be admitted to be marketable.

"There is no argument," says Dr. Salmon, "to justify the sale of milk secreted by tuberculous udders, reeking with pus and the microorganisms which it contains, changed in its chemical composition, and unsavory to every civilized person. The question of the desirability of measures against bovine tuberculosis as a part of the campaign against human tuberculosis is a thing by itself and entirely distinct from the desirability of such measures from an economic and general public health standpoint." There can, we think, be no gainsaying such propositions as these, supported as they are by the general sense of civilized people.

ANTITETANIC SERUM.

The present drift of opinion seems to be to the effect that tetanus antitoxine, while probably of considerable prophylactic efficacy, is of little use as a curative agent. We have hardly been prepared, however, to recognize that it might have an injurious effect when administered after the development of the disease. But such an action was imputed to it in a case related by M. Potherat at a recent meeting of the Paris Society of Surgery (*Semaine médicale*, March 9th). It was that of a lad sixteen years old, who was attacked with tetanus in eight days after receiving a gunshot injury of the palm of the hand. The patient entered a hospital, in M. Potherat's service, on the following day, when ten cubic centimetres of antitetanic serum were injected. Far from being mitigated, the phenomena of the disease seemed rather to be aggravated. The lad finally recovered under the chloral treatment.

Most of the speakers at the meeting were dubious as to the curative action of tetanus antitoxine, though M. Lucas-Championnière thought it possible, attaching importance to the dose injected. The present tendency, he remarked, seemed to be to employ doses much larger than at first, but it does not clearly appear from the report whether or not the speaker approved of this tendency. A prime fact in support of the preventive efficiency of the antitoxine was thought by M. Labbé to be the disappearance of tetanus after castration in horses, since its injection had been employed as a routine prophylactic measure, but on this point M. Terrier remarked that the cessation of the disease due to that cause had coincided with the adoption of the practice of performing the operation aseptically. However, such a coincidence does not, it appears to us, do away with the force of M. Labbé's argument.

Recent experience in the immediate topical employment of the antitoxine in cases of toy pistol injuries appears to support our trust in its prophylactic value, so that at all events we should not consider it wise to dispense with its employment. Its supposed aggravation of the disease in the instance reported by M. Potherat—in which, indeed, so far as the report goes, only one injection was given—may well have been apparent rather than real. Possibly the result was the effect of the mere puncture with the hypodermic needle, for in tetanus any irritation is capable of aggravating the spasm for the time being. Certainly such an instance should not count for much in leading us to give up the use of the serum as a curative agent, and in all probability it will not.

THE ORIGIN OF SYPHILIS.

The primordial genesis of this dire scourge of the human race is a subject which has very often, and very naturally, engaged the attention of professional specialists. And the problem of its origin cannot even now be said to have received a satisfactory solution. The historic mystery of its first appearance, and the secretive factor necessarily connected with individual infection, have especially contributed to its prolonged sojourn amongst us. All students of the history of medicine—as all true members of our profession should be—are familiar with the old story that the lues venerea was imported to Europe from Hayti by the crew of Christopher Columbus; that the infection was communicated to the French besiegers by the Spanish garrison of Naples, in 1494; and that, from that focus, it was rapidly dispersed throughout Europe. But it was only after thirty years had elapsed from the date of the introduction of the "French evil" into Italy, and its baptism with the name of "morbus gallicus," that the idea of its importation from the newly discovered Western Continent appears to have found its way into print. During the first quarter of the sixteenth century—down to 1525, and, in some instances, later still—the various medical authorities who wrote on the subject offered a great many varieties indeed of theoretical and fanciful explanation of the origin of the new venereal plague. The catalogue of "causes" is a long and somewhat gruesomely amusing one; but the assertion of its growth from an American germ is conspicuously absent. Those of our readers who have some knowledge of the hopelessly entangled connection of medicine with mysticism, metaphysics, theology, astrology, and alchemy, which prevailed during the darkly interesting centuries of the reign of scholasticism, are, of course, prepared to grasp the central factor in the generation of the inspired confidence with which two of the most prominent and most learned physicians of that age announced their belief that the origin of the "French disease" was due to the close conjunction of the sun with Mercury, Jupiter, and Saturn, which happened to take place in the year 1483. As it so happened that the year in which the great initial epidemic of venereal disease spread over Italy was also one characterized by exceptionally heavy rains and consequent inundation, the still more famous physician Nicolaus Leonicenus discarded the astrological theory of Corradino Gillini and Gaspare Torella, and advanced the less elevated meteorological one that the outbreak of this foul disorder was really engendered by the excessive amount of moisture then existing—in the heavens above, and in, as well as on, the earth beneath. The great reputation of this physician governed the opinions of many subsequent "authorities." We next find Manardi and Paracelsus both ascribing the origin of the new disease to the intercourse of a leprous male with a prostitute—the former knew of the case by personal acquaintance—the gentleman was a Valentinian by birth; the evidence obtained by Paracelsus was similar in origin, but the male partner in his case was of French nativity. The learned and deservedly famous Antonius Musa Brasavola, of Ferrara, informed the professional world that the original epidemic of the French evil spread from the person of a female camp follower of the French army at the siege of Naples. The female in question had suffered from an abscess at the mouth of the uterus. But a widely divergent exploration of the source was furnished by Gabriel Falloppius, of Modena, the celebrated anatomist and physician, whose name has become immortalized in connection with the human oviduct. He avers that the Spaniards, at the time when they were hard pressed by their French besiegers, poisoned the wells from which the latter obtained their water supply, and that the new epidemic arose from that source only. The celebrated physician of Pope Clement VIII, Andrea Cesalpino—one of the foremost claimants to the discovery of the circulation of the blood—tells us that he learned from those who were present at the siege of Naples and the other operations of that campaign that the disease really originated at the siege of Somma, a village of the Vesuvian territory. A great quantity of an excellent, and much coveted, Greek wine was shut up there. One night the besieged Spanish garrison managed to effect their escape, leaving behind them the greater part of their wine—which they had previously mingled with the blood of the sick of San Lazaro. The French besiegers, on entering the place next dav, with the usual pillaging instincts of "that dissipated nation," drank freely of the luscious wine; after which event they soon developed venereal symptoms. The learned Bolognese physician, Leonardo Fioravanti, states that he was informed by the son of a person who had been sutler to the army of Alfonso, King of Naples, that when the supply of meat began to run short on account of the prolongation of the war, this sutler supplied both camps with dressed human flesh instead. The unconscious cannibalism which resulted from the gruesome fraud so effected was the immediate cause of the development of the epidemic of "morbus gallicus." The famous Lord Chancellor Bacon quotes this story, as he does so many other "old wives' tales," with patronizing credulity; and tells us, too, that the human flesh supplied on that occasion was that of men killed in Barbary, and had been prepared and dressed after the manner of tunny fish.

A strange conjunction of events of thrilling historical importance it surely was,—that Europe should have been almost simultaneously affected (and inflicted) by the conquest of a new enemy, the Turks; the discovery of a new Continent, America; the infection of a new disease, syphilis; the introduction of a new art, more revolutionary and iconoclastic than any of its forerunners, printing; and the propagation of the new theological doctrines which collectively constituted the "Reformation." Whether the "morbus gallicus" was really new to Europe is a question which, as of course most of our readers know, is even now strongly debated; the description of disease in the classical ages are generally rather vague, and lesions of the genital organs would probably be dealt with in less detail than almost any other. But the public castigators of the type of Juvenal and Martial offer many very significant allusions. The lines of Catullus, in which he so mercilessly attacks the morals of Julius Cæsar, are, unquestionably, very suggestive:

> ". . . *maculæ* pares utrisque
> Urbana altera, et illa foramina,
> *Impressæ resident nec eluentur.*"

The great French geographer, André Thevit, informs us that the French evil was endemic in Africa, along the regions bordering the river Senegal, I. Bonzius, who was physician to the Dutch settlement in the East Indies, states that the same disease was endemic in Amboyna and the Moluccas.

And Cloyer, the first physician of the Dutch colony in Java, tells us that the venereal contagion was a natural endemic product of that great island, and as common there as the quotidian ague. We are told by Herrera that Magellan and his crew—in the first circumnavigation of the globe—landed at Timor, an island of the Moluccan Archipelago, and there found a great number of the native inhabitants affected with the "French disease," although previously unacquainted with Europeans of any nationality! Astruc, the author of the classical work on *Lues Venerea,* questioned Forneau on the subject, who had long lived among the Chinese, and had investigated customs and penetrated their secrets as only a French Jesuit can. He was told that the Chinese physicians believed that the disease had existed there from the earliest antiquity; the author of their oldest books referred to it as an ancient disease.

Turning our attention to the names of more sacred countries and persons, we find theological authorities of the greatest learning and erudition defending the opinion that the multitudinous cutaneous ills from which Job suffered were genuine syphilitic lesions. So firmly was that idea rooted in the Italian mind at the time of the original outbreak of the epidemic of the "morbus gallicus" that we have the testimony of the contemporary author, Fulgentio, to the effect that, even from the beginning, some called it "morbus Sancti Jobi." Since then, other saintly names have been attached to the disorder; it has at various times been referred to as "the disease of St. Mevius," of St. Roch, of St. Sementius. From the original historic locus of its development it has also been called the "morbus neopolitanus"; and from the hypothetical Spanish-American importation it received the compound epithet of "scabies hispanica." The racial antipathies of dirt-throwing patriots sometimes transferred the prevailing version of the association to other nationalities, and replaced the Gallic cognomen by that derived from the people whom they most detested. Thus it was sometimes called the "German disease," "Polish disease," "Turkish disease"; by the Turks, the "Christian disease," and so on. The name of syphilis, which even to the present day remains the *pons asinorum* of surgical etymologists, appears to have been first popularized, if not invented, by Fracastorio. But whether the loathsome plague was one of local West Indian origin, as has been so frequently and so strenuously maintained, or of cosmopolitan diffusion, which seems more likely, it is one which owes its existence to unclean contact; and is, accordingly, absolutely preventible.

John Knott.

Dublin.

NEWSPAPER COMMENT AS A PROFESSIONAL STIMULUS.

We read that in a certain town in Illinois a discussion has arisen regarding the mention in newspaper reports of the name of the attending physician of an accident case. One doctor is quoted as saying that the statement in a newspaper of the name of the surgeon involved "would spur him on to greater efforts to secure the complete recovery of his patient."

We always hesitate to comment on newspaper quotations of the alleged statements of physicians; but if any member of our profession made the foregoing remark he should instantly matriculate into some profession or business where the lack of journalistic comment, which is so stimulating to him, would not necessarily imperil the lives of others. The remarks exhibit a mental attitude that we cannot harmonize with our concept of any physician, however unfit.

VACCINAL DELIRIUM.

It appears that there are on record a few cases of psychical disturbance seemingly due to vaccination, but they must be exceedingly rare. Régis (*Journal de médecine de Bordeaux,* 1903, No. 30; *Zentralblatt für innere Medizin,* March 12th) reports three cases, two in adults and one in a child three years old. The delirium came on with the inflammatory stage of the pocks, and lasted two or three days, subsiding with the occurrence of suppuration. It was aggravated at night. The subjects had always been healthy, and had shown no neuropathic signs.

ACTINOMYCOSIS IN ARGENTINA.

Cranwell (*Revista de la Sociedad Medica Argentina,* May-June, 1903; *Zentralblatt für innere Medizin,* March 12th, 1904) thinks that in a few years actinomycosis will be a common disease in Argentina—meaning, we presume, in the human subject. Apparently he bases his prophecy upon the fact that in 1901 537 cases were observed among 515,624 cattle. We trust that efficient measures will be taken to prevent the extensive communication of the disease to human beings.

A MEDICAL COMPOSER.

We have often taken occasion to commend the incursions of medical men into the field of literature. We now take great pleasure in recording the fact that the music of a hymn given at a recent concert by the Washington Sängerbund was the work, including the orchestration, of Dr. John C. Hemmeter, of Baltimore. We understand that the hymn was very well received.

News Items.

Society Meetings for the Coming Week:

MONDAY, *March 28th.*—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, *March 29th.*—Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, *March 30th.*—Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

FRIDAY, *April 1st.*—Practitioners' Society of New York (private); Clinical Society of the New York Post-Graduate Medical School and Hospital; Baltimore Clinical Society; the Manhattan Clinical Society.

SATURDAY, *April 2nd.*—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

Changes of Address.—Dr. Tobias Jurim, to 66 Second Avenue; Dr. Charles B. Mittelstaedt, to 466 West One Hundred and Fifty-first Street.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending March 19, 1904:

	Week end'g Mar. 12.		Week end'g Mar. 19.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	1,579	23	1,454	35
Diphtheria and croup	353	44	406	46
Scarlet fever	496	21	491	28
Smallpox	5	..	..	1
Chickenpox	112	..	102	..
Tuberculosis	455	198	457	209
Typhoid fever	22	9	29	9
Cerebrospinal meningitis	..	10	..	16
Totals	3,022	305	2,939	338

Dr. Heinrich Stern has severed his connection with the New York School of Clinical Medicine.

The Seney Methodist Episcopal Hospital, of Brooklyn, has received a bequest of $5,000 by the will of the late Smith Lafayette Russell.

Epidemics of Scarlet Fever and Measles are evident in the Borough of the Bronx, over one hundred cases of the former, and six hundred of the latter having been reported by the health department.

The Masonic Hospital and Shelter Association, of Brooklyn, has been incorporated for the purpose of maintaining rooms on South Third Street, between Driggs Avenue and Roebling Street, where Masons may get medical and surgical care.

The New York County Medicopharmaceutical League held a regular meeting last evening at the Tuxedo, Madison Avenue and Fifty-ninth Street, at which the following papers were read: Concerning the Character of Nations, by Professor Heinrich Stern; The Prevention and Cure of Tuberculosis, by Dr. L. W. Zwisohn. Nonmembers are welcome to these meetings.

The Death of Dr. Moreau Morris, of New York, occurred in New York on March 17th, aged seventy-nine years. Dr. Morris was born at Stillwater, Saratoga county, graduated from the College of Physicians and Surgeons in 1848, and occupied many positions connected with the health department. Only one daughter survives him.

Nursery and Child's Hospital.—An appeal for all is being sent out by the managers of the Nursery and Child's Hospital, an institution that has been in existence for more than half a century. The hospital is greatly in need of funds to carry on its work, which is ever increasing. When this hospital was started it was the only one of its kind in the city. Now, after an unusually severe winter, there is more than ordinary sickness and suffering among the poor, and the wards of the hospital are overcrowded. There is a pressing need of more beds, and it is absolutely necessary to have the services of more trained nurses. Although the receipts of the annual Charity Ball were nearly up to the average, the hard winter has used up much of this money. Just at this season it is necessary to incur many expenses for the country branch of the hospital.

New York Eye and Ear Infirmary.—At a meeting on March 16th of the directors of the New York Eye and Ear Infirmary announcement was made that nearly $20,000 in subscriptions had been received by the treasurer since the decision to close the infirmary on May 1st. It was stated after the meeting that if $5,000 additional could be raised the hospital might remain open until October 1st, as the hospital year will close the last of September.

The subscriptions are as follows: President James J. Higginson's collection, amounting about $6,000; gift of Adrian Iselin, of $5,000; gift of John L. Riker, of $5,000; one gift of $500; one of $150; six of $100; two of $50; eight of $25; one of $20; two of $15; sixty-nine of $10 each, and four of $5, and one of $1,000, making a total of $19,310. With the additional $5,000, the total would be a trifle above $24,300.

It was also stated that a permanent endowment of $400,000 was necessary if the hospital was to be reopened and kept open. The Platt Pavilion has been closed, and only a few patients in the endowed wards of the Du Bois Pavilion of the Infirmary are at the hospital. A resolution was read suggesting reconsidering and rescinding the board's action taken in February to close the infirmary on May 1st. It was laid on the table.

Presbyterian Hospital. — The Presbyterian Hospital has, during the thirty-one years of its existence, been intensely active in its treatment of all acute cases. In order to respond with the utmost quickness to all such appeals its system has been gradually improved until now ambulances are instantly ready, at least fourteen doctors or surgeons are within a minute's call, and one of the finest operating rooms in the country is perfectly equipped to attend to any case known to medicine or surgery. Every precaution possible is taken to insure the proper treatment of patients.

In the wards of the hospital last year 3,214 patients were given 71,235 days of treatment at a cost of $2.51 per day. In most instances this service was principally to fathers, mothers, and children who would have had small chance of recovery in the crowded, ill-ventilated tenement houses from which they came and with prolonged sickness would have impoverished the family and spread disease.

In the dispensary, where the services of 46 physicians are constantly required, 30,092 persons were treated last year and had 82,488 prescriptions filled at 10 cents each, regardless of the actual cost. Such timely treatment has not only enabled so many poor, who need every dollar they can earn, to continue their work, but has also prevented serious sickness.

In the emergency wards 6,495 victims of accidents, tragedies, and sudden illness were treated. Taking part in this work, the ambulance responded to 2,844 calls, bringing immediately to the hospital persons stricken down by violence or disease, and to such promptness many of them owe their lives. In the operating room 2,431 operations were performed. A deficit, however, of $58,504 was incurred during 1903, and gifts are solicited to prevent the institution from wreck.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g Mar. 19.		Week end'g Mar. 12.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	30	7	48	6
Diphtheria	67	11	74	12
Scarlet fever	101	4	95	4
Typhoid fever	141	21	142	25
Consumption	..	79	..	87
Cerebrospinal fever	..	..	..	..

Methodist Hospital of Philadelphia.—The quarantine which had been established in this institution on account of a suspected case of smallpox has now been raised.

Appointments.—At a recent meeting of the Board of Directors of the Jewish Hospital of Philadelphia, Dr. S. MacCuen Smith and Dr. E. L. Klopp were elected otologists to that institution.

Smallpox in Philadelphia on the Decrease.—The number of new cases reported to the health authorities of Philadelphia has decreased considerably within the past few weeks, which is undoubtedly due to the rigid enforcement of vaccination as recently conducted in that city.

Benefit for the Jefferson Maternity Hospital.—A piano recital at Witherspoon Hall, Philadelphia, was given last week by the distinguished pianist, Miss Adele Aus der Ohe, the proceeds of which will be used for the Gillespie Memorial, named after Mrs. E. D. Gillespie, who was the founder and first president of the Board of Managers of the institution.

New Insane Asylum for Schuylkill County.—On several occasions within the last few months the prevailing conditions in the insane asylum of Schuylkill Haven have been the subject of considerable comment. A recent investigation by Dr. George I. McLeod, president of the State Lunacy Board, and Dr. George W. Ryon, of Shamokin, disclosed the necessity for an immediate change. A new building will be shortly erected. The county had 250 insane patients who are now housed in very small and inadequate quarters.

Examinations for Philadelphia Hospital.—It has been decided that hereafter the resident physicians of the Philadelphia Hospital shall obtain their positions solely upon the merit of their examinations. Heretofore it has been the custom to select a certain number of graduates from each of the Philadelphia medical colleges who had attained a certain average in their examinations. A conference was held last week between the Mayor of Philadelphia, Dr. Edward Martin, the Director of Public Health and Charities, and the deans of the medical colleges. The examining board, it is said, will be composed of members who are not affiliated with any of the medical institutions.

Measles Epidemic in Philadelphia.—If measles was classed among the diseases that required notification to the board of health, quite a formidable array of statistics would have been presented to the authorities of Philadelphia during the past few weeks. The disease is said to prevail throughout the city. This is, of course, a general statement, and diseases like German measles and other eruptions may have been included. Investigation, however, shows that the disease is not only epidemic, but even endemic, in some of the poorer districts. No special virulence of the disease in these cases has been observed, although the sequelæ, as is often the case, may cause the epidemic to receive more than transitory notice.

The Henry Phipps Institute.—We regret to announce that a cable from Professor Maragliano announces his illness and inability to give his lecture under the auspices of the Phipps Institute scheduled for March 28th. It has, therefore, been indefinitely postponed.

The Henry Phipps Institute will entertain at dinner on Monday, the 28th inst., the delegates who have been called to meet in Philadelphia to consider the question of A National League Against Tuberculosis, and the holding of an American Congress Against Tuberculosis.

Dr. L. F. Flick will give a luncheon to the delegates on the same day just before the meeting, which has been called for 3.30 o'clock. At this meeting an abstract from Professor Maragliano's paper will be read.

Erroneous Report Regarding the Phipps Institute.—The work of the Free Hospital for Poor Consumptives was seriously handicapped during the year 1903 by reason of a decrease of $11,000 in the public contributions. This was shown at the annual meeting of the hospital managers, held recently in the Witherspoon Building. President Lawrence F. Flick referred to the financial loss in his address, and expressed the opinion that it could be attributed to the erroneous impression that Henry Phipps, who established the Phipps Institute for Consumptives, at Second and Pine Streets, had founded the hospital's sanitarium at White Haven, Pa.

The president stated that in consequence of the loss the beds in five of the hospitals of the city provided for dying patients at a cost of $5 each per week had to be discontinued.

There are two projects which, he said, ought to be established during the coming year. One is a convalescing farm, where the patients who recover in the sanitarium may live and work eight hours a day, receiving $5 and $10 a month for their labor. He said such a farm could be made self-supporting and would pay the interest on the capital invested. He also advocated the establishment of an intermediary place between the city and White Haven for hopeless cases.

The report of the treasurer showed that medicine has comparatively little prominence in the cure of tuberculosis. Eggs, milk, and fresh air are the most effective agencies.

The money expended for medicine during the year was a little over $1,700, while the cost of eggs was $3,598.53, and milk $6,660.17. The report also showed that the $12,000 indebtedness had been reduced during the past year to about $2,500.

The following officers were elected for the year: President, Lawrence F. Flick; vice-presidents, Louis Gerseley, William S. Kemmerer; treasurer, Edward A. Miller; secretary, Charles M. Levis; directors, Dr. Henry M. Fisher, Dr. Talcott Williams, Frank Graham Thomson, John J. Henderson, Henry B. Cutter, James M. Wilcox, Benjamin Wolf, Tuttnal Paulding, Samuel Castner, Jr., and Peter F. Kiernan.

The Typhoid Fever Situation of Philadelphia.—There is very little to be added to what has been said regarding the almost alarming prevalence of typhoid fever in Philadelphia. That the polluted drinking water is the exciting agent, and that adequate filtration is the only probable solution in this case no longer need discussion. There is, however, a stringent necessity for bringing these facts with all the emphasis possible before the public, and to give them to understand that boiling the water in its present condition is the only preventative means at their disposal. While this has been done in a general way, it appears that it has not been fruitful of much benefit. The number of new cases reported varies slightly. As has been stated, the recent freshets throughout the State must have been fruitful in disturbing precipitated pollution to such a degree as to cause it to be held in suspension by the drinking water. As in the case of other infectious diseases, the number of deaths during a given week is often erroneously used to determine the average mortality. When we consider the period of incubation, the course, and the complexity of typhoid fever, we must certainly examine a number of cases extending over a long period of time before the estimation of the mortality can be at all undertaken. Furthermore, complications, intercurrent diseases, and accuracy in diagnosis are by no means unimportant factors. The city of Philadelphia offers unusual facilities at the present time for the study of typhoid fever. Considerable importance is sometimes attached to the fact that residents in the districts to which filtered water is supplied contract the disease. The deduction would be correct if we could presuppose that these residents did not leave their districts and that there were no other media for the transmission of the typhoid bacillus than drinking water.

GENERAL

Smallpox is Prevalent, it is said, in Jackson township, Lebanon county, Pa., and Dr. George G. Groff, of the committee on preventable diseases, has been directed by Dr. Benjamin Lee, of the State board of health, to institute measures for its suppression.

Measles at Boston University.—An epidemic of measles at Boston University has greatly reduced the attendance within the last few days. It has made such a serious inroad that it may be necessary to close the college, unless the increasing rate of victims daily is reported to be somewhat lowered. A number of the girls are now out of college on account of this disease, and the percentage of the male attendance is considerably lowered.

Statement of Mortality in Chicago, Ill., for the Week Ending March 19, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on estimated midyear populations of 1,950,000 for 1904 and of 1,820,000 for 1903:

	Mar. 19, 1904.	Mar. 12, 1904.	Mar. 21, 1903.
Total deaths, all causes	578	549	612
Annual death rate per 1,000	15.44	14.75	16.92
By sexes—			
Males	338	331	369
Females	240	218	243
By ages—			
Under 1 year	103	99	109
Between 1 and 5 years	35	41	64
Over 60 years	122	126	125
Important causes of death—			
Acute intestinal diseases	14	20	21
Apoplexy	24	10	9
Bright's disease	24	38	34
Bronchitis	22	21	27
Consumption	74	86	62
Cancer	22	24	26
Convulsions	19	15	14
Diphtheria	10	6	6
Heart diseases	32	32	44
Influenza	2	3	13
Measles	0	1	4
Nervous diseases	28	14	28
Pneumonia	137	127	133
Scarlet fever	5	4	8
Smallpox	0	0	2
Suicide	7	5	14
Typhoid fever	7	9	13
Violence (other than suicide)	26	20	26
Whooping cough	2	0	11

As to the "pneumonia death" rate—it can hardly be said to be "increasing," at least here or in New York. The 388 pneumonia deaths reported in New York during the week and the 137 reported in Chicago are about the average for several weeks. The comparative figures for the two cities between November 1, 1903, and March 19, 1904, follow:

	New York.	Chicago.
Total deaths, all causes	29,681	11,306
Deaths from consumption	3,314	1,124
Deaths from pneumonia	6,338	2,450
Proportion per cent. of all causes—		
From consumption	11.1	9.9
From pneumonia	21.4	21.6

The Watertown, N. Y., Typhoid Fever Epidemic.—To an inquirer who wrote from Utica asking when it would be safe for him to establish a business in Watertown, Dr. George A. Soper, the sanitary expert in charge of the Watertown water supply, wrote that after April 1st, residence would be quite safe for any one who was willing to carry out the simplest sanitary precautions, such as boiling drinking water, etc.

An American Physician is Wanted to fill a vacancy in the position of physician in the Indian service at Grand River, N. D., at $1,000 per annum, and other similar vacancies as they occur. The United States civil service commission will hold an examination in Milwaukee, Wis., April 19th. The examination is open to all citizens of the United States between the ages of 25 and 55 years.

Nurses Graduated in Detroit, Mich.—The first public graduation of nurses from the Michigan College of Medicine and Surgery was held on March 10th at Emergency Hospital. Mrs. L. B. Goodwin, Miss Blanche Herrick, Mrs. Belle Allen, and Miss Etta Fennessy received diplomas. A draped chair indicated the absence of Mrs. Sarah E. Bechtel, who died under pathetic circumstances while caring for a contagious case to which she had been assigned.

Hospital Memorial of Chicago Fire.—It is stated that a $500,000 memorial hospital is to be erected on the site of the ill fated Iroquois Theatre.

Dr. S. P. Kramer has been elected president of the Academy of Medicine of Cincinnati, O. Dr. Kramer was a surgeon in the army during the war with Spain.

Dr. J. A. Corry, of Barnesville, Ga., has been appointed surgeon of the Central railroad, taking the position made vacant by the recent removal of Dr. K. L. Reid to Atlanta.

The Doctor in General Literature.—A Worm's Revenge, The Triumphs of a Henpecked Husband, is the title of an interesting character sketch, by Dr. Axel V. Grafstrom, which appears in *Wayside Tales* for March.

Burglars Visit a Louisville, Ky., Physician.—The residence of Dr. R. B. Gilbert, of Louisville, Ky., was entered early on the morning of March 16th. Apparently the thieves secured two overcoats only.

Mount Vernon Hospital.—A large kirmess for the joint benefit of the Mount Vernon Hospital and People's Institute, of that city, is to be held in the armory of the First Regiment on the evenings of April 13th, 14th, 15th, and 16th.

New Asylum Commissioners in Kentucky.—Governor Beckham, on March 14th, made the following appointments of commissioners of the Central Asylum for the Insane: Dr. M. K. Allen, to succeed himself; Dr. Walter C. Vanderespt, to succeed Dr. George H. Alexander, and Dr. B. W. Smock, to succeed Dr. M. S. Tyler.

Iowa to Build Hospital for Drunkards.—The Iowa State Senate, on March 18th, voted an appropriation of $125,000 for the location at Knoxville of a hospital for habitual drunkards. This is the first open approval of Iowa's so called " dipsomaniac law." This law, which went into effect two years ago, has been severely criticised.

Physician Nearly a Centenarian.—Dr. John Stafford, on March 18th, celebrated his ninety-ninth birthday at his home, 27 Byron Street, Rochester, N. Y. He received many calls from friends and neighbors during the day. Despite his great age Dr. Stafford seems more active and in possession of keener faculties than many men of 80 years. He is suffering from a slight attack of grippe. Dr. Stafford was born in Manchester, Ontario county, March 15, 1805.

Rochester, N. Y., to Treat Pneumonia as Infectious.—The Rochester Health Bureau has decided to treat pneumonia as an infectious disease and to ask physicians to report all cases, just as they report diphtheria and smallpox. A new map is to be placed in the Health Office, upon which is to be designated, by means of pins, all cases of pneumonia and the sanitary conditions accompanying them. Because the cases have not been reported it is not known how many there have been in Rochester this winter, but it is known that pneumonia has been more than usually prevalent.

Handsome Endowment of Medical Instruction in England.—Sir Donald Currie has given $500,000 to the University College and London University. It is intended with this sum to build a school of advanced medicine, and it will also enable the university to incorporate the college in its system.

Kentucky State Board of Health.—The Governor has appointed the following as members of the State Board of Health: Dr. J. M. Mathews, of Louisville, six years, to succeed himself; Dr. F. O. Young, of Lexington, four years, to succeed Dr. L. L. Robertson. The nominations have been confirmed by the Senate.

Nurses Graduated in Louisville, Ky.—Diplomas were given to the following young women as nurses by the faculty of the Gray Street Infirmary at the commencement, held on March 14th, at the Hospital College of Medicine: Misses Frances Gilmore, Katherine M. Arnold, Lulu Barrette Evans, and Effie Duncan.

Richmond Academy of Medicine and Surgery.—A regular meeting of this body was held on Tuesday, March 22nd, at 8.30 p. m., at T. P. A. Building, Third and Main Streets, with the following subject: Fracture of Long Bones, by M. E. Nuckols, M. D.; discussed by D. Meade Mann, M. D. W. Brownley Foster, M. D., assistant secretary.

Central Kentucky Insane Asylum.—At the meeting of the Board of Commissioners of Central Kentucky Insane Asylum, on March 10th, at the institution at Lakeland, W. H. Newman, who had been acting president since the retirement of Dr. T. P. Satterwhite, was elected president for the ensuing year, and Dr. M. K. Allen was re-elected vice-president.

The New Hampshire Surgical Club held its regular semiannual meeting at Concord on March 24th, with the following programme: Conservative Surgery; Report of Cases, by Dr. F. A. Stillings; Removal of the Larynx, Epiglottis, Two Rings of the Trachea, and the Upper Part of the Œsophagus for Cancer, by Dr. W. C. Milliken; The Prevention of Postoperative Intestinal Paresis and Adhesions, by Dr. Daniel H. Craig, of Boston, Mass. The officers of the club are: President, Charles R. Walker, M. D., of Concord; vice-president, J. Franklin Robinson, M. D., of Manchester; secretary-treasurer, N. W. McMurphy, M. D., of Gilmanton.

Professor Paul Ehrlich, Director of the Royal Institute for Experimental Therapy at Frankfort am Main, is to be the representative of German medicine at the coming convention at the University of Chicago, at which he will deliver an address and receive the degree of LL. D. Professor Ehrlich's investigations regarding the problems of immunity from the *à priori* viewpoint are familiar to our readers, and his subsequent discoveries regarding quantitative measurements of diphtheria toxine and antitoxine have been of the greatest service to modern therapy, besides rendering his fame secure.

The Tuberculosis Committee Appointed at the Baltimore Exhibition, at a meeting held in New York on February 27th, decided to refer to a larger gathering the discussion of the question relating to organizations for the study of tuberculosis in this country. A meeting for this purpose will be held in the College of Physicians, Thirteenth and Locust Streets, Philadelphia, on March 28th, at 3.30 p. m.

New York State Abandons Research on Cancer.—After spending $100,000 New York State has abandoned its attempt to find a cure for cancer. The Senate Committee on Finance has reported the annual appropriation bill, and from it has been stricken the provision of $15,000 for the cancer laboratory at Buffalo. The institution has had the benefit of State funds for six years. "We are convinced that no progress is being made in the Buffalo laboratory," said Senator Malby. "The State would gladly spend its money in the effort to find a cure for cancer if it could be shown that any advance had been made. My own impression is that if a cure for this much dreaded disease is ever found it will come through the work of some man who has devoted his life to scientific research and not through any State endowed institution."

Good Results from South Dakota Medical Law.—M. F. Yegge, who styled himself "Doctor" and advertised to "cure cross eyes, headaches, hysteria, female disorders, and hundreds of nervous troubles," has been convicted in the circuit court of violating the medical law by practising medicine without a license. Yegge represented a notorious optical college in Chicago, which claims to educate a man in anatomy, physiology, diagnosis, and treatment of disease in two weeks, and to graduate him as qualified in these branches, all for one hundred dollars. The people and the medical profession alike of South Dakota are to be congratulated on the riddance of many cases of this class under the new medical law.

Medical Society of Franklin County, Pa.—The regular quarterly meeting of this society will be held in the library room in the Court House, Chambersburg, on Tuesday, April 19, 1904, at 1.30 o'clock p. m. The following is the programme for the day: Paper—The Need of a Hospital for a City of Five Thousand Inhabitants, by J. W. Croft, M. D., of Waynesboro. Paper—Adenoids, by Frank N. Emmert, M. D., of Chambersburg. Paper—Contributive Factors to Puerperal Infection in Country Practice; also, Demonstration of Obstetric Outfit for Aseptic Technics for Country Work, by J. E. Kempter, M. D., of St. Thomas. Paper—Uric Acid, by S. S. Bishop, M. D., of Harrisburg. Address—Empyema, by George B. Kunkle, M. D., of Harrisburg. L. M. Kauffman, president. John J. Coffman, secretary.

Dinner to Dr. John H. Pryor, of Buffalo, N. Y.—A farewell dinner was given to Dr. John H. Pryor, on March 17th, at the Saturn Club by his associates of the Buffalo medical fraternity. Dr. Pryor left Buffalo on Wednesday or Thursday of this week for the Adirondacks, where he is to assume charge of the State Hospital for Consumptives.

The dinner was an informal affair. There were about fifty in attendance. Dr. S. J. Howell presided and Dr. John B. Olmstead had the honor of presenting to Dr. Pryor a handsome loving cup, which he did with a graceful and an appropriate address.

Among those present were: Dr. John H. Pryor, Dr. S. Y. Howell, Dr. Arthur W. Hurd, Dr. H. G. Matzinger, Dr. Roswell Park, Dr. F. Park Lewis, Dr. DeLancey Rochester, Dr. P. W. Van Peyma, Dr. Ernest Wende, Dr. H. U. Williams, Dr. H. E. Hayd, Dr. James W. Putnam, Dr. W. S. Renner, Dr. John Parmenter, and Dr. A. Burrows.

Mortality of Michigan During February, 1904.—The total number of deaths reported to the secretary of State for February was 3,389, an increase of 263 over the preceding month. The death rate rose from 14.7 in January to 17.1 for February. By ages there were 523 deaths of infants under one year of age, 201 deaths of children aged one to four years, and 1,158 deaths of elderly persons 65 years of age and over. The principal increase of the month was for the latter class. Important causes of death were as follows: tuberculosis of lungs, 189; typhoid fever, 42; diphtheria and croup, 57; scarlet fever, 32; measles, 21; whooping cough, 27; pneumonia, 487; influenza, 195; cancer, 128; accidents and violence, 175. Diphtheria was somewhat less prevalent than last month, while pneumonia and meningitis increased, the latter especially nearly doubling in amount. There were three deaths from smallpox, one in Detroit, one in Frankenlust township, Bay county, and one in Oregon township, Lapeer county. One death from chickenpox was reported from Detroit.

The Saratoga County, N. Y., Medical Association will hold its fourth annual meeting on Tuesday, March 29th, at the Hotel Leland, Mechanicville, with the following programme: Gastric Ulcer; Report of a Case, by Dr. Frank F. Gow, of Schuylerville; Aortic, Mitral, Tricuspid, and Pulmonary Regurgitation; Report of a Case with Autopsy, by Dr. George H. Fish, of Saratoga Springs; The Business Side of the Profession, from a Country Practitioner's Viewpoint, by Dr. Francis W. St. John, of Charlton; Preparation of Cumol Catgut, by Dr. Douglas C. Moriarta, of Saratoga Springs; Poliomyelitis; Report of a Case, by Dr. John Cotton, of Burnt Hills; Home Treatment of Pulmonary Tuberculosis, by Dr. Dudley R. Kathan, of Corinth; History of a Case, by Dr. Frank Garbutt, of Mechanicville; Symposium on Pneumonia: I. Ætiology and Pathology, by Dr. G. Scott Towne, of Saratoga Springs; II. Symptoms and Diagnosis, by Dr. John B. Ledlie, of Saratoga Springs; III. Prognosis and Treatment, by Dr. John H. Humphrey, of Saratoga Springs. Discussion by Dr. George F. Comstock, of Saratoga Springs; Dr. John R. McElroy, of Jonesville; Dr. Frank A. Palmer, of Mechanicville; and Dr. Elbert A. Palmer, of Saratoga Springs. The election of officers and fellows and the appointment of committees will follow.

Pith of Current Literature.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT.

February 16, 1904.

1. Serodiagnostic Methods in Forensic Blood Examinations, By G. HAUSER.
2. Simple Method of Forensic Differentiation of Human Blood from That of Other Mammals, By H. MARX, and E. EHRNROOTH.
3. Ætiology of Acute Gastroenteritis (*Continued*), By N. SCHOTTMUELLER.
4. Prophylaxis of Ophthalmoblennorrhœa Neonatorum, By DAUBER.
5. Cure of Apical Tuberculosis, By A. HOFMANN.
6. Value of Chemical Disinfection, By G. BELLEI.
7. Hæmolysins of Normal Blood Serum, By H. SACHS.
8. Glycerin and Lymph, By E. LEVY.
9. Case of Pneumococcus Pyocele, By A. MUELLER.
10. Pyæmia After Operation for Adenoids, By MANHENKE.
11. Administration of Mesotan, By L. WEIL.
12. Progress of Medical Science and Race Degeneration, By E. BLEULER.

1. **Serodiagnostic Methods in Forensic Medicine.**—Hauser says that no suspected case can to-day be considered proved unless the serodiagnostic differential tests for blood have been applied by one who is thoroughly conversant with the methods. The surest test is by the employment of a serum in the strength of one to thirty which, in an incubator, will cause a cloudiness of human blood solution within half an hour, while the same solutions will have no effect upon the control tests of animals' blood in from six to eight hours, and at the most, will show a slight cloudiness in them in twenty-four hours.

2. **Human and Animal Blood.**—Marx and Ehrnrooth endorse warmly the biological tests of Wassermann-Schuetze and Uhlenhuth in differentiating human blood from that of other mammals. The test consists in adding to fresh human blood homologous serum and heterologous serum. In the former instance, the blood is influenced only so that the erythrocytes lie near one another and each cell is distinct. When brought into contact, however, with heterologous serum, there is a rapid agglutination, the cells are scarcely distinguishable and the masses are fairly grouped upon each other. Dried blood answers the purpose of the test equally well. The blood of apes acts similarly to human blood except that the red cells of the human blood, when brought into contact with ape serum, become polygonal and smaller, and do not assume the form of a thorn apple, as they do on the action of human serum. The technics of the procedure is described by the authors and the importance of the method in forensic medicine is emphasized, as the preparations are permanent.

4. **Prophylaxis of Ophthalmia Neonatorum.**—Dauber finds in the instillation of a one per cent. solution of silver nitrate an absolute preventive of gonorrhœal ophthalmia in the newborn infant, and insists that no bad reaction on either the conjunctiva of the lid or the eyeball is to be noted. The author quotes Leopold's suggestion that, in view of the importance of this procedure and its almost unfailing effectiveness, the general public should be instructed in its value.

5. **Cure of Apical Tuberculosis.**—Hofmann speaks of the good results obtained in apical tuberculosis by forming a pseudoarthrosis between the sternum and the first rib by separating them surgically. The purpose is to offer increased respiratory space in those cases in which the bony chest wall is contracted. The operation can be performed on both sides. Hofmann cites eight such cases, in all but one of which death ultimately resulted from other causes than tuberculosis. At the autopsies, scar tissue was found in the apices. The operation must be performed early in the disease.

7. **Hæmolysins of Normal Blood Serum.**—Sachs concludes that the hæmolysins of normal blood serum, including the simple alexins, act through the combination of amboceptors and complements. New methods of proving the presence of amboceptors are: 1. The activity of inactive serum through fœtal serum of the same species, which often contains only complements; and 2. the separation of amboceptors and complements through combination with the blood cells at 37° C. in an increased concentrated salt solution which diminishes the hæmolytic process. Many amboceptors of normal sera are poorly combined with the erythrocytes at 0° C. or at 37° C. The combination only takes place when amboceptors and complements have united, after which their separation by the attempted combination is impossible. In such cases the difference between amboceptors and agglutinins becomes very distinct, as the latter are fully absorbed by the erythrocytes at 0° C., while the amboceptors remain in demonstrable quantitative solution.

12. **Medical Progress and Race Degeneration.**—Bleuler discusses the influence of medical progress in its effect upon the race by preserving unfit members. He contends that hygienic progress is useful and in no sense harmful to the race. Nevertheless, the unfit are weeded out, even though scientific progress does leave the possibility of choice. Modern medicine, by preserving the weak at the cost of the strong, gradually results, *cœteris paribus*, in reducing the strength and health of the race. The solution of the problem rests in preventing the propagation of the unfit.

ZENTRALBLATT FUER INNERE MEDIZIN.

January 30, 1904.

1. Biological Characteristics of the "Long" Lactic Acid Bacilli in Gastric Contents, By R. KAUFMANN, and W. SCHLESINGER.

1. **The "Long" Lactic Acid Bacilli.**—Kaufmann and Schlesinger describe the cultural peculiarities of the long lactic acid bacilli first described by them as present in cases of cancer of the stomach. Free hydrochloric acid up to two-tenths per cent. weakens the culture, and five-tenths per cent. inhibits the culture altogether. Organic acids or a culture medium made acid by phosphoric acid, fosters the development of the bacteria. The occurrence of the organisms in great numbers in the stomach contents, especially in that of persons suffering from gastric cancer, is due to the almost total absence of free hydrochloric acid and to the stagnation of the gastric contents.

February 13, 1904.

1. The Study of Hæmatology, By J. MITULESCU.

1. **Hæmatology.**—Mitulescu shows, in tabular form, that the quantitative determination of hæmoglobin obtained by different methods—by hæmoglobin tests or tests for iron, runs in parallel figures. Exceptions are due to the presence of hæmolytic substances which dissolve the hæmatin and thus increase the amount of iron in the serum. The author gives a practical formula for the determination of the quantity of iron:

$$Fe = \frac{\text{Hæmoglobin} \times 0.42}{100.}$$

This formula proves that the ordinary clinical method introduced by Fleische is satisfactory enough for the usual test. Calorimetric as well as ferrimetric tests must be made when greater accuracy is required, as in cases of albuminuria and glycosuria.

SEMAINE MEDICALE.

February 10, 1904.

1. Perforations of the Nasal Sæptum, Other than Syphilitic, By EUGENE FÉLIX.
2. Chronic Inflammation of the Subpatellar Fat, By F. LEJARS.

1. **Non-syphilitic Perforation of Sæptum.**—Felix notes the importance of understanding all causes of perforation, because specific treatment might be begun and continued for years without benefit. Among other causes are: Simple ulcer, which never attacks bone; occuption ulcerations, occurring in workers in cement, the chromium salts, alizarine, Swedish matches, which may involve bone. Perforation is common also in cobalt mines and wherever arsenic is used in manufacturing; also in factories of glass, paper, dextrin, sodium carbonate, and hydrochloric acid. Other causes are atrophic rhinitis, traumatism, perichondritis, and foreign bodies. Perforation may also complicate typhoid fever, diphtheria, smallpox, tuberculosis, lupus, leprosy, glanders, rhinoscleroma, sarcoma, adenoids, dental cyst, Bright's disease, and tabes dorsalis. Other proof than mere perforation is therefore required to establish a diagnosis of syphilis.

2. **Inflammation of Subpatellar Fat.**—Lejars states that this condition was first described by Hoffa, of Berlin. It is generally traumatic in origin and the resultant pain is very resistant to treatment. The fat must be removed and is found to be thickened, yellowish, and traversed by fibrous bands.

LYON MEDICAL.

February 21, 1904.

1. Acute Nephritis; Rapid Resorption of Œdema, with Eclampsia, By L. BOUVERET.
2. The Pathogenic Agent of Syphilis a Hæmoprotist, By RÉNÉ HORAND.

1. **Resorption of Œdema with Eclampsia.**—Bouveret concludes from his study of a case of his own which he details and of others which he has studied, that the convulsions are produced by some toxic agent in the dropsical fluid, which, by the absolute or relative renal insufficiency, has time to act on the nerve centres, producing the cerebral phenomena. Death is rare in this form of eclampsia. Hyperpyrexia precedes the convulsions. Too rapid resorption should be guarded against and disappearance of œdema aided by puncture or Southey's tubes.

2. **The Germ of Syphilis.**—Horand states that in 1902, he discovered in the blood of a syphilitic infant, germs like a small eel, endowed with a spermatozooid movement, moving rapidly about the microscopic field, and, adhering to them, highly refractive circular bodies. No description of these bodies was to be found in syphilitic literature and Horand pursued his investigations alone for some time. He details his method of mounting blood for the purpose of finding this germ, which was evidently not a bacillus, a sporulated capsule, or a trypanosoma. Horand has found it near the primitive chancre, and watched its evolution, in the blood and lymphatic vessels, in mucous plaques, and in secondary and tertiary ulcerations. It is of both sexes. Horand states positively that he can make an absolute diagnosis of syphilis by examination of the blood and believes that he has discovered a hitherto undescribed parasite of intraglobular evolutive form, a sporozoon, a protozoon, or best a hæmoprotist, which can always be found near the characteristic lesions of syphilis and, in a characteristic form, in the blood of syphilitics.

PRESSE MEDICALE.

February 13, 1904.

Dynamic Properties of the Secretions; Cryoscopy, By J. WINTER.

Cryoscopy.—Winter states that the importance of the secretions has always been underestimated and recalls, among the facts, that chemical action in the body is necessarily confined to the gases and liquids. Cryoscopy, according to Winter's method, is described.

February 17, 1904.

1. The Cautery and So Called Arthritic States, By L. BROCQ.
2. Secretine. Acid Duodenal Medication, By ED. ENRIQUEZ.

1. **The Cautery.**—Brocq details two cases where he used this measure. In the first the production of a suppurating wound on the thigh completely did away with a gouty bronchitis, associated with indigestion and hebetude; in the second, a similar case, the same results were obtained by cauterizing the spine and præcordial region. Brocq anticipates incredulity on the part of pathologists, but recalls numerous cases of relief of visceral symptoms when a suppurating wound has been accidentally produced.

2. **Secretine.**—Enriquez speaks of this substance named by Bayliss and Starling, which they prepared by acid maceration of the duodenal mucosa. The writer has found that its injection stimulates strongly the intestinal, pancreatic, and biliary secretions and that it is of value in various forms of intestinal dyspepsia.

RIFORMA MEDICA.

February 3, 1904.

1. Alopecia Areata Due to Traumatism, By Florio Sprecher.
2. Dercum's Disease with Osteomalacia, By Papino Pennato.
3. Roux's Method of Gastroenterostomy (*To be continued*), By Nicola Giannettasio.
4. Researches on the Metabolism in Precocious Dementia, By A. D'Ormea, and F. Maggiotto.

1. **Traumatic Alopecia.**—Sprecher reports the clinical history of a girl aged six years, who, a year before admission, had received a small contused and lacerated wound on the right side of the head. Seventeen days later, the hair about the wound began to fall out over a circular area of moderate size, and in three months there was a large, perfectly bald, patch over the right side of the head. The hairs at the periphery of this area were easily removable without pain. The area itself was covered with fine light hair and in places there were long, thick, and dark hairs. Upon microscopical examination the roots of the hairs of the periphery were found to be atrophic. The thick hairs within the area were found to be truncated in the form of exclamation points, a phenomenon which indicates acute alopecia areata. The author thinks that the baldness in this case was due to the injury. The treatment consisted of a change of climate, epilation at the periphery of the bald spot, and the use of a local irritant on the scalp, consisting of equal parts of crystalized carbolic acid, tincture of iodine, and chloral hydrate.

2. **Dercum's Disease and Osteomalacia.**—Pennato says that there is a relation between Dercum's disease (adiposis dolorosa) and osteomalocia. This relationship has not been spoken of in the published observations on adiposis dolorosa, but several cases are on record in which changes in the joints have been noted. The nutrition of the bones is regulated by the trophic centres, and these are markedly affected in Dercum's disease. We know but little as regards the origin of adiposis, except that it arises under the influence of nervous disturbances. Pennato reports a case of this affection in a woman aged thirty-five years, whose symptoms dated twelve years back. She slowly developed the signs of adiposis dolorosa, but in addition virtually lost all her teeth, with the exception of the inferior canines and one molar, although no caries developed. Symptoms referable to the bones began to appear almost at the outset of the disease, and consisted of a distortion of the right knee, a curvature of the leg, some years later the fracture of a clavicle, and still later of the left humerus. On admission the legs and thighs were semiflexed, and complete extension was impossible on the right side, on account of rigidity in the knee with partial dislocation of the tibia inward. Pennato thinks that that osteomalacia should be included in the syndrome of Dercum's disease, although he admits that in the ordinary case of osteomalacia there are no signs of adiposis dolorosa. In the present case, so far as the large amount of adipose tissue would permit to be determined, there was no deformity of the pelvis and the sternum and ribs were not altered in shape.

4. **Metabolism in Precocious Dementia.**—D'Ormea and Maggiotto say that but very little is known as yet as regards the causes of precocious dementia. The majority of authors incline towards the theory of Kraepelin, who believes that this condition is due to a change in the metabolism in the body, resulting in an autointoxication, which especially affects the functions of sexual organs. In order to contribute to our knowledge of these metabolic changes, D'Ormea and Maggiotto instituted a series of experiments as to the renal activity in this condition. To this end, they administered methylene blue and potassium iodide to a series of patients and to another series of normal persons, and compared the time required in the elimination of these drugs, as attested by the discovery of a blue tint in the urine or of a reaction for iodine. The results which they obtained were as follows: In normal individuals, the elimination of methylene blue begins always within the first half hour after the injection, reaches its maximum within four hours, and lasts altogether on the average from 80 to 90 hours. In precocious dementia, the elimination is always retarded, sometimes for several hours; its maximum intensity is not reached before the twelfth hour and its total duration is prolonged to 100 or even 130 hours. The elimination of potassium iodide in normal individuals begins within ten to fifteen minutes after the administration of this drug. In the saliva the reaction begins within from six to ten minutes. At any rate, a very marked reaction is obtained in the urine within twenty-five minutes, the elimination reaching its maximum intensity in a short time, and lasting about thirty hours. In precocious dementia a notable retardation in the appearance of the reaction in both the urine and the saliva is observed. The maximum intensity of elimination is retarded for over an hour, and the total duration is prolonged to fifty hours.

ROUSSKY VRATCH

January 10, 1904.

1. Chemical Changes in the Bodies of Animals Born of Starving Parents, By P. K. Ugrumoff.
2. On Secretory Depressive Neuroses, By F. J. Kitayeff.
3. On the Prevention of Accidents Among Agricultural Laborers and on First Aid to the Injured, By L. D. Bertenson.
4. On the Operative Treatment of Prolapse of the Rectum (*To be concluded*), By F. K. Weber.

2. **Neuroses of the Stomach.**—Kitayeff says that the most difficult diseases of the stomach to diagnosticate are the neuroses of the depressive type. The clinical picture of these neuroses has not yet been thoroughly studied, and the chemical examination of the gastric juice often gives results which may be interpreted in various ways. He reports a case which belongs to the type of depressive secretory neuroses know as "achylia gastrica." The patient was a farmer, aged nineteen, who had sustained a severe fall four years before admission. Eight months later, he began to suffer from severe pain in the epigastrium, radiating to the right and to the left. The attacks of pain lasted from a few

days to over a week and the intervals lasted from two to four weeks. The pains were very severe, were not altered by external pressure, nor on the application of cold or heat; were usually more marked when the stomach was empty, and somewhat relieved by eating. They were more severe when the patient was active than when he was resting. On physical examination the stomach was found displaced downward but not dilated. Its motor function was found normal, but both hydrochloric acid and pepsin were absent during fasting. After a test meal there was only a reaction for lactic acid. During the attacks of pain the same absence of acids and of ferments was noted, and the diagnosis was, therefore, the stationary or constant form of gastric achylia. The pain, which occurred periodically, must have been dependent upon some other cause. A neurologist who examined the patient did not find any definite signs of locomotor ataxia, but he could not exclude the presence of this disease in its initial stage. Kitayeff thinks that it is probable that the pain was due to locomotor ataxia which was developing in this man, partly as a result of the injury which he had sustained. This injury also caused the sinking of the stomach and the liver, although these displacements were not characterized by any definite signs. It is to be noted that the digestive powers of the patient were not seriously impaired, as the stomach made up for its lack of hydrochloric acid and ferments by an increased motor activity.

3. **Accidents in Farm Laborers.**—Bertenson calls attention to the fact that over 12,000 persons are seriously injured annually in European Russia in the course of agricultural pursuits. Most of these accidents are such that they lead to complete loss of working capacity. During the past year the Ministry of Agriculture has taken up the question as to the prevention of these accidents, and has formulated a set of rules. One of the measures suggested was that the manufacturers of agricultural implements should be ordered to supply all their machinery with devices preventing the occurrence of accidents. The agricultural administration of the various provinces shall insist upon the observance of certain rules for the management of farming implements and machinery, such as the admission of children to the operation of this machinery, etc. The author thinks that all these rules are not so effective as would be the thorough organization of a corps for the first aid to the injured among farmers. Children under fifteen years of age should be prohibited by law from working with any agricultural implements or machinery. All work with such machinery should be conducted under the supervision of persons thoroughly acquainted with the method of operation of these appliances, as well as with the rules of first aid in accidents. Such persons should always be present on farms isolated from medical service.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 19, 1904.

1. The Treatment of Lobar Pneumonia, By W. GILMAN THOMPSON.
2. Tumors Involving the Cauda Equina; with Report of Case, By GEORGE GILBERT DAVIS.
3. Recent Advances in Actinotherapy, By WILLIAM S. GOTTHEIL.
4. Examination of the Blood of Pneumonia Patients for Pneumococci, By FRANK C. KINSEY.
5. The Use of Silver Foil to Prevent Adhesions in Brain Surgery, By M. L. HARRIS.
6. A Method of Dispensing with Rubber Gloves and the Adhesive Rubber Dam. A Preliminary Note, By JOHN B. MURPHY.
7. Simultaneous Extrauterine and Intrauterine Pregnancy. Report of a Case, By CHARLES A. STILLWAGEN.

1. **The Treatment of Pneumonia.**—Thompson discusses the treatment of pneumonia in the light of his own experience in the management of the disease. He concludes his article by emphasizing the following points: (1) The importance of not crowding an overtaxed heart with too much stimulation, and especially of basing the selection of the proper variety of cardiac stimulant on the existing balance between the conditions of vascular tone and the effort the heart is already making. (2) The uselessness of the so-called "specifics" for pneumonia, and, as a rule, of expectorants. (3) The importance of prevention of indigestion and particularly of tympanites. (4) The great value of hypodermoclysis in certain cases. (5) The uselessness of topical applications excepting for the purpose of relieving pleuritic pain. (6) The necessity of prescribing proper intervals of rest in which the patient is free from incessant efforts at medication.

2. **Tumors of the Cauda Equina.**—Davis briefly reviews and tabulates nineteen cases of tumor of the cauda equina which he has collected from the literature. One personal case is given in considerable detail. Illustrations are given of the areas of anæsthesia, mapped out on the patient's body, as well as of the tumor removed at operation and of its histological structure. The tumor proved to be sarcomatous in character.

3. **Actinotherapy.**—Gottheil's retrospect concerns itself only with that part of therapeutics which deals with the results that can be obtained by the use of ether vibrations appreciable by the unaided eye, together with ultraviolet and chemically demonstrable ones lying just beyond them. This definition restricts his study to the effects of concentrated sunlight and to that of the electric arc light. The author concludes: "I can only say that the method is a promising field for investigation. The bactericide and tissue stimulating action of light is proved, as is also the fact that it can be made to penetrate the body and reach the internal organs. Whether its properties can be successfully employed for the treatment of diseases of the internal organs must be left for future investigation to decide."

4. **The Blood in Pneumonia.**—Kinsey attempts to answer four questions: (1) Are pneumococci to be found in the blood at any time? (2) With what frequency may they be found in all cases? (3) What is the simplest method of finding them? (4) What is the prognostic value of positive results if such occur? The answers that follow are based on the study of the blood in twenty-five cases of pneumonia. (1) Yes. (2) The pneumococcus may be found in the blood of every patient suffering from pneumonia. Negative results are to be attributed to unfavorable conditions for growth or faulty technics. (3) Large quantities of

blood should be used in making tests and they should be diluted with a liquid culture medium in the proportion of one to twelve. (4) The mere finding of the pneumococcus in the blood is of diagnostic and not prognostic significance. The finding of large numbers of penumococci is of grave prognostic import.

6. **A Substitute for Rubber Gloves.**—Murphy is now experimenting with a temporary covering for the hands while operating. He immerses his hands in a 4 to 8 per cent. solution of gutta percha in benzin. This leaves the hands covered by an impervious and sufficiently durable rubber coating. This film is very thin and does not interfere with the delicacy of the touch. The false skin can readily be removed by washing the hands in benzin.

MEDICAL RECORD.

March 19, 1904.

1. A New Treatment for Fracture of the Neck of the Femur, By ROYAL WHITMAN.
2. The Soluble Ferments of Cow's Milk, By JOSEPH LESPERANCE.
3. Some Operative Methods for the Fixation of Movable Kidney and Their Result, By ALEX. B. JOHNSON.
4. Asthenopia and Headache from Eyestrain, By JAMES R. NELSON.
5. Dilatation of the Bladder in Suprapubic Cystotomy, By E. BLASUCCI.
6. Gastroenterostomy for Carcinoma of the Stomach, By W. P. MCINTOSH.
7. Primary Pyelitis in Infants, By MARCELL HARTWIG.

1. **Fracture of the Neck of the Femur.**—Whitman, before describing his new method of treatment for fractures of the neck of the femur, shows how inadequate all the recognized methods of treatment are. He also asserts that fractures of the neck of the femur are not so infrequent in children as has been supposed, the error being too frequently made of calling such fractures, which are usually incomplete, contusions. The author advocates overcoming the deformity by placing the affected limb in complete abduction and then maintaining the position by means of a plaster bandage extending from the toes to the mammary line or a little below. The various manipulations and the form of dressings used are illustrated by cuts. The general method of obtaining reduction is thus described by the author: "A wide, firm band of cloth is then carried about the perinæum, the two ends of which united over the shoulder and held by an assistant furnish countertraction. If the fracture is incomplete, as is usual in young subjects, the limb under gentle traction is slowly abducted, an assistant at the same time abducting the sound limb to prevent the tilting upward of the pelvis, and to demonstrate the normal range. If the fracture is complete, the shortening is first entirely overcome by the traction and countertraction. The limb in the extended attitude, under traction, is slowly abducted by the assistant until the trochanter is fairly apposed to the side of the pelvis; the operator meanwhile pressing the trochanter downward and inward. In some instances there is a distinct snap as the outer part of the neck slips beneath the rim of the acetabulum, and in any event the abduction is increased until the trochanter is firmly apposed to the side of the pelvis. In the first instance the primary object of the abduction is by leverage against the upper border of the acetabulum to overcome the deformity; in the second, by tension on the capsule to remove folds to oppose the fragments and by actual contact of the bone with bone to oppose redisplacement."

2. **Ferments of Cow's Milk.**—Lesperance concludes: "Summing up the various researches and discoveries made in connection with cow's milk, we find, then, that this milk contains numerous ferments. We have determined definitely the presence of trypsin and of pepsin, of the lipasic and oxidizing ferments, and of a glycolytic ferment. There is, moreover, reason to expect further discoveries in this direction, and this is not improbable when the extremely complex nature of milk is taken into consideration."

3. **Fixation of the Kidney.**—Johnson considers the principles involved in the various operations for the fixation of movable kidneys, and analyzes the commoner methods in general use. He asserts that to select one method as superior to all others is impossible. It is probable that all methods at present in vogue result, in the majority of instances, in a sufficiently firm fixation of the kidney.

7. **Pyelitis in Infants.**—Hartwig asserts that pyelitis in infants, though rarely recognized, is not very infrequent. Four cases of the condition have been recognized by him. The general symptoms are those of typhoid fever. Careful examination of the urine is necessary in order to reach a correct diagnosis. If this were more frequently done the conundrum of a "continued fever" in infants would be more frequently solved.

BOSTON MEDICAL AND SURGICAL JOURNAL.

March 3, 1904.

1. The Relation of Some Special Causes to the Development of Neurasthenia, By ROBERT T. EDES.
2. The Intraabdominal Rupture of Ovarian Cysts, with Report of a Case, By ERNEST BOYEN YOUNG.

1. **Neurasthenia.**—Edes asserts that, without straining the facts, it is possible to look upon neurasthenia as a real entity and not merely as a name invented to gloss over a want of classification. Neurasthenia is a state of diminished energy of the nervous centres, especially the higher psychical, closely akin to ordinary fatigue, of which, indeed, it is an extreme development, but so extreme as to have become different in kind, that is, in incapacity for rapid restoration under favorable circumstances and in time in some measure corresponding to that taken in its development. If this definition is accepted it follows that the causes of neurasthenia must be various. The author reviews a number of the principal causes which have been alleged to be the origin of the affection and asserts that too often the physician's special idiosyncracy is apt to carry the day.

2. **Ovarian Cysts.**—Young's case serves as the text for discussing the general subject of ruptured ovarian cysts. He reviews the literature, cites in detail all the principal papers on the subject, and then considers the ætiology, symptomatology, diagnosis, prognosis, and treatment of the condition.

So far as the treatment is concerned, he believes that early operation is indicated and that the mortality statistics confirm such an assertion.

MEDICAL NEWS.

March 19, 1904.

1. The Individual Equation of the Patient in Surgical Operations, By W. L. ESTES.
2. Valvular Disease of the Heart and Its Treatment. Case of Mitral Obstruction and Insufficiency, with Tricuspid Regurgitation and Pulsating Liver, By STEPHEN SMITH BURT.
3. The Clinical Significance of Pain in the Epigastrium, By FRANK H. MURDOCH.
4. The Significance of Pus and Blood in the Urine, By RICHARD DOUGLAS.
5. Neurasthenia, By HUBERT RICHARDSON.
6. The Theatrical Profession as a Factor in the Dissemination of Disease, By S. H. BROWN.
7. Instrument Hanger for Glass-shelved Cases, By FREDERIC GRIFFITH.
8. Forensic Eye Aspects of Tabes, By JAMES G. KIERNAN.

1. **The Individual Equation.**—Estes attempts to determine the factors which increase one patient's resistance to a surgical operation to such a point that he will recover, while a second patient, in apparently better condition, will succumb to a like procedure. The chief factors he considers are: Heredity; environment and habits; disposition; age; sex; nationality; and physical condition.

2. **The Treatment of Valvular Heart Lesions.**—Burt writes a rather discursive paper on the treatment of heart lesions. He sums up his advice thus: "Judicious treatment of a patient with valvular disease of the heart presupposes a knowledge of the distinction, and an ability to discriminate clinically between adequate and inadequate compensation; possibility is one thing, probability is another, and finality quite another in the prognosis of these affections; although not always feasible, it is nevertheless desirable frankly to explain the situation, where dilatation from valvular defects is balanced by hypertrophy, in order to forestall a fortuitous disturbance of equilibrium; ordinary occupations and recreations not too strenuous need not necessarily be abandoned; systematic outdoor exercise, preferably walking, is not only permissible, but, to maintain the integrity of the heart muscles, actually indispensable; violent exertion, exciting emotions, and excessive eating and drinking are positively injurious; temperateness in all things pertaining to daily existence should be the watchword; with failing compensation absolute rest is of paramount importance, and, not infrequently, all that is necessary for rehabilitation; digitalis in this condition irrespective of the valve affected when drugs are required is the sole remedy that cannot be dispensed with; large doses may be given for a short time and small doses for a long time or indefinitely; strophanthus is one of the most reliable substitutes for digitalis; nitroglycerin, calomel, aconite, iron, arsenic, magnesium sulphate, and strychnine are valuable adjuvants; maximum doses of strychnine should not be continued for extended periods without intermission; finally, ruptured compensation is the beginning of the end, however long deferred by intelligent management"

3. **Epigastric Pain.**—Murdoch discusses in succession the characteristic pain which is due to the following conditions: Hyperacidity, hypersecretion, hyperæsthesia of the stomach, nervous gastralgia, biliary colic, certain affections of the spinal cord, cancer, gastric ulcer, pancreatitis, some forms of appendicitis, and Addison's disease. Two cases of gastric ulcer are reported.

4. **Pyuria and Hæmaturia.**—Douglas emphasizes the fact that the mere finding of pus or blood in the urine is but the first step toward a diagnosis. He reviews at length the different causes for such findings and enumerates the methods by which one may hope to arrive at a definite diagnosis in any particular case.

AMERICAN MEDICINE.

March 19, 1904.

1. The Pathology and Surgical Treatment of Pancreatic Diseases, By JOHN B. DEAVER, and GEORGE P. MULLER.
2. On the Occurrence of Diabetic and Non-Diabetic Glycosuria in the Same Individual, By HEINRICH STERN.
3. Remarks on the Uncinate Group of Fits, and on Severe Subcutaneous Hæmorrhage Occurring in Epilepsy, By WILLIAM G. SPILLER.
4. Reflex Cardiac Inhibition Resulting from Irritation of the Peripheral Fibres of the Trifacial Nerve and Occurring in the Course of an Operation for Chronic Empyema of the Frontal Sinus, By GEORGE FETTEROLF.
5. The Ochsner Treatment of Appendicitis Applied After Operation, By GEORGE S. BROWN.
6. Astigmatic Changes, By JULIUS POHLMAN.

1. **Pancreatic Disease.**—Deaver and Muller present the following classification of pancreatic disease: (A) Acute Pancreatitis—*(a)* acute hæmorrhagic pancreatitis; *(b)* gangrenous pancreatitis; *(c)* suppurative pancreatitis. (B) Fat necrosis. (C) Chronic pancreatitis—*(a)* interlobular; *(b)* interacinar. The ætiology, pathology, and symptomatology of each of these conditions is reviewed. Treatment: This is surgical for all the conditions. The technics of the best methods of procedure is given in some detail. In general it may be said that acute pancreatitis calls for early operative intervention. The end to be sought is free drainage. The mortality is high. Chronic pancreatitis offers a promising field to the surgeon. The cause of the pancreatitis must be removed. This can often be done and brilliant results may then be obtained. The essential lesions from the standpoint of surgery are: (1) Chronic pancreatitis due to obstruction of the ducts of the glands by biliary or pancreatic calculi. (2) Chronic pancreatitis due to infection, usually secondary to an obstruction of the ducts by gallstones, or by carcinoma, though not necessarily so. Opie has observed four cases in which the clinical history afforded evidence of continued gastric or gastrointestinal disease. They were presumably the consequence of an ascending infection of the duct. (3) The form of the disease arising in consequence of the effects upon the organs of the misuse of alcohol, from arteriosclerosis, endarteritis, syphilis, and general tuberculosis. In these cases biliary cirrhosis and perhaps interstitial nephritis are coexistent. (4) Interacinar pancreatitis, of unknown origin,

with disease of the islands of Langerhans, and usually diabetes. It is evident from this that no one operation will cure all forms of chronic pancreatitis.

2. **Glycosuria.**—Stern gives a table by which nondiabetic glycosuria may be differentiated from diabetic glycosuria. He asserts that these two forms of glycosuria may coexist in the same patient. Three cases are reported, which are said to have presented this condition, which the author calls duplex mellituria. From the study of the cases the author concludes: (1) The diabetic state may be well established before glucose is excreted by the urine. Diabetic glycosuria is nothing more than the salient feature of the second stage of the diabetic deterioration. (2) Glycosuria is a symptom, an enunciation of manifold other disturbances of ectogenous, as well as of endogenous, causation. (3) With the assistance of various discrepant factors we are enabled to differentiate clinically between the diabetic and nondiabetic form of glycosuria. (4) Duplex mellituria is the result of two concurrent or intercurrent affections of dissimilar character, having the one symptom, glycosuria, in common. (5) The recognition of duplex mellituria depends on the alternate prominence of one set of symptoms, including the respective glycosuria.

BRITISH MEDICAL JOURNAL.

March 5, 1904.

1. Observations on the Inception of the Rhythm of the Heart by the Ventricle as the Cause of Continuous Irregularity of the Heart, By J. Mackenzie.
2. On Some Hæmoglobin Investigations in Cases of Chronic Heart Disease, By T. Schott.
3. Improvements in Dietetics of Diabetics, By Sir J. Sawyer.
4. Recurrent Fever Associated with Spirilla in the Blood in a Patient from Gibraltar, By Sir P. Manson.
5. Veronal: a New Hypnotic, By A. C. Jordan.
6. On the Use of Oxygen Gas for Distending the Bladder for Cystoscopy, By A. G. Faulds.
7. Aseptic Surgery in Theory and Practice. (Lettsomian Lectures: III), By C. B. Lockwood.

1. **Cardiac Irregularity.**—Mackenzie seeks to explain that puzzling form of cardiac irregularity, where the heart is never regular and each beat differs in character from the preceding one. Under this head fall the conditions known as delirium cordis, mitral pulse, pulsus irregularis perpetuus, loss of vagus control, etc. He holds that in such cases the ventricle takes on the inception of the cardiac rhythm, and that when it does so the heart beats irregularly. It may be further presumed that whenever there is a continuous irregularity, as distinct from rhythmic irregularity, the ventricle is giving the rhythm. The same holds good in paroxysmal tachycardia. The cause of the continuous irregularity is the exalted irritability of the heart muscle and not the stimulation of the heart through the nervous system. The dilatation and ineffective action of the heart is secondary to the irregularity. Treatment should be directed to lessening the irritability of the heart muscle and to protecting the heart from exposure to causes which excite it to increased activity. While opium and the bromides are of service, yet no remedy equals prolonged rest in bed.

2. **Chronic Heart Disease.**—Schott has investigated the hæmoglobin in cases of chronic heart disease, with a view to showing that the so called Schott method of treatment by baths and gymnastics has a tonic influence, not only on the heart, but on the whole system. His results show that the formerly depreciated hæmoglobin in cases of heart affection, is always increased—even though in some cases the increase is only slight. It is far easier to raise the amount of hæmoglobin in young and middle aged persons than in older people. In a few cases there may be a fall in the hæmoglobin percentage at first, followed later by a rise.

3. **Diabetes.**—Sawyer states that the permission of potatoes in the food of diabetics is one of the greatest dietetic advances of our times. Cooked in any of the ordinary ways, they are a grateful food, but they should be cooked by steaming with the "skin" on. He proposes that the bread difficulty in diabetes be met by using the "flour" of properly cooked potatoes, instead of the flour of grain.

4. **Recurrent Fever.**—Manson reports a case of recurrent fever, occurring in a woman aged thirty years, who had lived at Gibraltar for three years. The case was at first diagnosticated and treated as one of Malta fever, but later, on examining the blood, spirilla were found. Morphologically the spirillum differed from *Spirillum Obermeyeri* in exhibiting only a few and graceful curves.

6. **Oxygen in Cystoscopy.**—Faulds recommends the use of oxygen gas to distend the bladder walls when cystoscopy is to be performed. It is preferable to the solutions of boric acid, etc., usually employed, for the reason that the latter are frequently made cloudy and opaque by blood or pus from the ureters. A "cold-lamp" cystoscope must, however, be used. Oxygen acts especially well in cases of enlarged prostate with foul, residual urine. It must be used cautiously, however; the patient must be warm and comfortable, the gas must be pure, and must enter the bladder slowly, and if cystitis exists a local anæsthetic must be used. The oxygen may be left in the bladder without any evil effects.

LANCET.

March 5, 1904.

1. The Evolution and Action of Certain Muscular Structures of the Heart. (Hunterian Lectures: II), By A. Keith.
2. The After Effects of Head Injuries. (Hunterian Lectures: III), By T. C. English.
3. The Antimalarial Operations at Mian Mir (Punjab), By J. W. Stephens.
4. Motor Symptoms of Mania and Melancholia; with a Theory of Their Origin and of the Origin of Delusions Arising in Those Conditions, By W. H. B. Stoddart.
5. Four Cases of Tetanus Treated by Injections of Antitoxine Into the Spinal Theca, By C. S. Wallace, and P. W. G. Sargent.
6. The Anatomical Characters of the So Called *Filaria Perstans* and on the Mode of Infection Thereby, By H. C. Bastian.
7. Congenital Hypertrophic Stenosis of the Pylorus, By E. Cautley.
8. Red Light in the Treatment of Smallpox. (A Fragmentary Contribution), By J. T. C. Nash.

9. On the Distribution of *Bacillus Coli* in Nature. Preliminary Note, By J. W. H. EYRE.
10. A Case of Paroxysmal Labyrinthine Vertigo Associated with Special Ocular Symptoms and Alleviated by Seton, By T. W. PARRY.
11. A Contribution toward the Ætiology of Alopecia Areata, By A. WHITFIELD.

2. **Head Injuries.**—English, in the last of his Hunterian lectures, discusses latent traumatic cerebral abscess, traumatic epilepsy, and lastly the surgical aspect of traumatic insanity. He sums up his conclusions as to the after effects of head injuries as follows: 1. Whilst some degree of mental impairment is comparatively common after injuries to the head the changes are seldom sufficiently marked to be included under the heading of insanity. 2. Insanity may result from injury to any part of the head. 3. Traumatism leads to insanity in two ways: (1) Direct insanity due to the actual injury to the brain or its membranes apart from hereditary or other predisposing causes; and (2) indirect insanity—that is to say, any form of insanity occurring as the result of lowered resistance of the brain due to injury in patients with a predisposition to insanity, hereditary or otherwise. 4. Every variety of mental change may be produced by traumatism, although some forms are commoner than others. 5. It is at present undetermined whether injury to the præfontal region is more likely to be followed by mental disturbances than injury to other parts of the brain. 6. Only a small proportion of the cases of traumatic insanity are open to relief by operation, for a localizing indication in an accessible region must be present. 7. The results so far have been encouraging, and although the operation must necessarily be exploratory it is fully justified in suitable cases, especially in face of the otherwise hopeless condition of these patients.

4. **Mania and Melancholia.**—Stoddart states that melancholiacs suffer from paralysis and rigidity of the spinal column and of the large proximal joints, the movement of the small joints being unimpaired. In mania, on the other hand, there is overstimulation and irritation, and characteristic movements occur at the large proximal joints. The melancholiac shakes hands from the wrist, the maniac from the shoulder. If it is accepted that insanity is due to nutritional disturbance of the cortical neurones, the following conclusions may be formed: (1) That in mania an irritating product is formed within the cortical neurones—such a view being supported by the frequency of hallucinations in mania; (2) that in melancholia a paralyzing product is formed within the cortical neurones; (3) that in agitated melancholia there is a combination of deleterious influences—viz., a paralyzing product within the cortical neurones and also an irritating body in the plasma which bathes the nerve cell; and (4) that in a few cases of mania there is in addition to the irritating body within the nerve cell an irritating body within the plasma which bathes the nerve cell.

When it is realized that melancholia is a special form of paralysis, it is easy to see that many of the more common delusions of melancholiacs arise from the feeling of inactivity. The delusions of exaltation of the maniac arise in a corresponding manner from the feeling of activity, which arises from the stimulation of his cortical neurones.

5. **Tetanus.**—Wallace and Sargent report four cases of tetanus treated by lumbar injection of tetanus antitoxine. The serum was injected by means of an antitoxine syringe provided with a specially long needle introduced between the third and fourth lumbar vertebræ, as first practised by von Leyden. Three patients recovered and one died, the fatal case being second in order of severity, both as regards incubation period and the character of the symptoms. From ten to twenty cubic centimetres of serum were given at a dose and in no case were any bad effects noticed.

6. **Filaria Perstans.**—Bastian, in reply to Low, who negatives his (Bastian's) suggestion that *Filaria perstans* belongs to the genus *Tylenchus* and is taken into the body with or in bananas, sums up his conclusions as follows: 1. Next to nothing is known of the internal anatomy of *Filaria perstans.* 2. It is an error to say that nematodes pass through one or more metamorphoses, since they invariably attain maturity by a process of steady development. 3. Nematodes stand in no need of being harbored by intermediate hosts. 4. Plants and vegetables, as well as water, may be the sources through which they obtain entry into the human body.

7. **Congenital Pyloric Stenosis.**—Cautley reports a case of fatal congenital hypertrophic stenosis of the pylorus occurring in an infant which died at the age of fourteen weeks. Vomiting began at the age of three weeks and was persistent; the child had wasted steadily, a movable lump could be felt in the region of the pylorus, and peristalsis was visible. It died from exhaustion due to marasmus. At the autopsy a probe could be passed through the pylorus, which was about an inch long and exhibited marked hypertrophy of the circular muscular fibres. As a rule the diagnosis is easily made. This case shows that a mild case can produce severe wasting and that operation was indicated.

8. **Smallpox.**—Nash reports good results obtained in the treatment of smallpox by means of red light. While prior vaccination undoubtedly plays the principal part in lessening the virulence of the disease in vaccinated persons, yet the red light treatment is of distinct benefit. Of eighteen patients so treated, only one died of hæmorrhagic smallpox, and that one was moribund on admission.

9. **Colon Bacillus.** — Eyre's investigations show that the generally accepted belief, that the presence of the colon bacillus is synonymous with "sewage" contamination, needs further proof. He has found the bacillus in the contents of the intestinal canal of the mouse, rat, guinea pig, rabbit, cat, and dog. Ducks, pigeons and sparrows, and sea birds also contained the bacillus, as likewise did a number of varieties of salt water fish.

11. **Alopecia Areata.** — Whitfield suggests that in a certain percentage of cases of alopecia areata the nervous irritation consequent on an undue effort to focus fine objects (eye strain) determines the onset of the symptoms in people whose health is not robust. He reports four cases in which correction of the visual error by means of glasses brought about a rapid growth of hair on the bald areas.

Proceedings of Societies.

THE OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, January 7, 1904.

The President, Dr. J. M. Fisher, in the Chair.

Four Cases of Hysterectomy.—This paper was read by Dr. George Erety Shoemaker. He said that the first operation was for severe pain in the right abdomen, lasting six years, followed recently by constant pain in the bladder, and disturbances of urination due to a fibroma of the uterus with many nodules. There was no hæmorrhage, but a chronic interstitial nephritis. Abdominal hysterectomy with amputation at the neck was performed. One half of one ovary was allowed to remain. The cause of bladder symptoms was a nodule developing underneath the bladder attachment, about three inches in diameter. It was undergoing cystic degeneration and was infected at the centre. There was for a few days superficial infection of the lower portion of the wound, possibly due to this cause. Excellent recovery. The patient was forty-eight years old and had had one child.

In the other patients the chief symptom was hæmorrhage. In one, who was twenty-seven years old and single, the periods for six years had been from seven to fourteen days in duration, the quantity very great and increasing. There had been several attacks of local peritonitis, and now urination was accomplished only after much straining. A hard fibroma of the uterus was tightly impacted in the pelvis, and reached four inches above the pubis. It was increasing in size and had practically disabled the patient. The tumor was completely buried by thoroughly organized bands of adhesion, and was intraligamentary on the left side. Removal difficult. The right tube formed a hydrosalpinx. Operation well borne, and recovery unusually smooth.

Another patient was thirty-three years old and had had one child. For very severe and long continued hæmorrhage she had been curetted by the writer two years before, though multiple fibromata of the uterus were recognized. The improvement had been only temporary, hæmorrhage had become gradually worse, the patient was bleeding several weeks at a stretch, and was confined to bed one third of her time with a tendency to syncope, and hæmoglobin of 50 per cent. There was albuminuria. After she entered the hospital, two weeks were devoted to efforts to check the constant hæmorrhage, in order that by a brief respite her operation chances might be improved. No impression could be made upon the hæmorrhage, however, and abdominal hysterectomy was performed during its continuance. Recovery from operation was uneventful.

The other patient was forty-one years old, and had had nine children. For one year hæmorrhage had been increasing, until it was almost constant through the month. The uterus being only moderately enlarged, vaginal hysterectomy was done, using ligatures and clasps. Recovery was excellent. Though the naked eye appearance of the growth, which choked the uterine cavity, strongly resembled adenocarcinoma, the microscopical report pronounced the disease benign adenoma.

Dr. R. C. Norris said that it was sometimes very difficult to make a diagnosis between beginning adenocarcinoma and benign adenoma, with which senile endometritis with hæmorrhage should be included. He narrated a case in point. When such cases were curetted the cervix should be dilated, so as to admit the finger for exploration of the entire cavity.

Dr. Shoemaker considered the tendency was for abdominal panhysterectomy as against the vaginal operation, and his preference certainly lay in that direction.

Dr. A. J. Downes advocated hæmostasis by pressure and heat, in preference to ligature. While the latter was perfect in aseptic elective cases, even there the after results were not so good, and in cases that bled freely the pressure method was much better. One could go down on the broad ligaments, using a wide clamp and cut on the track, or using an ordinary uterus forceps or the uterine side, and cutting on the side of the forceps, we had an absolutely bloodless operation. No abdominal pain followed this method.

Dr. G. M. Boyd endorsed Dr. Norris's remarks about the malignant changes that sometimes occurred in fibroids, and emphasized the need of a closer study of small fibroids that did not yield to curetting.

Dr. J. C. Da Costa referred to the excessive bleeding in the first of Dr. Shoemaker's cases as contrary to all we were taught regarding interstitial or subperitoneal fibroids. He regretted that scrapings had not been made just before operation, as they might have shown malignancy at that time.

Dr. Shoemaker, in closing, said that in the case curetted two years before operation, the condition was shown to be benign. The condition called for the major operation, therefore he did not waste time curetting. The specimen showed what troublesome hæmorrhage could be caused by small growths resistant to ordinary treatment.

As to the change of benign adenoma or endometritis into the malignant form, fallacies arose clinically from the fact that pathologists did not get hold of the malignant pieces. Nine tenths of the growth might be benign and one spot no bigger than the finger tip might be malignant. He reported such a case. He considered the method of electrohæmostasis inapplicable with a tumor as large as the one where he could not get his hand behind it after separation of all adhesions.

Dr. Downes contended that it made no difference what kind of a case it was, his method was practicable, and some men did all their work without ligature.

Artificial Dilatation of the Cervix.—Dr. Stricker Coles read this paper. He first considered the changes in the cervix during pregnancy, its enlargement and apparent shortening due to abrupt termination in the lower uterine segment. He then described the natural dilatation of the cervix by the bag of waters and the contractions of the uterine muscles pulling the cervix upward and outward. This dilatation began at the end of the thirty-eighth week of gestation by the cervix becoming obliterated. First the internal os dilated, then the cervical canal, when obliteration was complete. Then with increased uterine contractions the external os became thinner and then dilated. The methods of dilatation were first the introduction of the bougie which softened the cervix and gradually set up uterine contractions, and dilatation was completed by the bag of waters in from twelve to twenty-four hours. If more haste in delivery was necessary, when the bougie had been in the cervix eight or ten hours, the funnel-shaped bag could be introduced, which would greatly lessen the time and would also dilate completely the cervix and vagina. This bag was made of plain rubber, similar in shape to the De Ribes's bag, but without the curve, and was more durable and less expensive, and should be used in the same manner that was introduced into the uterus. When great haste in delivery was necessary he did not use the McLean bag introduced into the cervix, but preferred the hand, used after the method of Edgar and Bonnaire, or the Bossi dilator. He preferred Edgar and Bonnaire's method with the hand to that of Harris, as dilatation of the entire cervix was easier and was better applied in the small vagina. He believed that with the hand and Bossi's dilator, the cervix should be dilated in from twenty to forty minutes without much laceration, but if dilated in from five to ten minutes, there would be a large laceration. He had used the funnel-shaped bag in twenty-two cases with good results. In one case following its removal there was prolapse of the cord, and in another case there was rise of temperature which subsided without treatment. In nine of these cases the amniotic sac had not ruptured, but did not pouch. The amniotic fluid did not remain in front of the child's head and the os was dilating very slowly. The bag was introduced to hasten delivery. Four were delivered spontaneously and five with forceps. In one case of twin pregnancy, the bag of waters ruptured when the os was the size of a half dollar and the cord and foot prolapsed. These were replaced and the bag introduced. Both children survived. He gave the following conclusions: That with the proper use of the funnel-shaped bag, the hand, and Bossi's dilator, the lives of many children would be saved, infection prevented by lessening the dangers of prolonged labor; that the lacerations of the cervix and pelvic floor would be diminished, especially when the bag was used, as the dilatation being complete, the child could be easily delivered and not forcibly dragged through a partially dilated cervix and vagina.

Dr. R. C. NORRIS considered the question of dilatation of the cervix one of the most important operative procedures in the ordinary practice of obstetrics. He was a firm believer in it in inducing labor in many conditions. Failure in the introduction of bougies he considered chiefly due to improper introduction. He utilized a principle drawn from the passage of a catheter with a stylet. He had a bougie guarded with a stylet which passed to its head. Inserting the index finger through the cervix the bougie was inserted, the stylet partially withdrawn and the bougie pushed onward to an equal degree, thus the part of the bougie in the uterine cavity remained always flexible, while that which had not entered remained stiff, thus aiding further introduction. Penetration of the amniotic sac was one of the dangers. When it occurred the obstetrician should look out for prolapse of the cord. He had never in his experience known a bougie to produce infection. With regard to the bag he preferred, in multiparæ, to insert at once the largest bag possible. The Champêtre de Ribes's bag was very useful, and most nearly aproached the ideal. The bag exhibited by Dr. Coles, from the shape of its summit, had the disadvantage of dislocating the presenting part. He considered a triangular Voorhees bag the best. Many women tolerated a bougie or a bag without the induction of uterine contractions. This was almost invariably overcome by attaching a string and weight and allowing continuous traction for two or three hours, relieving it according to the indications. When there was no need of speed this method would overcome a rigid cervix where a metal dilator seemed otherwise to be necessary. As to hand and instrumental methods, Edgar's method required a great deal of manipulation, which especially in the hands of general practitioners, whose aseptic methods were not of the best, was dangerous as a source of infection. With instrumental methods infection diminished, but danger of laceration increased. He considered laceration the lesser danger of the two. With a hard sclerotic cervix in a multipara the bag or manual methods frequently failed, in which case resort must be had to metal dilators. He considered the Bossi instrument the best so far devised. The extent of laceration usually depended on the time taken to dilate up to nine or ten centimetres. Practically the rigidity of the cervix would largely determine the time required to accomplish this degree of dilatation. He never attempted to accomplish a dilatation of ten centimetres in less than twenty-five or thirty minutes. With the bougie and rubber bag distention of the vagina at the same time frequently hastened uterine pains. Where speed was necessary he inserted the bougie, at the same time placing the rubber bag in the cervix and distending it to its full size; also arranging the appliances for constant traction and distending a Karl Braun's colpeurynter in the vagina. As to the distending syringe he had never found any difficulty with the ordinary hand bulb Davidson. Strands of sewing cotton would correct any looseness where the tube was attached to the bulb. It obviated the necessity of removal to refill the syringe. To hasten the first stage of labor in cases dragging along for hours, the rubber bag was certainly a useful device. It saved the patient hours of suffering and prevented asphyxiation of the infant.

Dr. GEORGE M. BOYD considered artificial dilatation of the cervix an operation that need not frequently be resorted to. He would cut out the group of cases dependent on pelvic deformity. He was sure that other members of the society had had the same experience of the unsatisfactoriness of methods for inducing labor as himself.

In view of the dangers of infection, rupture of the membranes, and perforation of the uterus, he thought that in his next case, if it was possible to anæsthetize, he would manually dilate the cervix and tampon both cervix and vagina. As to methods, those of Edgar M. Harris had served him so well that he had not often resorted to the rubber bag. In eclampsia, he thought it well to empty the uterus promptly, using manual dilatation, which had always proved satisfactory.

Dr. W. A. N. **Dorland** had recently had occasion in a short space of time to use rapid dilatation in three cases, in all of which he used the digital method of divulsion to his entire satisfaction. In his experience Edgar's method of rapid dilatation and the rubber bag, according to Voorhees's method, had proved most satisfactory. He had never used the Bossi dilator, the use of which he considered limited to an exceedingly narrow field.

Dr. M. M. **Franklin** spoke of the importance of testing all forms of rubber bags against liability to rupture before using them.

Dr. **Cole** had never had any trouble in starting labor by the bougie. He inserted about ten inches inside the uterus, and in all cases labor had begun in from twelve to eighteen hours.

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Book Notices.

Die Funktionsprüfung des Auges und ihre Verwertung für die allgemeine Diagnostik. Für Aerzte und Studierende von Professor Dr. O. Schwarz, in Leipzig. Mit 81 Figuren im Text und einer Tafel. Berlin: S. Karger, 1904. Pp. 322

The author's aim has been to give a survey of the entire field of functional examinations of the organ of vision in connection with the disturbances of refraction, accommodation, motility, light and color sense, visual field, and so on, with their immediate causes, and to show how the results of such tests are to be applied for diagnostic purposes. In systems and textbooks of ophthalmology these methods are not found under the headings of the various affections and abnormal conditions in which the disturbances occur, nor, on the other hand, are the latter considered in the chapters on functional tests. The volume under discussion enables us to consult the various tests and the disturbances they reveal with very little loss of time and with the gain of a broader view of the subject.

The first division deals with the optical principles of vision, with the dioptrics of the eye, and with eye glasses; the second part gives a complete analysis of the various functions of sight and the means of testing them; the third part is devoted to the application of the knowledge gained by functional tests to the diagnosis of morbid states.

The book is exceptionally thorough and complete in its scientific foundation, especially in the physical and mathematical basis, and valuable as well as interesting for the way in which the underlying physiological principles are taken into consideration and explained in each analysis. The practical side of the work is equally satisfactory, except for one or two minor omissions and discrepancies, such as the absence of any mention of toric lenses and their application, although a very complete analysis is given of the refraction by astigmatic (toric) surfaces.

The signal tests for color blindness (Thomson, Oliver, Williams, Eldridge, Green), the central color perception test, and some of the tests for simulation have been omitted; the prismatic action of decentered spheres is not considered with regard to its practical importance in refraction work and in prescribing glasses; mechanical retraction palsy and synergetic movements of the lids and jaw are not mentioned among the anomalies of motility. The diagrammatic illustrations are good, with the exception of those in the chapter on muscle paralysis. The work will be found valuable for reference and special study, as the grouping of methods and symptoms is a great convenience.

A Textbook of Legal Medicine and Toxicology. Edited by Frederick Peterson, M. D., President of the New York State Commission in Lunacy, etc., and Walter S. Haines, M. D., Professor of Chemistry, Pharmacy, and Toxicology, Rush Medical College, Chicago. In Two Volumes. Volume I. Philadelphia, New York and London: W. B. Saunders & Co., 1903. Pp. iii-730. (Price, $5.00.)

Composite works, that is, works published by the cooperation of many authors, are apt to have some unsatisfactory features. All have many disturbing elements, such as lack of uniformity, overlapping of subjects, redundancy and repetition, contradictory and opposite views, especially disturbing to the seeker of fact and truth. This work of Peterson and Haines is in many respects an exception to the usual composite and shows fewer of the faults mentioned. Many of the subjects are well presented, and, on the other hand, some of the authors are little known in the field of workers in medical jurisprudence. On the whole, however, the work is of value and is deserving of a place in every library on forensic medicine.

The work is to consist of two volumes. The first deals with expert evidence, followed by an excellent chapter by Hektoen, of Chicago, on the technics of medicolegal post mortem examination; next appear the topics of identity, the signs of death and sudden death, by Ewing, of New York; a chapter on death from cold, heat, and starvation by Allen J. Smith, as well as one on death from asphyxia by the same author; death and injuries by lightning and electricity from the pen of Smith Ely Jelliffe; wounds, by Lewis Balch; gunshot wounds, burns, and scalds, by Josiah N. Hall; the destruction and attempted destruction of the human body by fire and chemicals, by Walter S. Haines; railway injuries, by Da Costa, of Philadelphia; injuries and disorders of the nervous system following railway and allied accidents (an exceptionally good chapter), by Pearce Bailey, of New York; the medical jurisprudence of life insurance and of accident insurance, by S. T. Armstrong; speech disorders, by F. W. Langdon; inebriety, by Græme M. Hammond; the stigmata of degeneration, by Peterson; insanity, by Eskridge —which, by the way, is a fair presentation of the subject, considering the limitations as to space allowed for this important subject—idiocy, imbecility, and feeble-mindedness, by Petersen and Jelliffe, and finally the mental perversion of the sexual instinct, by C. G. Chaddock.

Infection and Immunity, with Special Reference to the Prevention of Infectious Diseases. By GEORGE M. STERNBERG, M. D., LL. D., Surgeon General U. S. Army (Retired), Ex-President of the American Medical Association and of the American Public Health Association, etc. New York and London: G. P. Putnam's Sons, 1903. Pp. ix-293.

This admirable little book is intended for the non-medical reader, and is one of the volumes of The Science Series. Its object is to present the subject of infectious diseases in a practical manner, to point out the general prophylaxis, and to call attention to those measures necessary for the control and avoidance of epidemics. The work is divided into two parts, the first dealing with infection, disinfection, and immunity, the second with the ordinary infectious diseases. A separate chapter is devoted to each disease, and its history, geographical distribution, causation, general characteristics, mode of dissemination, and prophylaxis are carefully described in detail. Scientific technicalities are avoided as far as possible, yet sufficient data are given to enable the book to be used as a textbook in high schools and colleges, as the author mentions in his preface.

A work of this kind is distinctly valuable and serviceable when placed in proper hands, and we trust that it may not only find a place, as the author expects, in schools and colleges, but in every intelligent community and institution and home. Many physicians will be adequately repaid by a perusal of its pages, and trained nurses in particular will find many useful points of information. The subject could not have been more satisfactorily presented within these limits, and we take great pleasure in commending the book.

Die chirurgischen Untersuchungsarten. Einführende Vorlesungen über allegemeine chirurgische Diagnostik. Von DR. OTTO MANZ, Privatdozent der Chirurgie. Mit 20 Figuren im Text. I. Teil. Jena: Gustav Fischer, 1904. Pp. vi-322.

The author very modestly calls this exhaustive treatise a small volume which is to set forth the principles in the methods of surgical examination.

The subject matter is divided into two classes, a consideration of methods applicable to the intact surface of the body and methods appertaining to the lesions beneath the surface of the body.

Under the former heading, as in internal medicine, inspection and palpation are the two great resources discussed. Inspection comprises an appreciation of the changes in color, the absence or deficiency of color, and, on the other hand, exaggerations of color. Then follow lectures on diseased forms discernible by the eye, such as swellings and faulty positions. The next feature for the eye to observe is disturbance in motion, and to this chapter is appended one on measurements.

Under palpation as the second step in surgical examination, the consistence, location, shape, and size of objects and the mobility associated with them are discussed. Thereupon follows a description of the various manipulations best suited to enable one to appreciate these, including differences in temperature, pain on pressure and the pain incident to movements. A far smaller space is given to the enumeration of lesions existing and such as are made by puncture or incision for the purpose of refinement of diagnosis.

We have by this enumeration of topics outlined the scope of this work. It is a philosophical and logical representation of the surgical methods of examination. Its verbosity unrelieved by the presentation of facts is a defect.

La Nature syphilitique et la curabilité du Tabès et de la paralysie générale. Par L. E. LEREDDE. Paris: C. Naud.

This is a treatise written to prove the syphilitic nature of general paralysis and tabes, and maintain their curability by means of mercury. The case which first prompted the writer to investigate this field was one which he himself admits would be regarded by the neurologist as a pure and simple case of syphilis of the central nervous system. Leredde maintains that such cases cannot be considered apart from tabes and that the use of the term tabes is a purely arbitrary one. It does not designate a type of cases which have a uniform pathological lesion or a sharply defined set of clinical symptoms. He practically demands that a disease which is due to syphilis of the nervous system, and exhibits some of the symptoms we are accustomed to consider tabetic, is to be regarded as tabes without regard to the time which has elapsed since the original injection. Fournier's term "parasyphilitic" has no meaning for him. And he is thus able to produce cures in his cases of locomotor ataxia. He does not believe in using inunctions. He uses the method of injection and preferably the soluble salts of mercury, in very large doses.

A Text Book of Obstetrics. By BARTON COOKE HIRST, M. D., Professor of Obstetrics in the University of Pennsylvania. Pp. 900, with 746 Illustrations, 39 of them in Colors. Fourth Edition, Enlarged and Thoroughly Revised. Philadelphia, New York, London: W. B. Saunders & Company, 1903. (Cloth, $5.00 net; sheep or half morocco, $6.00 net.)

As in all the previous editions of this now standard text book of obstetrics, much emphasis is placed upon the surgical aspect of the subject, the author believing that every obstetrician should be a competent gynæcologist also. This attitude is but another instance of the closing in of the specialty, of its gradual separation from general surgery; and more particularly is Hirst's attitude correct in the performance of plastic operations on the vagina. For he is a poor obstetrician, indeed, who cannot repair lacerated perinæa and cervices, and, in general, surgeons are not very expert in this kind of work. We believe the day is not far distanct, in larger centres at least, when obstetrics will be practised exclusively by those with special training in this line and in gynæcology, and when, in fact, the public will demand that the accoucheur shall be one who does not come into contact with infectious and contagious material.

As far as the book itself is concerned, it appears to be thoroughly revised. New sections have been added, especially on diseases and injuries associated with childbirth, new illustrations have been inserted freely, and recent literature has been consulted and noted in the text. The book remains what it has been from the first edition, a sane, practical, scientific, modern text book.

BOOKS, PAMPHLETS, ETC., RECEIVED.

A Practical Treatise on Nervous Diseases for the Medical Student and General Practitioner. By B. F. Savary Pearce, M. D., Professor of Nervous and Mental Diseases in the Medico-Chirurgical College of Philadelphia; Fellow of the College of Physicians of Philadelphia, etc. With Ninety-one Illustrations. D. Appleton & Company, New York and London. 1904. Pp. xvii-401.

Diseases of the Gallbladder and Bile Ducts, Including Gallstones. By A. W. Mayo Robson, F. R. C. S., Hunterian Professor of Surgery and Pathology, 1897, 1899, and 1903; and Vice-President Royal College of Surgeons of England, 1902, assisted by J. F. Dobson, M. S. (London), F. R. C. S., lately Resident Surgeon to the General Infirmary at Leeds. Third Edition. William Wood & Company, New York. MDCCCCIV. Seventy-three Illustrations. Pp. xvi-485.

Medical Union Number Six. By William Harvey King. The Monograph Press, New York. 1904. Pp. 58. [Price, boards 35 cents; paper 15 cents].

Annual Report of the Surgeon General of the Public Health and Marine Hospital Service of the United States for the Fiscal Year 1903. Government Printing Office, Washington, D. C. 1903.

Experiments Concerning Tuberculosis under the supervision of the Biochemic Division. U. S. Department of Agriculture, Bureau of Animal Industry, Bulletin No. 51, Part 1. D. E. Salmon, D. V. M., Chief of Bureau. By Marion Dorset, M. D., Assistant Chief of Biochemic Division, Bureau of Animal Industry.

The Gazette Pocket Speller and Definer, English and Medical. Second Edition. The Gazette Publishing Company, 503 Fifth Avenue, city.

Miscellany.

Notes on American Hospitals.—Campbell Douglas, L. R. C. P. Ed., has the following article in the *Glasgow Medical Journal* for February, 1904. It is of such great interest to Americans that we think no apology will be necessary for reproducing it almost in its entirety:

Recently it was the good fortune of the writer of this article to spend some six weeks visiting American hospitals, and learning at first hand something of the way in which his American medical brethren did their work. Some impressions of the men whom he met and of the work which he saw carried out are here recorded. As six weeks' acquaintance with anything is hardly enough to enable one to pass judgment upon it, so these notes of a holiday trip do not pretend to give more than a general impression left by a flying visit across a continent—the composite picture formed from a score or two of individual films. If anything I say should hurt the susceptibilities of my American friends I crave their indulgence, and assure them that I shall try to be honest in my criticism, and record nothing which I have not seen, and repeat nothing which I have not heard directly. For them all I have a high regard, and some of them I should feel honored to count among my personal friends. If it is given to me to again visit the United States I shall seek with great pleasure to renew acquaintanceship with not a few of them.

A few weeks or months spent in the workshops of our American colleagues will probably do more than anything else to teach one that all the wisdom of the world is not contained in one's *alma mater,* and at the same time to make one an enthusiast for that British-American friendship whose growth has been so remarkable within the past two decades. In no section of society can the increase of this friendly feeling be stimulated more than in that which embraces the medical profession, whose only aims are mutual and never antagonistic; whose object is the demonstration of scientific truth, not the piling up of fortunes; and whose goal is the conquest of disease, not the conquest of each other. Nothing will help on the growth of this friendliness more than travel in each other's country, and it is probable that there has been too little of this in the past. Cheaper rates and quicker transit are gradually leading toward the time when we will discuss the advisability of going for our short vacation, not to the Isle of Man, or across to Holland, but to Hot Springs or Santa Catalina.

THE BEST TIME FOR A VISIT TO MEDICAL AMERICA.

A writer in an American medical magazine recently confessed that he thought the best time to take a foreign trip, which would include the study of foreign hospital methods, would be after fifteen or twenty years of hard general work, when one was fagged and in need of a rest, and when one was able by one's own work to appreciate the value of another's. From this view I would dissent for two reasons—first, because a man who has never been much away from a general practice for fifteen years ought to go back to college—his own college—and stay there all the time, if he wants any sort of brushing up; and, second, because if one intends seeing much of foreign hospitals, and has only a limited amount of time, he ought to be fresh enough to "hustle round" without feeling fagged all the time. The man fresh from active hospital work in the home country, be he visiting surgeon or interne, is in a better position to compare home methods with foreign ones, and will at the same time learn more from and notice more of what he sees. It is true, of course, that the Atlantic trip, which is the preliminary to every holiday in America, braces one up, and takes all fag out of one, making in itself the pleasantest of holidays; and when the time comes when we are able to take a week-end in New York, we shall probably look back with regret to the days when it took a week to cross, and when one didn't have the previous day's news served up at the breakfast table every morning by wireless telegraphy. The best time of the year to visit the States is not July or August, when we usually take our holidays, for the chances are that the leaders in the surgical and medical world in America are on holiday, too. Thus Osler, Halstead, and Kelly leave the Johns Hopkins for Europe or elsewhere as soon as the students' session closes in May, and a visit to Baltimore while they are gone is apt to be a little disappointing. Probably May or late autumn, or any time that the students' session is in full swing, would be the time to go across. One does not exactly wish to go round with the house physician while the professor is rusticating amongst the hills, or watch the house surgeon carve while his chief is "back East."

In a note to the writer, wishing him a pleasant trip and the acquisition of fresh knowledge, Sir William Macewen remarked that one was always sure of a welcome in American hospitals at any time; and though this is literally true, yet one is none the worse of having one or two introductory cards to some of the more prominent men in foreign hospitals, and I would take this opportunity of thanking those who so willingly obliged me in this respect, and through whose kindness I was enabled to gain a closer insight into American hospital ways than I might otherwise have done. One could not help being gratified at the cordial spirit of free masonry which existed among the medical fraternity of the United States, a spirit of brotherhood which made the presentation of one's card change the sharp scientific business man into the eager delighted friend, who could not do enough to make your stay both pleasant and profitable, and who sent you on your way with mutual regrets that you had to part, and with little personal notes of introduction to confrères in distant cities. This is one of the most lasting impressions which I have taken away with me.

HOSPITAL METHODS AND AMBULANCE SYSTEMS COMPARED.

It might seem at first that there was little difference between American hospital methods and our own, except in minor details; yet, on closer inspection, many and fundamental differences can be found affecting their hospital buildings, the financing of their institutions, the admission of patients, their ambulance system, and numerous other things. The way in which their ambulance system is operated differs considerably from our own. Each hospital has its own ambulances, and with these drains a certain district of the city. When an accident occurs in a particular district a policeman will, from the nearest telephone, ring up whichever hospital happens to be nearest the scene of the accident, and in a few minutes an ambulance is on the spot. Each of these ambulances, moreover, when it goes out, is accompanied by an assistant house surgeon.

who is for the time being on ambulance duty, so that the patient gets into skilled hands at once, and there is little chance of any one dying of hæmorrhage, or some such preventable cause, while on the way to hospital. In Bellevue Hospital, New York, I saw an ambulance standing outside the stable, horsed, and ready for any call that might turn up. The moment a call sounds in the stable the ambulance dashes round to the exit gate, where the interne on ambulance duty at the time is already waiting, bag in hand. He jumps in, shouts the location of the case to the driver, and in a moment they are on their way to the scene of action. If the case be a trivial one, it may be treated and sent home, or driven home right away, or it may be taken to the hospital for temporary or prolonged detention. By such a system cases are more quickly reached and more quickly taken in hand, though the system is more applicable to large cities than to small towns. The following incidents serve well to illustrate the value of a medical man going with the ambulance: A call from the other side of the island came to Bellevue one afternoon during a spell of very hot weather. The doctor found on his arrival that the patient was a man overcome by heat, and with a temperature of 109° F. The application of an ice cap to the head, and sponging the man's body with ice water all the way to the hospital, brought his temperature more nearly to normal and probably saved his life. On another occasion a hurried call came to the New York Hospital from a few blocks away, and when the ambulance reached the spot, some five minutes later, the house surgeon, whom I had the pleasure of meeting, and who was a very smart man indeed, found a boy who had been run over by a motor car, and was very blanched and shocked. Making a provisional diagnosis of internal hæmorrhage of a serious character, he picked the boy up in his arms, and drove to the hospital as fast as his horse could gallop. On reaching it he went at once, with the boy still in his arms, to the theatre, where Dr. Lewis Stimson was at the time finishing an operation, and, without waiting for preparation of any kind, the abdomen was opened, and a spouting superior mesenteric artery quickly caught with forceps.

THE HOUSE STAFF.

To become a house surgeon or house physician in almost any American hospital one has to pass a competitive examination, and for the appointments in the larger hospitals there is keen competition. As with us, the men who have done best work as undergraduates generally get in. The length of service varies greatly in different hospitals, but is longer than with us as a whole. A man may enter a hospital and stay in it for a year or two years or longer, but during this time he may not be more than two or three months in any one set of wards, or under one chief. Thus, in the Roxburgh Hospital, in Wissahickon, the housemen spent three months on the medical side, three months on the surgical side, and three months in the laboratory, doing all the chemical, bacteriological, and pathological work of the hospital. This is certainly a disadvantage from the visiting surgeon's or physician's point of view. In other hospitals the same thing occurred, though perhaps an extra month might be spent in each department. In any case, the men must go through the various branches of hospital work in one continuous service, and cannot, as is frequently done with us, break off for six months or a year, and then return for a fresh turn as interne. In some of the larger hospitals, such as the Johns Hopkins and the New York Hospital, the term of service is longer than elsewhere, and the men are kept more strictly to one side of hospital work—medical, surgical, or gynæcological. Thus, in the latter hospitals there are two surgical divisions, each with four internes, and the work of the two divisions is kept separate. During the first six months the interne anæsthetizes; during his second six months he assists at operations; his third half year is spent on ambulance duty or in taking instruments; and during his final period of six months or more he has charge of the surgical wards, admits cases, acts as first assistant when his chief is operating, and very frequently operates himself. Both the house surgeons in this hospital (the senior man in each division is alone called house surgeon) had done many laparotomies for pyosalpinx, appendicitis, hernia, etc., nor were they alone in this respect, for I found the same thing to occur at the Cook County Hospital in Chicago, and saw several operations by house surgeons in the Johns Hopkins Hospital. Whether all this was right, from the patient's point of view, I leave others to decide. By the time their term is finished, however, the house surgeon's knowledge of operative technics is considerable, and, as one of them said, they are "ready to tackle anything." In the Johns Hopkins Hospital the offices of resident physician, surgeon, and gynæcologist are more or less permanent (that is, the man appointed can remain in the position for years if he cares to), and a small salary is paid. Those under them are termed house officers, are elected for a year, and are eligible for reelection. That many of these junior men never reach the senior post is evident, when one learns that there have been but three house physicians in the past fourteen years, the present occupant, Dr. M'Crae, having been there some three or four years, and his predecessor, Dr. Thayer, nearly seven years. These housemen take an active part under the direction of their chiefs in the teaching work of the hospital. In operating they were assisted by their juniors, who treated them for the time being almost like chiefs. Most of the internes whom I met impressed me with their smartness and fitness for work, and seemed to take a pretty keen interest in doing their work well. Yet, in one big hospital in New York, I saw three housemen fail to recognize surgical emphysema following tracheotomy. Others, again, knew few men or books outside their own university or city. In their social relations, when they were off duty, as it were, they proved always to be the best of good fellows, and I have passed many a pleasant hour in their company on the tennis court, or at the dinner table, or in the snug sanctum of some senior resident, chatting and comparing notes. I do not know that the Bohemian hilarity of the Scottish hospital symposium is ever indulged in, but they can enjoy themselves, too, when they get together of an evening, with music, and song, and story. Their rooms were more than up to our own as regards size and furnishing, although in some hospitals two men shared each bedroom, and in the Philadelphia Infirmary three men slept in one room, and had, of course, a common sitting room and dining room. The "cuisine" was always excellent. In the Episcopal Hospital, in Philadelphia, the dinner table is provided for out of a fund left for that special purpose by a former resident. Here is a most practical suggestion for "old residents."

HOSPITAL BUILDINGS.

America is a new country in many respects and among others in the matter of hospital buildings. Most of the hospitals are smaller than ours, averaging three to four hundred beds, though the State hospitals, where the very poor, chronics, fever cases, and sometimes insane patients are received, may reach a huge size, as in the case of the Philadelphia Hospital, which has five thousand beds, and the Bellevue, and Cook County Hospital, Chicago, both of which are of great size. Most of the general hospitals are comparatively new, up to date buildings, often planted in the centre of the town, with very little ground around them for convalescents to exercise in. The plan of building in the majority of them is to have pavilions or blocks three or four stories in height and connected by corridors. Some of them have excellent situations as regards air and sunlight, particularly St. Luke's Hospital in New York, built on the summit of Cathedral Heights, on the outskirts of the city; the Pennsylvania Hospital, in the suburbs of one of the most beautiful cities in America, and the Johns Hopkins Hospital, situated on the top of a hill, well above the smoke and dust of Baltimore. The average number of beds in each of these is about three hundred. The larger and better hospitals are very frequently denominational; that is, are kept up and supported by members and adherents of certain religious and other organizations. The Mt. Sinai Hospital in New York, kept up by Jews; the Providence Hospital in Washington, maintained by Catholics, and the French Hospital in San Francisco, supported by the French society of the city, are examples. The wards in nearly all are large and wide and airy, with plenty of cubic space to each bed, the average number of the latter varying from twenty to twenty-five in the general hospitals, up to forty or fifty in the State hospitals, with their closely packed, low-roofed wards. In one hospital an idea in flooring with different colored tiles had been carried out, with very pleasant effect, but in most the floors of the wards were of polished wood. On the other hand, nearly all the corridors, entrance halls, and theatre floors were formed of small pieces of marble, embedded in concrete, forming a mosaic pattern. The three hundred odd beds, which constituted the average hospital, were not, however, free beds for charity patients. Perhaps a fourth, or a third part of them, might be in private wards of two or three beds, or in private rooms of one bed. Thus all the hospitals, except the State hospitals, receive paying patients, and the system of nursing homes, unconnected with any hospital, for the treatment of those able to pay, is quite unknown. In the Providence Hospital in Washington I saw some very beautiful private suites, where the patient had a private bathroom attached to the bedroom, and an extra room for any relative who desired to remain near the patient during his illness. Senior students are admitted to the private operations, and the patients are under the care of the house surgeon or house physician.

OPERATING ROOMS AND METHODS.

Great attention has been paid to the operating suite in most American hospitals, and its newness and first class equipment are very apparent. Frequently the operating block is by itself, attached to the end of the surgical pavilion, the suites for the different floors being placed on top of one another. The operating room is at one side, the sterilizing room, surgeons' dressing room, instrument room, etherizing room, and surgeons' bath room opening off an anteroom on the other side. The favorite material for the walls and doors of the theatre and the side rooms connected with it is solid blocks of marble. Each door may be cut from a single piece of nearly white marble, swung on very heavy brass hinges. While the amphitheatre where operations are performed before the class was often large enough to accommodate five or six hundred students, the private operating rooms might be just large enough to serve the surgeon and his assistants. As showing the cost which these marble theatres entail, I was assured that the large marble operating theatre of the Medico-Chirurgical Hospital in Philadelphia (they call it "Medico-Chi." for short), was built at a cost of two hundred thousand dollars (£40,000). It certainly was the most magnificent operating theatre I had seen anywhere. When the surgeon enters the dressing room he divests himself of all his clothing save his undershirt and socks, and proceeds to don a sterilized suit of duck or cotton cloth, and a sterile, closely fitting skull cap. Then he sterilizes his hands, and, lastly, puts on a sterilized gown and sterilized rubber gloves, and has his moustache and beard, if he has either, covered in by a bag or a turn of bandage over the vertex and under the chin. He has goloshes or sandshoes on his feet. This was quite a common method of preparation for operation, and was the one adopted by Lilienthal in New York, by Deaver in Philadelphia, and by Murphy in Chicago. The assistants follow the chief's example in every detail. Though bathrooms with shower, and spray and plunge were attached to several of the theatres, I do not know that they were often used, but sometimes the surgeon had a bath to cool himself after a tedious operation. I will always remember standing for nearly four hours one afternoon in the New York Hospital theatre, watching several difficult and prolonged abdominal sections being performed by Dr. Hartley, while the thermometer indicated a temperature of 97° F. in the shade. I felt like joining the house surgeons in the cold shower which some of them took before we went down to dinner.

(*To be concluded.*)

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Official News.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending March 19, 1904:

Buck, Carroll D., First Lieutenant and Assistant Surgeon. Arrived at San Francisco, Cal., on the *Thomas*, from Manila, P. I., with troops.

Davis, William T., First Lieutenant and Assistant Surgeon. On expiration of leave of absence, he will rejoin transport *Logan*, San Francisco, Cal.

De Loffre, Samuel M., First Lieutenant and Assistant Surgeon. Granted fourteen days' leave of absence from April 1st, with permission to apply for an extension of seven days.

Edger, B. J., Jr., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month.

Gosman, George H. R., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Duchesne, Utah, and ordered to Camp George H. Thomas, Ga., for duty.

Perley, Harry O., Major and Surgeon. Assigned to temporary duty as Chief of the Surgeon's Office, Department of Colorado, Denver, Colo.

Raymond, Thomas U., Major and Surgeon. Upon being relieved from duty at Jefferson Barracks, Mo., by William B. Banister, Major and Surgeon, will proceed to St. Louis, Mo., for special duty at the Louisiana Purchase Exposition, with a view to exercising supervision over the sanitary conditions on the grounds.

Siler, Joseph F., First Lieutenant and Assistant Surgeon. Granted fourteen days' leave of absence.

Williamson, L. P., First Lieutenant and Assistant Surgeon. Will proceed to Jefferson Barracks, Mo., with recruits *en route* to San Francisco, Cal.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending March 18, 1904:

Place.	Date.	Cases.	Deaths.
Smallpox.—United States.			
California—San Francisco	Feb. 21-28	5	
Dist. Columbia—Washington	Mar. 5-12	2	
Florida—Jacksonville	Mar. 5-12	2	
Illinois—Belleville	Feb. 26-Mar. 12	2	
Illinois—Chicago	Mar. 5-12	1	
Illinois—Danville	Mar. 5-12	1	
Illinois—Galesburg	Mar. 5-12	1	
Maine—Madawaska region	Feb. 27-Mar. 5	11	
Maryland—Baltimore	Mar. 5-12	2	
Michigan—Detroit	Mar. 5-12	1	
Missouri—St. Louis	Mar. 5-12	11	
New Hampshire—Manchester	Mar. 5-12	5	
New Jersey—Camden	Mar. 5-12	2	1
New York—Buffalo	Mar. 5-12	4	
New York—New York	Mar. 5-12	5	
Ohio—Cincinnati	Feb. 26-Mar. 11	7	1
Ohio—Dayton	Mar. 5-12	2	4
Ohio—Toledo	Mar. 5-12	1	
Pennsylvania—Johnstown	Mar. 5-12	1	
Pennsylvania—McKeesport	Mar. 5-12	1	
Pennsylvania—Philadelphia	Mar. 5-12	48	6
Pennsylvania—Pittsburgh	Mar. 5-12	2 1 Imported.	
South Carolina—Charleston	Mar. 5-12	1	
South Carolina—Greenville	Mar. 5-12	9	
Tennessee—Nashville	Mar. 5-12	12	
Wisconsin—Milwaukee	Mar. 5-12	3	
Smallpox.—Foreign.			
Austria—Prague	Feb. 20-27	9	
Belgium—Antwerp	Feb. 14-21	7	4
Canada—Ontario; 24 localities	Jan. 1-31	103	
Canada—Quebec	Mar. 5-12	3	
France—Marseilles	Feb. 1-29		25
France—Paris	Feb. 20-27	38	1
Great Britain—Edinburgh	Feb. 20-27	16	13
Great Britain—Glasgow	Feb. 26-Mar. 4	30	2
Great Britain—Hull	Feb. 20-27	6	
Great Britain—Leith	Feb. 20-27	3	
Great Britain—London	Feb. 20-27	5	
Gt. Britain—Newcastle-on-Tyne	Feb. 20-27	5	
Great Britain—Nottingham	Feb. 20-27	14	
India—Bombay	Feb. 9-16		5
India—Karachi	Feb. 7-14	5	1
Italy—Palermo	Feb. 20-27	1	
Malta	Feb. 13-20	1	1
Mexico—La Cananea	Mar. 9	Present.	
Mexico—Magdalena	Mar. 7	8	
Mexico—Terreen	Feb. 24	Epidemic.	
Netherlands—Amsterdam	Feb. 20-Mar. 5	2	
Russia—Moscow	Feb. 13-20	8	1
Russia—Odessa	Feb. 13-20	2	
Russia—St. Petersburg	Feb. 13-27	17	5
Spain—Barcelona	Feb. 1-19		7
Spain—Santander	Feb. 22-29	4	1
Turkey—Constantinople	Feb. 21-28		5
Yellow Fever.—United States.			
Texas—Laredo	Mar. 14	1 It is not yet determined whether this case was imported or not. All precautions taken.	
Yellow Fever.—Foreign.			
Mexico—Merida	Feb. 28-Mar. 5	1	2
Cholera.			
India—Calcutta	Feb. 6-13		19
India—Madras	Feb. 6-13		1
Plague.—United States.			
California—Concord	Feb. 29		1 Bacteriologically confirmed Mar. 12.
Plague.—Foreign.			
Egypt—Alexandria	Jan. 30-Feb. 13	1	
India—Bombay	Feb. 8-16		550
India—Calcutta	Feb. 6-13		45
India—Karachi	Feb. 7-14	69	34

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending March 19, 1904:

Ferebee, N. M., Medical Director. Detached from the Navy Yard, Washington, D. C., and granted sick leave for six months.

Peck, A. E., Assistant Surgeon. Granted sick leave for two months.

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ended March 17, 1904:

Brooks, S. D., Surgeon. Department letter granting Surgeon Brooks leave of absence for four months from April 1, 1904, amended to read four months from April 6th.

Bullard, J. T., Acting Assistant Surgeon. Granted leave of absence for twenty-seven days from March 4th.

Carter, H. R., Surgeon. To proceed to New Orleans, La., and attend conference of quarantine officers, March 14th.

Francis, Edward, Assistant Surgeon. To proceed to Delaware Breakwater quarantine and assume temporary charge of station during illness of Passed Assistant Surgeon C. H. Lavinder. March 10, 1904.

Grubbs, S. B., Passed Assistant Surgeon. Granted leave of absence for twelve days from March 18th.

Guiteras, G. M., Surgeon. Department letter granting Surgeon Guiteras leave of absence for three months from December 19, 1903, amended to read two months and five days from December 19, 1903.

Kolb, W. W., Pharmacist. Granted leave of absence for twenty-eight days from April 2nd.

McMullen, John, Passed Assistant Surgeon. To proceed to Immigration Depot, New York, N. Y., and report to Surgeon G. W. Stoner for duty. March 12, 1904.

Moncure, J. A., Acting Assistant Surgeon. Granted leave of absence for thirty days from April 1st.

Nall, R. P., Acting Assistant Surgeon. Granted leave of absence for seven days from March 1, 1904, under paragraph 210 of the regulations.

Richardson, T. P., Assistant Surgeon. Relieved from duty at New Orleans, La., and directed to proceed to Laredo, Texas, and assume command of service at that port. March 16, 1904.

Sibree, H. C., Acting Assistant Surgeon. Granted leave of absence for five days from March 15th.

Simonson, G. T., Acting Assistant Surgeon. Bureau letter of March 10, 1904, granting Acting Assistant Surgeon Simonson leave of absence for five days from March 15, 1904, amended to read five days from March 22nd.

Stanton, J. G., Acting Assistant Surgeon. Granted leave of absence for thirty days from March 8th.

Thurston, E. J., Pharmacist. Granted leave of absence for seven days from March 9, 1904, under paragraph 191 of the regulations.

Appointment.

Dr. Melvin M. Hopkins appointed acting assistant surgeon for duty at Ketchikan, Alaska. March 9, 1904.

Births, Marriages, and Deaths.

Married.

Cherry—McNeil.—In Council Bluffs, Iowa, on Monday, March 7th, Mr. C. H. Cherry and Dr. Josephine McNeil.

Collins—Lindblad.—In Wheaton, Illinois, on Thursday, March 10th, Dr. Lorin C. Collins and Miss Anna E. Stoff.

Floersheim—Stern.—In New York, on Sunday, February 28th, Dr. Samuel Floersheim and Miss Bertha Stern.

Foster—Watrous.—In Omaha, Nebraska, on Wednesday, March 9th, Dr. Harry Alden Foster and Miss Grace Watrous.

Hanna—Houser.—In New Orleans, Louisiana, on Friday, March 11th, Dr. John J. Hanna and Miss Georgiana Houser.

Seibert—Hopkins.—In Washington, D. C., on Saturday, March 5th, Dr. Edward Grant Seibert and Miss Jessie Eastman Hopkins.

Died.

Billingslea.—In Harrington, N. Y., on Wednesday, March 2nd, Dr. James Billingslea, of Baltimore, Md., in the forty-eighth year of his age.

Cameron.—In Phœnix, Arizona, on Sunday, March 13th, Dr. Douglas J. Cameron, of New York, in the thirty-second year of his age.

Case.—In Collinsville, Connecticut, on Wednesday, March 9th, Dr. Ida R. Gridley Case, in the forty-second year of her age.

Down.—In Philadelphia, Pennsylvania, on Friday, March 11th, Dr. Edward Down, in the sixty-sixth year of his age.

Duncan.—In Kansas City, Missouri, on Friday, March 11th, Dr. James W. Duncan, in the sixty-sixth year of his age.

Edge.—In Downington, Pennsylvania, on Monday, March 7th, Dr. John P. Edge, in the eighty-second year of his age.

Fettig.—In Detroit, Michigan, on Friday, March 11th, Dr. Felix Fettig, in the sixty-ninth year of his age.

Fowlkes.—In Winterpock, Virginia, on Wednesday, March 9th, Dr. E. J. Fowlkes.

Gulick.—In Watkins, N. Y., on Wednesday, March 16th, Dr. William Gulick, in the ninety-first year of his age.

Hanckel.—In New York, N. Y., on Saturday, March 12th, Dr. Middleton Stuart Hanckel, in the seventy-fourth year of his age.

Hawkes.—In Washington, D. C., on Sunday, March 13th, Dr. William H. Hawkes, in the fifty-ninth year of his age.

Henry.—In Charleston, West Virginia, on Thursday, March 10th, Dr. Robert S. Henry, in the fifty-third year of his age.

Holcombe.—In New York, N. Y., on Thursday, March 17th, Dr. William F. Holcombe, in the seventy-seventh year of his age.

Irish.—In Northfield, Vermont, on Sunday, March 20th, Dr. George Nelson Irish, in the seventy-fourth year of his age.

Kempe.—In Pinellas, Florida, on Monday, March 7th, Dr. J. J. Kempe, in the sixty-first year of his age.

Lindsay.—In Columbus, Ohio, on Tuesday, March 8th, Dr. O. W. Lindsay, in the thirtieth year of his age.

Lunn.—In La Grange, Texas, on Saturday, March 5th, Dr. Vastine C. Lunn.

McInnes.—In Vancouver, British Columbia, Canada, on Wednesday, March 16th, Dr. Thomas McInnes.

Morris.—In New York, on Thursday, March 17th, Dr. Moreau Morris, in the seventy-ninth year of his age.

Murray.—In Edinburgh, Scotland, on Sunday, February 14th, Dr. Milne Murray.

Powell.—In Alexandria, Virginia, on Saturday, March 12th, Dr. John S. Powell, of Occoquan, in the seventy-fifth year of his age.

Robbins.—In Denver, Colorado, on Wednesday, March 9th, Dr. Aaron B. Robbins, in the eightieth year of his age.

Robinson.—In Southboro, Massachusetts, on Friday, March 11th, Dr. James Henry Robinson, in the seventy-fourth year of his age.

Sanford.—In Denver, Colorado, on Wednesday, March 16th, Dr. James Brownlee Sanford, in the thirty-sixth year of his age.

Scherer.—In Los Angeles, California, on Wednesday, March 2nd, Dr. L. D. Scherer, in the fifty-eighth year of his age.

Swartwout.—In Prospect, N. Y., on Thursday, March 10th, Dr. Leander Swartwout, in the sixty-second year of his age.

Thompson.—In Angola, N. Y., on Sunday, March 6th, Dr. Justin G. Thompson.

Watkins.—In Opelika, Alabama, on Saturday, March 12th, Dr. J. M. Watkins, in the sixty-sixth year of his age.

Whitaker.—In Cherry Hill, Maryland, on Saturday, March 12th, Dr. James S. Whitaker, in the fifty-seventh year of his age.

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Original Communications.

A CRITICAL REVIEW OF SOME OF THE RECENT LITERATURE OF TUBERCULOSIS.

(Third Paper.)

BY JONATHAN WRIGHT, M. D.,
NEW YORK.

Some recent communications of Von Behring form the most valuable contributions to the discussion of the problems presented by tuberculosis which have appeared in many years. They constitute in many respects a *volte face* from the laboratory conceptions of the disease which have hitherto prevailed. It is impossible in the scope of any one article such as this to review, or even to touch upon, the many points included in the very succinct summary of his views recently published in the *Berliner klinische Wochenschrift* (No. 4, 1904). No one interested in the subject can peruse these outlines of his larger work in preparation without realizing that the more complete development of his ideas in regard to "Phthisiogenesis in men and animals" will make a new era in the study of the subject.

One cannot forbear remarking how impossible it is to advance further in the elucidation of the subject without a comprehensive knowledge of what others have done, however striking and original may be the investigations of the author himself. There are plenty of facts, even without Von Behring's contributions. The success of his endeavors in his forthcoming work will depend on his power of coordination and ratiocination, rather than on his powers of observation.

If we must suppose, as does Von Behring,[1] that the tubercle bacillus enters everybody's organism in infancy, and it depends on the subsequent reaction of the individual's system whether or not it sets up tuberculosis after thirty or forty years, it relegates the bacillus to a very insignificant rôle in ætiology. If this is so, the tubercle bacillus belongs to the pathology and not the ætiology of tuberculosis. This is the kind of change that ætiological factors are continually undergoing in the progress of medicine from one generation to the other, in the ceaseless search for the causation of things.

It may be remembered that a short time ago Naegeli concluded from the observations made at numerous autopsies that practically all dying beyond thirty years of age present in their bodies evidence of having been at some period the hosts of the tubercle bacillus. The bearing of the Naegeli statistics on diagnosis is somewhat interesting. The question now presents itself, not, Has this man tuberculosis? but, Has he it in such conditions that his life is in danger and that he needs treatment?

Supported by the revelations of statistics such as Naegeli's, Behring returns to the old view of Baumgarten, that the bacillus enters the system with the food. He goes further than was ever dreamed of in those early days. He says that it enters *every one's* system thus in early life. While we may admit the frequency of this occurrence, we must not leave out of account the inhalation of the bacilli, either in the moist or in the dry state. While we certainly have very good reason indeed to believe (and I think we have conclusive proof of it) that the air current deposits all of its microbic load in the upper air tract, we are only warranted in believing that a very moderate number are deposited from the food in its passage through the pharynx and past the tonsils. It is evident that if we allow the infection from the food, we must look sharply for the port of entry of the bacillus below the pharynx. It is true that, even when the air current deposits the bacilli in the nose and pharynx, and when bacilli are scraped off the food in deglutition, they may subsequently become entangled in food and secretions and pass downward into the digestive tract proper. They cannot glide down the surface of the larynx. The waving cilia extrude them, for, notwithstanding Dr. Cobb's very lucid paper in the *New York Medical Journal and Philadelphia Medical Journal* (October 3, 1903) it still seems to me that, to assume the entrance of the bacillus in the air current into a pulmonary air vesicle, we must somehow get rid of the law of gravitation, or we must believe that the bacillus is of the same specific gravity as air, or that it is itself a gas and subject to the law of the diffusion of gases. As I understand Von Behring's "Introductory Remarks," he takes the same view of this matter as I do, though arriving at his conclusions from a different standpoint.

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[1] *Deutsche Med. Woch.*, September 24, 1903.

Yet who knows that the cilia of the air passages may not occasionally reverse their action? That would make a very "susceptible" individual indeed.

From the supposed fact that it is the cervical and bronchial glands which have regularly shown the earliest involvement, both in experimental and clinical observations, the inference has been drawn that it is the upper air and food tract through which the bacillus penetrates the organism. While many have certified to the accuracy of this observation, it is still plain that this is too important a point to be lightly accepted. To throw more light upon it, animals have been fed with tuberculous matter through a tube, but dying or being killed late, it has not been possible to settle definitely whether the bronchial and tracheal glands had been primarily involved or only secondarily so in the course of a general systemic infection. Weleminski,[2] an assistant in Hueppe's laboratory, has killed guinea pigs and rabbits previously fed on tuberculous food, at an early enough date to observe conditions before systemic involvement. He found that the submaxillary and bronchial glands in rabbits were repeatedly involved without evidence either of intestinal or mesenteric glandular tuberculosis. In the more susceptible guinea pig and in some of the rabbits, an intestinal and a respiratory tuberculosis coexisted, but from appearances he judged that the bronchial and submaxillary glands presented older lesions than the intestinal. It is greatly to be regretted that these animals were not fed through a tube. I must confess that his conclusions, accepted as they are by Von Behring, seem very open to criticism on this score. After tuberculous food has passed over a pharyngeal mucosa it seems very unwarranted to assume that the bacilli subsequently entered the lymph nodes from the distant intestinal tract, even though there was no lesion elsewhere.

It is usually supposed, or at least tacitly assumed —and into this possible error the author just quoted falls—that the human infant resembles the guinea pig in its feeble resistance to the proliferation of the tubercle bacillus, but if we are to assume Behring's position it presupposes a very considerable resisting power in the infant, in fact a practical immunity in a very large majority of the human race.

As has been intimated, resting on the statistics of Naegeli and his supporters, Behring infers that "we are indeed all of us a little tuberculous." The Naegeli statistics were based on the evidence which he accepts as conclusive of the actual or former presence in the tissues of the tubercle bacillus. Into this we need not go here but discuss only those evidences which Behring considers. Now, by recognizable evidence of the presence of the bacillus we understand some change wrought by it in the tissues. When we leave the evidence presented by the anatomy of tubercle, we enter into histological changes which necessarily give rise to considerable difference of opinion as to their ætiological significance, and it must always be borne in mind that, after all, anatomical tubercle is the ultimate result of an active preexisting tissue change. The cells have had their day. They are dead on the field of battle. The giant cell is a home for incurables, and the coagulation necrosis is the mouldering detritus of a process which is no longer active. When we consider the pretubercle stage of the tissue change, best exemplified histologically in lupoid cases, supposed to be inaugurated by the bacillus, we find ourselves among the granulomata, and the accurate differentiation of these very frequently lies beyond the powers of the microscope and the culture tube. We know, too, from Prudden's work, that other irritants than the tubercle bacillus may set up tubercle in an inflammatory area. The finding of tubercle bacilli in chest or abdominal effusions, so sparsely present that persistent use of the centrifuge only can demonstrate them, is not a very convincing evidence of their tuberculous origin, though to it must be attached great weight. The finding them in buccal and nasal secretions of the nose of healthy people has passed into the history of tuberculosis. After all, tuberculosis is a process of living tissue evidenced by systemic reactions when we have to deal with it practically, and to the practitioner of medicine the Naegeli statistics present merely an academic interest.

But however open to criticism the actual demonstration of the universal tuberculous infection of the human race may be, to many of us and for many years it has seemed that every one in the course of even a comparatively short life must receive into his system a dose of tubercle bacilli sufficient to kill him, were his index of immunity as low at the time as it habitually is in a few, and *exceptionally* is in many of the human race. We therefore have no reason beyond the desire of truth to quarrel with the actual evidence Naegeli and others incidentally furnish in support of this timeworn belief. Von Behring accepts as sufficient the evidence at the possible weak points of which I have hinted. This position naturally follows as a corollary of the all but proved ubiquity of the tubercle bacillus, which Behring also accepts.

At this point we must halt to take account of the criticism of Pflügge. He contributes a very timely paper[3] to the discussion of this and other points. He asserts that the use of the term "ubiquitous" has led to rather false ideas of the frequency with which the tubercle bacillus may be found in the environment of man. We are not to use it in the sense of the term as applied to the pyogenic cocci, but in a more restricted sense. Just how restricted we should be in its use does not appear from his remarks. He admits that it has been proved to be very widespread. Now, it may be urged, the proving of the presence of the tubercle bacillus presents technical difficulties which render its actual demonstration a very difficult matter in many instances. We know this in routine clinical work from our experience with tuberculous sputum. If, then, in the well grounded argument of Pflügge against the actual literal ubiquity of the tubercle bacillus he is constrained to admit that it has been proved to be very widespread, we are justified in the supposition that it is still further disseminated in the environment of man than has been demonstrated, for the technical difficulties of its demonstration do not cease when we make use of injections into the susceptible guinea pig to prove its existence in dust. As to the existence of pyogenic cocci in the pharynx and upper air passages being no parallel or criterion of the existence there of the tubercle bacillus, it was long ago demonstrated by Strauss and others that such was occasionally the fact. The coexistence there of pyogenic cocci is a serious bar to its more frequent demonstration by animal inoculation, and differential staining is a very incomplete way of arriving at a positive result, as we well know.

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[2] *Berl. klin. Woch.*, No. 37, 1903.

Pflügge calls into question the application of the post mortem statistics of Naegeli to mankind in general in the argument for the ubiquity of the tubercle bacillus. His demonstration of almost universal tuberculous infection of the inhabitants of Dresden, with a population so largely made up of factory workers, might not, indeed, we may venture to say probably does not, apply to man living in other environment. Nevertheless a very large proportion of civilized mankind does live more or less in such environment.

The importance of the proper conception of the frequency of the occurrence of the tubercle bacillus in the environment of man, while very evident in the biological part of the argument of phthisiogenesis in man, assumes a very practical aspect when it is applied to the enforcement of hygienic measures. If it is so, as Behring assumes, that the tubercle bacillus is indeed everywhere, it would seem that the hope of materially influencing the death rate by alone combating the bacillus before it enters the human organism is an iridescent dream. So far as prevention is concerned, there would remain but the question of raising the index of immunity. I think it has been amply proved that this has to some extent occurred naturally in the improvement of the general hygienic conditions of life in the last seventy years.

To raise artificially the index of immunity in the human race generally, scarcely calls for serious discussion. The history of smallpox vaccination is a melancholy record of human fatuity. With all the proof which exists in readily accessible records, it is all but impossible for even the highest civilized nations to enforce vaccination strictly enough to prevent its occasional appearance in epidemic form. Looking at the matter thus and reflecting upon the vastly inferior methods of even the most reliable immunization demonstration in animals, it would seem the height of folly to think now of doing anything in this way to diminish the number of cases of phthisis pulmonalis; and yet this is a part of Von Behring's programme.

To raise the index of immunity in the susceptible part of mankind alone may or may not be possible. It is scarcely practicable until we find out who is and who is not susceptible. Without this we must find a method perfectly free from danger and involving a minimum of trouble and discomfort. Von Behring makes a suggestion, as we shall subsequently see, with these limitations in view.

In his criticism of the generally accepted view, that certain individuals are predisposed to phthisis, Pflügge calculates that from fifty to seventy per cent. of mankind are so predisposed to it that they would die from it were they infected and were the course of the resulting process not cut short by some other intervening fatal disease. Instead of only the one seventh who demonstrate their susceptibility by dying from it we are asked to believe that half of the remaining six sevenths are not immune. Without establishing a standard, this is a waste of words. Without this we are dealing with uncertain and unstable premises, because of the lack of definition inherent in such terms as susceptibility, predisposition, even immunity. Until some definite standard is set up by which to measure the relation of man's resistance to the tubercle bacillus, it is useless to attempt to reconcile conflicting statements and to unite discrepancies of belief. Many years ago some one calculated that eight tubercle bacilli were enough to infect a guinea pig. I believe some one has recently placed the figure at forty. This is ignoring the factor of the varying susceptibility of the animal, and in man that would be the very point on which we need enlightenment.

Trudeau has pointed out in this *Journal* (July 18, 1903) that such success as has been attained in inoculating against tuberculosis infection has been secured by injecting into animals doses of attenuated but still live bacilli. Behring[4] relates how he inoculated cattle with old human tubercle bacilli and found that while the animals in their first year were frequently severely affected with pleural effusion, coming on a few hours after the injection, and later with pleuropneumonia, these eventually recovered and the older animals were not harmed by the procedure. Behring claims to have attained thus complete immunity in calves, while Trudeau, more accurately no doubt, stated that his success was partial with smaller animals. It seems from investigations of Dr. Baldwin, quoted by Dr. Trudeau, that this immunization is of a more or less temporary character. This, if it obtained in man, would deprive the future achievement of much practical value. While Behring eventually succeeded in preventing even local reaction in calves to virulent tubercle bacilli injections, Trudeau's protected rabbits showed more pronounced lesions than the unprotected animals, but the former eventually recovered, and the controls died. It would be deplorable if some enthusiastic but unbalanced individual should attempt at this stage of the investigations to draw any deductions which he would venture to apply in the way of treatment to man. Both Behring and Trudeau very conscientiously warn against this, and very properly reiterate and insist on the warning. We want no second tuberculin fiasco in this generation.

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[3] *Deutsche med. Woch.*, June 28, 1904.

As for Von Behring's plan of immunizing animals, even if it were efficient and permanent it seems all but impracticable in cattle when we consider its application on a large scale, for about one calf out of ten is killed in the process. No plan is practical which proposes to convulse to its base either the commercial or the social life of mankind. Moreover, waiving this aspect of the matter, and imagining it is possible to immunize the animals man uses for food, the undertaking seems too stupendous for our civilization. Some author has pointed out that there are certain breeds of cattle apparently relatively immune to the tubercle bacillus. It is possible that tuberculosis might be bred out of cattle, and at first sight this would seem more practicable than immunizing them. We should have to emigrate to Plato's Republic to breed it out of mankind. Behring has said we are not concerned with the way a man *may* get tuberculosis but with the way he *does* get it; but in this very respect he is open to criticism in his suggestions as to immunization. Even if the possibility has been proved, the practicability is still a problem of the future, so far as the protection of man against the chance of having bacilli in his food is concerned. When I come to speak of Von Behring's ideas of a possible way to immunize the human race, I cannot venture to abbreviate but I translate entire an important paragraph:

> Through my investigations of the methods of infection in the epizootic of cattle I have arrived at the conclusion, which is continually growing stronger, that the chief danger of tuberculosis invasion is to be looked for in infantile infection which can take place most readily during the first ten weeks of life; because, on the one hand, during this time the intestinal mucous membrane, on account of the lack of a continuous epithelial covering, is especially predisposed to the absorption of corpuscular elements; and because also, on the other hand, the antibacterial ferments have not yet been produced—these, according to Gmelin, depending upon the growth and development of the glandular epithelium. Like the infecting material, the antibodies pass unimpeded through the intestinal mucous membrane during the first weeks of life, and they will, as such, by the nutritional use of milk containing them, be stored up in considerable quantities in the blood. In view of these facts, which have been established in a perfectly satisfactory manner, I suggest the idea of feeding nursing infants on antibodies in the milk of cows rendered immune to tuberculosis, the infants taking their nourishment in the usual way and being carried over the period most exposed to the danger of tuberculosis infection. I leave it undecided whether the idea is practicable or not.

The fact which he quotes from Disse, as to the lack of epithelial lining of parts of the intestinal canal in young infants, may possibly be well established. With that point I am unfamiliar; but in his assumption that the columnar epithelial lining of the intestinal canal offers any resistance to the resorption of "corpuscular elements," he is hardly in accord with the usual understanding of the matter. From what we have known of physiological principles for several centuries, we have every reason to assume that the intestinal epithelium is freely permeable to minute corpuscular elements, and that its absence at any point in infancy would certainly not in any appreciable manner facilitate the passage of so minute an organism as the tubercle bacillus into the general circulation.

As for the further fact quoted from Gmelin—as to the absence of the *antibacterial* ferments in the first days or weeks of life—this is something very hard to reconcile with clinical facts. I do not know how young a child may contract a contagious disease, but such instances in the first few weeks of life are certainly very rare, and it is only fair to assume that something must exist in the infant's organism to prevent it—whether it be antibacterial ferments or not. The entrance and growth of the tubercle bacillus in the human organism during the first few weeks of infancy is an assumption very widespread, it is true, but not on that or any other account, so far as I can see, is it warranted. It is not impossible, but certainly it is improbable, that in this respect tuberculosis infection is an exception to that of measles and scarlet fever.

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[4] *Berliner klin. Woch.*, No. 11, 1903.

If Behring would waive his rather exclusive ideas of the method of infection, it is probable that he would find more unqualified supporters. Whatever may be the relative permeability of the intestinal coats for corpuscular elements, I do not understand how he arrives at such a conclusion from collateral evidence, while of course there is no direct proof of the contention. It is true that it is not conclusive disproof to advance the fact of the comparative rarity of intestinal and abdominal tuberculosis, even in infancy; but at the same time if it is the infant who receives, in the vast majority of cases, the first dose of the bacillus in the system through the intestinal wall, one would hardly expect that the statistics Behring himself quotes from Naegeli and Ribbert should be 17 per cent. at 1 to 5 years, and 96 per cent. at 18 to 30 years, of the cases at autopsy in which a tuberculous lesion is recognizable.

Behring, I presume, means to explain this discrepancy in his ratiocination by the statement that the human individual's susceptibility to tuberculosis is not congenital or inherited, but acquired, i. e., that all infants are born with approximately even chances, and more or less immune. The subsequent development of tuberculous lesions depends, not, perhaps, very much on a few bacilli more or less entering his system, but on the dosage and the virulence of the germs entering, and especially upon the subsequent modifications of the vital powers by the bad hygiene of the growing child and the mature adult, by the incidence of other diseases, by overwork; in short, bad air, bad food, and whiskey, are the chief predisposing factors in the development of tuberculosis. No one can deny their importance, but it seems to me that Behring's denial, or tendency to minimize the influence of heredity, has no support in facts. The family history is not more frequently phthisical in our private records than in those at the dispensary. At either place the phthisical patient usually has a phthisical ancestry. Perhaps I misunderstand Behring's position here, for elsewhere he speaks of the bad prognosis of cases with a phthisical family history. I fail to see, however, how this is to be reconciled with his belief that all infants are born with equal chances.

Union Finally Complete.—On March 21st, at the Academy of Medicine, 17 West Forty-third Street, the New York State Medical Association went out of existence, by a resolution unanimously adopted, and the last action necessary taken to complete its consolidation with the Medical Society of the State of New York.

WHEN SHOULD THE TUBERCULOUS PATIENT BE SENT FROM HOME?

By C. P. AMBLER, M. D.,

ASHEVILLE, N. C.

The beneficial influence of change of climate, to patients suffering from pulmonary tuberculosis has from ages past down to the present time been recognized as the most desirable and beneficial procedure for such patients to follow. Those advocating the most modern ideas, so far as medicinal treatment is concerned, are generally free to confess that this remedy or means will be more effective under favorable climatic conditions, in conjunction with outdoor life and strict observance of hygienic measures. That the disease is curable is no longer doubted. True, for centuries the laity and many physicians have considered this disease fatal, but this has resulted from the fact that, up to within very recent years, the disease was rarely recognized before the patient had advanced to such a point that a recovery was out of the question. Statistics now show that the great majority of those who contract the disease recover without ever becoming aware that they have been so afflicted. Natural resistance brings this about, frequently under the most adverse unsanitary and unfavorable climatic conditions.

Physicians at resorts are invariably struck with the fact that the great majority of the persons who consult them on account of a tuberculous trouble are far advanced in the disease, and in a hopeless condition. The great majority are also poor; poor, because during the last year or two their earning capacity has been greatly lessened; they have hung on to their work from necessity, and have finally only left home as a last resort, with death staring them in the face, and on being advised that "a change of climate is their only chance." The inconvenience, suffering, and deprivation to the poor thus afflicted and sent from home are certainly too often not thoroughly considered by the home physician. A change of climate may offer hope where otherwise none exists, but in the advanced cases the same money spent judiciously at home in a rural district, with good food and attention, would undoubtedly offer more encouragement than separation from home and friends, a life in a cheap boarding house, and the lack of home comfort, attention, unkindness, and the anxiety arising from financial matters.

Tuberculous patients should always, no matter whether they remain at home or are advised to change climate, receive the most painstaking instructions in regard to their disease and the requisites for recovery. They should be told the truth at home, and not left to find it out for themselves after leaving their friends. As a rule, the patient knowing least about himself and his disease, the one who has had practically no instruction regarding his hygienic life, has been told that all he needs is "to go to Asheville and let the doctors alone." This is certainly dangerous advice, for the reason that the physician at home is not able to foretell exactly what change of altitude, for instance, will result in. Many a patient blindly follows such suggestions on the part of the home physician (in whom he may rightly and naturally place the most implicit confidence), and ruins his chance for improvement or recovery by following a course, which, could the home physician have foreseen the result, would never have been outlined.

What Patient Should Be Sent Away.—It is in the beginning of the disease that a climatic change is most beneficial. We speak of cases in the "early stage," as though that was some clearly defined condition; whereas, in fact, a patient may have tuberculosis for years and still be in much better condition than another who has been infected only a few weeks. Generally speaking, by "early stage cases" is meant those who show but slight physical signs and whose symptoms do not indicate a rapid advancement or a septic condition.

If destructive processes have progressed in the lung to the point where cavity formation can be detected, great care should be used in advising the patient to leave home. Particularly if high temperature (101° F., or over, as a daily maximum) is present, is this true. In such cases, a few weeks' rest in bed at home, preferably in the open air, will see a marked improvement in the general condition. If the patient is sent to a resort and improvement is to follow, the same procedure will in all probability have to be carried out there. It is preferable, therefore, especially where the patient cannot, on account of money matters, have away from home the care and attention he needs, that this high temperature (meaning active disease process) should be reduced before the patient leaves home.

It is a mistake to hurry the patient away from home in a day or two following hæmorrhage, particularly on a long journey or one that carries him to a high altitude.

Weight.—Our records show that where the disease has advanced to the point that the patient has lost one third in weight, it is in the rarest exceptions that recovery follows, and but a small per cent. of such patients make any permanent improvement.

Intelligence of Patient.—The adage, "Where ignorance is bliss 'tis folly to be wise," does not apply to tuberculosis, in any case. The strongest point for recovery is a full appreciation on the part of the patient for the dangers that are ahead of him. If his mental calibre is such that he cannot be made to appreciate the necessities as laid down, then he should not be allowed to leave home alone. Again, thoughtlessness, carelessness, and indifference are equally bad with, if not worse than, stupidity. Some patients must have constant supervision. A tractable patient with marked tuberculosis has many more chances for recovery in his favor (other things being equal) than has a thoughtless or careless patient with ever so slight an infection.

Financial Condition.—No patient with pulmonary tuberculosis should be sent far away from home and friends, unless his financial matters are so arranged that he does not for months to come have to work to pay his expenses. Many, many poor patients are continually arriving at our resorts who have practically spent their all on their railroad fare, arriving under the fond delusion that they will find employment at once and be able to support themselves. The large number of persons seeking employment at resorts makes wages very low; too low, in fact, for a person to secure good board on his wages. Many persons who are well accompany their sick friends, and these well persons in many instances are willing to work for half or a third of what their work is worth, simply in order to be doing something to help pay their expenses: Result—the healthy get the preference, and when the poor patient does secure employment his overexertions do not net him sufficient remuneration to meet his actual necessary expenses.

It is members of this class that break down and develop complications that put them to bed; matters only go from bad to worse; they are unable to procure the attention of nurses; frequently cannot even buy the necessary medicines, and, as no municipality, county, or State provides for the care of the indigent poor from other States, their condition is indeed pitiful. To be sick is hard; to be sick and poor is doubly hard; but to be sick, poor, and away from home and friends and State charity is something that all physicians should thoroughly consider before saying, "A change of climate is your only chance."

Where Should the Patient Go?—In a large country like ours it is amusing to hear the advice that has frequently been given patients regarding dress, climate, and outdoor possibilities. Many persons come to Asheville, expecting to hear the birds sing and see the flowers bloom all winter. We have a good all-the-year-round climate, and the latitude is "south," but the altitude necessitates practically the same clothing as that required in New York or Ohio. Our weather is bracing, however, and with little snow. Our patients live out of doors in winter, but they do not wear summer shirtwaists in winter.

Hæmorrhagic patients should, generally speaking, not go to an altitude of over 3,000 feet. Heart complications should, of course, always receive careful consideration.

In advising a patient to leave home for climatic change, the physician should not only consider the altitude, but should be sure that the patient will receive the same general conveniences that have been enjoyed at home. Board, sanitary measures, pure water, food, companions, amusements, temperature, rainfall, sunshine, snowfall, and many other points should be considered. The patient should never be sent to a small place with which the physician is unacquainted. There is no place in this country to-day which offers what a tuberculous patient should receive, about which the physician cannot acquaint himself in a few minutes' time.

Sanitariums or Boarding-houses.—The sanitarium probably offers the greatest hope to the average patient, and is certainly much the better place for those hard to control. The majority, however, from necessity and choice, will seek a boarding-house. The selection of such a house should be left to the medical adviser at the resort. It should be a place that is kept clean; furnishes a good table; has plenty of grounds; practices fumigation after the departure of every guest (a board of health procedure in Asheville), and carefully insists upon the compliance with a prepared set of rules regarding all sanitary and hygienic measures. The patient should be in a house where he is among his own class socially.

The congregation together of a number of patients in a sanitarium or carefully conducted boarding house is preferable to allowing the patient to enter a house where no regard to sanitation or hygiene prevails. These patients learn from one another, and, in fact, gain from being so situated. The education acquired as to the necessities for recovery in such an institution is among the most important parts of the treatment of a case.

What Can Climate Do?—The benefit to be derived from change of climate can be summed up in "better nutrition." Improved nutrition means better blood, and favors repair of any diseased organ.

What Climate Cannot Do.—A change of climate cannot close pulmonary cavities in a few weeks or months; cannot remove old, cheesy deposits, or absorb purulent effusions, or overcome sepsis, tuberculous ulcerations, or proliferations in a few days, weeks, or months. Nature does heal all these, but such results are brought about slowly.

When Should the Patient Return Home?—If improvement or recovery occurs, every endeavor should be made to remain in the region where such improvement has been brought about. Months should certainly elapse after all signs and symptoms have subsided before the patient should consider the advisability of returning to his old home; and for a year or two he should, following his return home, be examined occasionally by his physician.

ON LABORATORY DIAGNOSIS.*

By M. P. OVERHOLSER, M. D.,

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In this age of progress we find, in all the sciences, new methods of work, new and improved ways of approaching and solving problems. As this march of progress in all scientific fields of labor continues on to higher planes of advancement, we cannot fail to be forcibly impressed with the tendency of the age to discover and utilize more accurate and more practical methods of work. In the great scientific achievements of the present time, medicine is no laggard in this work of progress.

Never before, in the history of our science, have our labors been marked with such a tendency to practical clinical methods of investigation, practical clinical study of abnormal conditions, and a practical and scientific application of our knowledge in the treatment of disease. Already many of the uncertain ways of investigation and observation have given way to the more modern and more exact methods of observing and studying causes, conditions, and phenomena of abnormal processes.

Practical clinical medicine is becoming the demand of the age. Speculative theories must give way in the presence of scientific realisms. Demonstrations of practical clinical facts must take the place, to a large extent, of so much didactic, theoretical teaching. Methods of greater accuracy and of more practical, every-day utility to the physician and surgeon must displace the earlier, uncertain, and less scientific methods of investigation and study.

Early in the history of our science medical diagnosis was based most largely upon the clinical history of the disease and a few of the most prominent clinical symptoms. Later, to these means were added the physical signs obtained by palpation, percussion, and auscultation; and more recently, to these means have been added still more exact clinical methods of observation and study, by a more elaborate investigation of the minute pathological conditions and processes as they can now be ascertained by the various chemical and microscopical examinations made by the practical, modern, laboratory diagnostician.

Clinical history of disease and clinical phenomena, as revealed by symptoms, must ever claim their importance in diagnosis. Equally important, and even more so, are the physical signs, but in a very large number of diseases it must be conceded that the most important, less misleading, more assuring, and of the greatest aid to the diagnostician are the observable direct pathogenic factors, and the true pathological conditions. To make this matter more clear to you, we shall illustrate what we mean by these more exact methods of diagnosis by giving you some examples. For instance, to diagnosticate anæmia by pallor of the face and mucous membranes, vertigo, shortness of breath, hæmic murmurs, etc., is much less positive, much less accurate, and surely less scientific, than to ascertain by the microscope the number of red corpuscles to the cubic millimetre of blood, and, by chemistry or other means, to determine the percentage of hæmoglobin that these corpuscles contain; or, by the same means of investigation, to learn that the red corpuscles are normal in number, and that the anæmia is due, not to a diminution of the red corpuscular elements of the blood, but simply to their scantiness or poverty in hæmoglobin. Or, again, by studying our case of anæmia still more closely, by carrying our investigation a step further and finding, by microscopical examinations of stained blood specimens, the presence of abnormal red blood corpuscles, some of which are abnormal in shape, others abnormal in size, and still others abnormal in their elements of construction, e. g., the microcytes, which are abnormally small red blood corpuscles; the macrocytes, which are abnormally large red blood corpuscles; the poikilocytes which, are irregularly-shaped red blood corpuscles, oval, oblong, pointed, dumb-bell-shaped, kidney-shaped, etc. In addition to these, perhaps, we may be able to find, also, in some of our specimens, red blood corpuscles which are abnormal in their constituent elements, such as the nucleated red corpuscles; for instance, nucleated red corpuscles of normal size, which are called normoblasts, or nucleated red corpuscles of abnormally small size, which are called microblasts, or nucleated red corpuscles of abnormally large size, which are called megaloblasts, or gigantoblasts—various evidences of which, when found on a microscopical examination of a stained blood specimen, point conclusively to an anæmia of a grave, pernicious form.

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* The first special lecture of a series delivered at the Kansas City Medical College, October 16, 1903.

To explain, again, what we mean by more accurate methods of diagnosis, we shall take another example: To diagnosticate vesical cystitis by pain in the bladder, frequent micturition, alkaline urine, and an abnormal precipitate, is a far less complete method, and one much less accurate, than to ascertain by a microscopical examination that the urine contains many pus cells in which are found numerous gonococci, or by further microscopical examinations of stained specimens of urine, to learn that the inflammatory process is produced by the presence of the colon bacillus, tubercle bacillus, staphylococcus, streptococcus, or some other pathogenic microorganism.

Again, to diagnosticate malaria by blueness of the finger nails, chill, subsequent high fever, and excessive perspiration, is certainly less positive, and surely less scientific, than to see, by microscopical examination of a fresh blood specimen, the living, motile malarial plasmodia in the red blood cells, their sporules and crescents in the plasma, and thus by a microscopical inspection alone to determine positively whether we have to deal with an infection caused by the benign tertian germ, or the pernicious æstivoautumnal germ. The practical means or methods of diagnosis of disease which reveal to us most positively and most correctly the true pathological conditions and their causative factors, are to-day the methods which should be most largely used in clinical work.

The work assigned me in this series of lectures and demonstrations is to endeavor to show you how easy it is for the modern physician to familiarize himself with many of the most practical methods of diagnosis now made by various chemical tests and by the microscope. I wish to state, however, at the outset, that a competent physician of to-day will not confine himself to only one or two methods of ascertaining the true nature of the disease he may be called upon to treat for we find in modern medicine that there are many ways of making a diagnosis. To have you understand more clearly what we mean by the different methods of diagnosis, we will explain to you more fully by giving you some examples. We will take a case, for instance, which we have not seen. The patient, we learn, was taken sick quite suddenly with a chill, fever, rapid breathing, cough, expectoration of blood, and a little later the spitting of a rusty colored sputum. With evidence like this, without even an examination of our patient, we can quite safely make a diagnosis of pneumonia. Such a diagnosis may be called a *symptomatic* diagnosis, or a diagnosis solely from a clinical history of the case. Again, in another instance, we may obtain no history of our case, except that we may, perhaps, learn that our patient was, also, taken sick rather suddenly with fever. We obtain no history of cough, no history of pain or expectoration, and no symptomatic manifestations evident on inspection upon which we can safely base a diagnosis. We then carefully examine the lungs of the patient by percussion and auscultation and find dullness over the lobe of one lung by percussion, and by auscultation we find diminished or absent vesicular murmur, crepitant râles, bronchial breathing, prolonged expiratory sounds, and increased vocal fremitus. A diagnosis of pneumonia, again, on such evidence can be quite positive also. Such a diagnosis is called a *physical* diagnosis. Again, we may have another patient with a chronic cough who expectorates a mucopurulent secretion. In this case we may not see the patient or obtain any clinical history of the disease. We are simply handed a specimen of his sputum. We examine it microscopically and find it contains many tubercle bacilli. A diagnosis of pulmonary tuberculosis from evidence like this is called an *ætiological* or *bacteriological* diagnosis. In another case we are handed a specimen of urine. We take the specific gravity and find it 1035, or perhaps 1040. By Fehling's test, Haines's test, or some other reliable test, we find that the specimen contains an abundance of sugar. A diagnosis of diabetes mellitus by this means is called a *chemical* diagnosis. Again, we examine microscopically, a thin section of a tumor and find it to be composed of round or spindle-shaped cells of various sizes, arranged about large protoplasmic bodies called giant cells, with very little intercellular stroma—cells characteristic of one form of malignant growth called sarcoma. In this case we may, likewise, not even see the patient, and thus not even be able to examine the physical characteristics of the tumor, or obtain any clinical history of the case, and yet a diagnosis of spindle-celled sarcoma could not be more positive by any other diagnostic methods at our command. Such a diagnosis is called a *histological,* or *anatomical* diagnosis. We still have other valuable methods of diagnosis as a *direct* diagnosis, *differential* diagnosis, or diagnosis by *exclusion.* So you can readily see we have a number of valuable methods by which we can make diagnoses.

When we take into consideration or use several or all of the different methods of diagnosis which are applicable to a given case, we call it a complete *clinical* diagnosis. A full and complete clinical diagnosis, therefore, is the practical application of all these methods, symptomatic, physical, chemical, microscopical, bacteriological, histological, etc., which may be applicable in a given case. All microscopical, chemical, bacteriological, and histological diagnoses are usually called *laboratory* diagnoses. And while we consider these methods invaluable, and wish to emphasize the great importance of a knowledge of these methods of laboratory diagnoses, we will not endeavor to lead you to believe that they should displace these other valuable diagnostic methods just named above. We shall endeavor, however, in this course of lectures to demonstrate to you how you can familiarize yourself with the most practical of these methods of laboratory diagnoses, and endeavor to point out the way by which you can acquire precision in diagnosis by means of the methods employed in modern clinical chemistry and clinical microscopy.

In the chemical and microscopical examination of the normal and abnormal fluids, secretions, and excretions of the body, our science has not yet limited the knowledge of disease that can be gained by disease in this important field of investigation. In the pathological chemistry of the urine, the presence of sugar, albumin, pus, blood, bile pigment, indican, excessive amount of urinary pigments, abnormal chromogens, etc., is a plain evidence of various pathological processes; and when we add to these the microscopical findings of other abnormal organic and inorganic constituents of the urine, as the granular, hyaline, and epithelial casts, leucine, tyrosine, calcium oxalate crystals, abnormal amount of uric acid, the presence of the triple phosphates in a fresh specimen of urine, the presence of the various pathogenic microorganisms, with still other abnormal elements and compounds, we can readily see the large number of pathological constituents of simply the urine, which can give us much valuable information from a diagnostic point of view. The various abnormal constituents, serving as indexes, point out to the pathologist and diagnostician the seat and nature of the disease. It belongs to the work of the laboratory diagnostician, also, to examine into the chemistry of a specimen of gastric contents, and to ascertain whether there is an absence, deficiency, or excess of hydrochloric acid, whether the specimen contains lactic acid or other organic acids, and to determine microscopically whether it contains pus, blood, or other abnormal tissue elements. A chemical and microscopical examination of the exudates, transudates, products of pyogenic inflammation, sections of tumors, etc., furnishes much valuable information as to the true nature of the disease before us.

A chemical and microscopical examination of the blood is also a most important part of the work of the laboratory diagnostician. In cases of anæmia, to ascertain the number of red corpuscles to the cubic millimetre of blood, and in various conditions of the system to learn the number of white blood corpuscles to the cubic millimetre of blood, to ascertain the percentage of hæmoglobin, to note whether there is an excess of fibrin by a thick network of little fibrils in the plasma between the corpuscles, to note the presence of an abnormal amount of free blood pigment, also the abnormal shape, size, and construction of the red and white corpuscles, to discover the presence in the blood of the various forms of malarial infection—these and many other evidences may be found by a careful chemical and microscopical examination of the blood, which point to various abnormal conditions of the system.

There are, indeed, many factors in the human economy which may lead to abnormal conditions of the system and produce disease which must be studied by the physician if he ever expects to attain any proficiency in the art of diagnosis. To be able to discover the particular microorganism producing a disease, to observe and study scientifically the effects of the various toxines of the disease-producing germs upon the vital processes of the system, to note an increase, diminution, or absence of the various secretions and excretions of the body; to be able to understand more clearly the many disturbances of the normal nutritive processes of the human organism, we must become familiar with these methods of work, for many of these important clinical facts can only be ascertained by laboratory methods of investigation. We will only take time to say a few words in reference to the close relation these methods of investigation must bear in our efforts to understand normal nutrition, and its various disturbances which may arise from a weak link, or a break somewhere in the chain of normal nutritive processes of the human economy.

Nutrition is the foundation of physiology and all life. It is that power of living things by which dead food material is converted into living substance. Food is matter which contains latent energy. It is only through the medium of food that energy or force can be supplied to the system. The food that is eaten furnishes the power for the various functions of the body. Without food all vital processes of the body would soon cease. In the generation of heat and work performed, the heart's action, respiration, glandular activity, and muscular work, there is continually an expenditure of force, and without a constant renewal of this force by means of food, all power of the system would soon be exhausted. Food is, therefore, simply the vehicle for transmitting this power to the body. The energy contained in food, however, cannot be utilized until the food matter is first transformed into definite assimilable compounds. The albuminoids must be changed into peptones by gastric digestion. They are then absorbed by the radicles of the portal system and conveyed to the liver, where they must undergo a further transformation. Peptones, as peptones, cannot be utilized by the tissue cells. In fact, it has been proved that when peptones are injected directly into the circulation they act as poisons to the system. The peptones, like all food stuffs, are so constructed that the ultimate cells of the body cannot break up their molecules and liberate the force they contain, for the functional activity of the various organs of the body and for heat and muscular work, without being first properly prepared for assimilation. The peptones must, therefore, be retransformed by the liver cells into serum albumin and globulin, etc., before they can be appropriated or utilized by the ultimate cells of the body. The sugars and starches after salivary, gastric, and intestinal digestion have converted them into maltose and dextrin, must be again transformed by the liver cells into an assimilable compound called glycogen. These being properly transformed, nutritive and force supplying products, we can thus clearly see, are really new compounds of a definite composition which are specially and carefully manufactured by the organs of digestion, and the great glandular organ, the liver, from the food stuffs supplied the body. After being properly elaborated they are then carried through the general circulation to the cells of the various tissues, where they are converted into living protoplasm for the nutrition, development, growth, muscular work, heat, and the various other functional activities of the system.

In the evolution of the life forces of the body there must, therefore, be a constant supply and a constant waste of material. The daily round of human life is but a repetition of integration and disintegration, of construction and destruction, of a building up and of a breaking down, of repair and of waste. And, while it is necessary that a particular set of organs of the body, the digestive organs, must continually transform and supply to the cells in a fitting shape the building up material, it is just as essential for the normal life processes that the used up, broken down, waste material be as speedily and continuously removed from the system, through its eliminative channels as rapidly as it is thrown back in the blood current. Some of these waste materials returned to the blood current for excretion, we must remember, are in such a shape that they cannot pass through the channels of elimination, and, before they can be eliminated through the excretory passages, must be retransformed from non-eliminable, non-diffusible colloids into crystalloid, dialyzable material for excretion by the emunctories. The used up nitrogenous, non-diffusible, refuse material is again carried back to the liver by the blood current, where it is retransformed into a soluble, eliminable compound called urea, which is readily eliminated from the blood by the kidney and carried off through the urine. In the preparation of the building up material and in the normal destructive processes, with the evolution of the vital processes for the maintenance of life, and in the removal of the resulting waste material from the system, there are many chances for a faulty or defective functional activity somewhere in the links of the great chain of normal processes from digestion to excretion.

These variations in nutrition and waste are nowhere recorded so well as they are in the urine, and by an intelligent interpretation of the modern methods of uranalysis these physiological and pathological tides may be read quite accurately. Whenever, in the human economy, pathogenic processes seriously disturb nutrition, the results are recorded in the urine, because the urine more than any other excretion of the body represents the equation of these changes. Foreign material absorbed from the intestinal tract or biliary tracts, deficient elaboration of food material by the liver, various toxic compounds formed in the tissue cells by faulty metabolism or infective agents, an excessive or diminished elimination of normal constituents of the urine or the elimination of the nutritive serumalbumin by a diseased kidney, as found in albuminuria, or Bright's disease, or the excretion of improperly elaborated sugar compounds, such as is found in diabetes mellitus, and, in addition, many other evidences of normal and abnormal conditions of the system can be detected by a chemical and microscopical examination of the urine. The importance of a careful study of this excretion can scarcely be overestimated, for it furnishes much valuable information to the diagnostician in the study of many diseases.

(To be continued.)

C. H. and D. Railway Surgeons.—The third annual meeting of this organization will be held in the Algonquin Hotel, Dayton, O., on Tuesday, May 24, 1904, with the following programme: Fractures of the Face and Cranium, by Dr. N. E. Jobes, of Indianapolis, Ind., 10.30 to 11.30 a. m.; Fractures of the Trunk, by Dr. G. J. C. Wintermute, of Celina, O., 11.30 a. m. to 12.30 p. m.; 12.30—dinner—2.30; election of officers and President's Address; Fractures of the Hand and Arm, by Dr. F. D. Barker, of Dayton, O., 2.30 to 3.30 p. m.; Fractures of the Pelvis and Femur, by Dr. T. M. Gehrett, of Deshler, O., 3.30 to 4.30 p. m.; Fractures of the Leg and Foot, by Dr. E. T. Busching, of Elmwood Place, O., 4.30 to 5.30 p. m.; address, 5.30 p. m., by Dr. Warren Stone Bickham, College Physicians and Surgeons of New York city.

SKIAGRAPHIC ERRORS; THEIR CAUSES, DANGERS, AND PREVENTION.

By LEWIS GREGORY COLE, M. D.,

NEW YORK.

(*Continued from page 592.*)

Fig. 1 demonstrates the fundamental principle of the skiagraph. Some rays of light are absorbed by the solid, while others pass through and are registered on the plate below. The amount that passes through is in proportion to the height of the vacuum and the density of the composition of the solid. The upper and lower surfaces each casts its own shadow on the plate, and it is by the relation of these shadows to each other that we ascertain the position of the solid and the relation of the tube to the solid. If the tube is vertically above the centre of the cube, the shadow cast by the lower surface will be in the centre of the larger shadow cast by the upper surface. If in the skiagraph the shadow cast by the lower surface of the cube is nearer any certain edge of the larger shadow, it would follow that the tube had been placed nearer that particular edge of the cube.

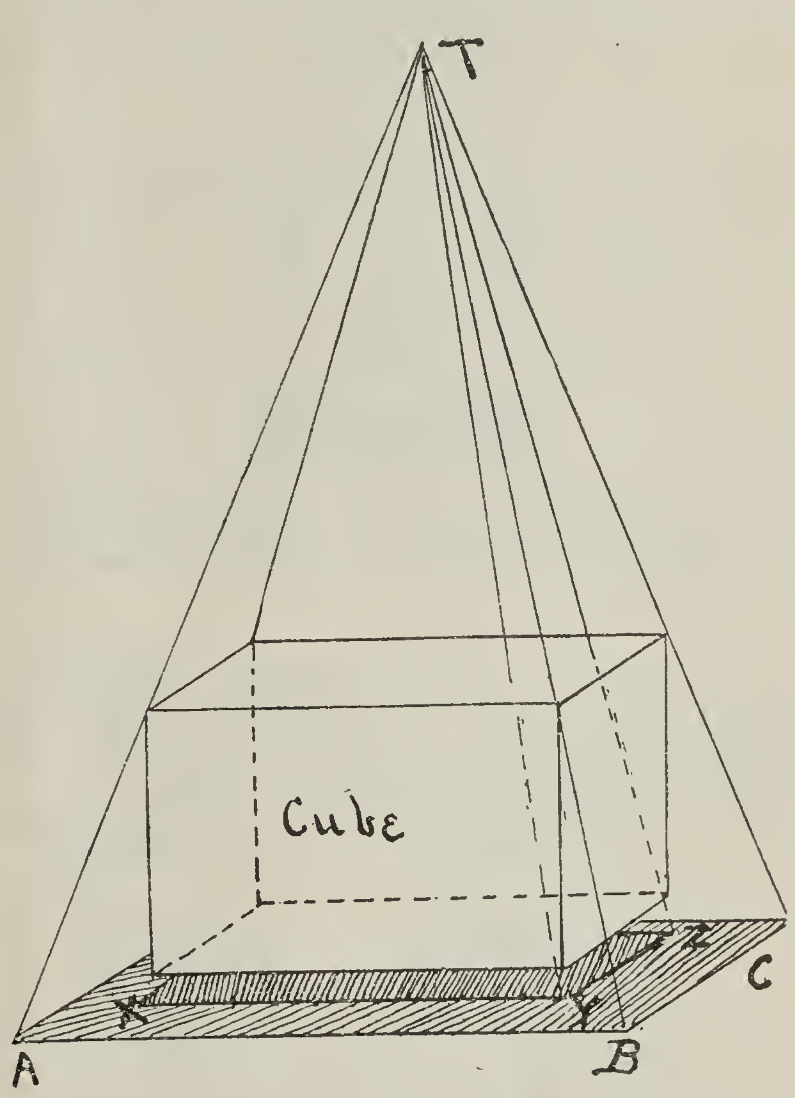


FIG. 1.—A, B, and C show the shadow cast by the upper surface; X, Y, and Z show the shadow cast by the lower surface; T represents the tube.

Fig. 2 shows why the edge of a sound bone casts a denser shadow than the centre, which is much thicker. The round bone being hollow, a ray of light (C) passing through the centre has less solid bone (B B^1) to penetrate than that (E) passing through the edge (A); thus the shadow of the centre is less dense than that of the edge.

A skiagraph showing this must not be mistaken for tuberculosis or osteomyelitis.

Fig. 3, represents error No. 1, made by varying the distance of the tube from the plate, shows the increase in size of the shadow of foreign body or bone as the tube approaches the plate. Therefore, the size of a bullet or any other foreign body cannot be proved by an x ray, unless the distance of the tube from the plate and the distance of the foreign body from the plate are known.

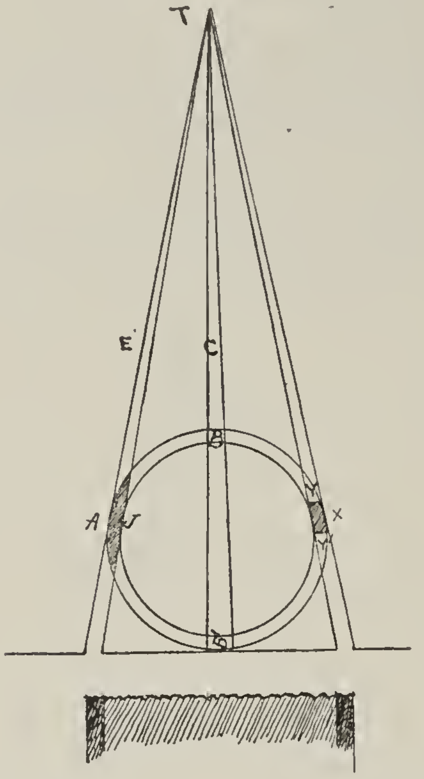


FIG. 2.—T represents the tube; B and B¹ indicate where bone is penetrated by ray of light C; A indicates where bone is penetrated by ray of light E; Y and Y¹ show the difference between X and A.

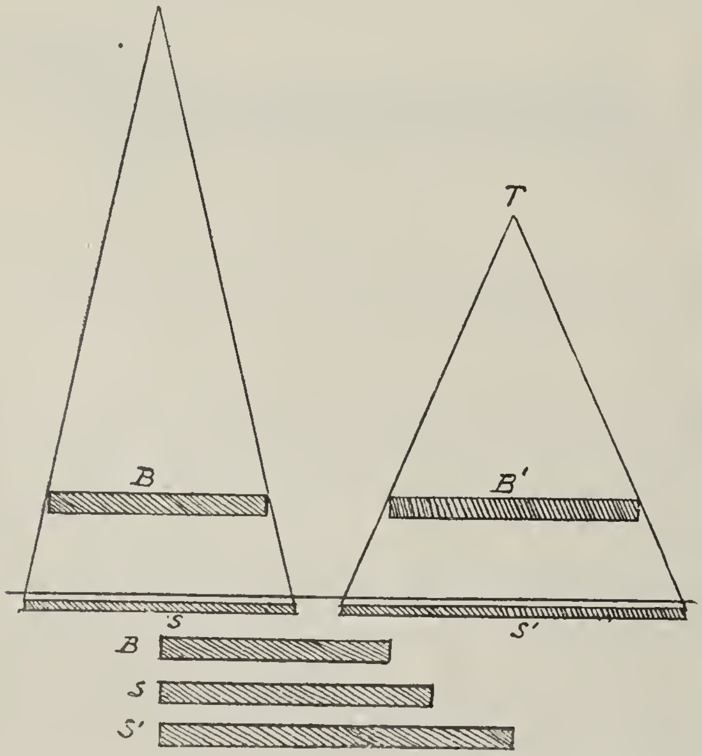


FIG. 3.—T represents the tube; B or B¹ represents the bone or foreign body; S is the shadow of B and S¹ is the shadow of B¹.

If two skiagraphs are made, one of a normal arm with the tube 14 inches from the plate, and one of a fractured arm properly reduced, and no deformity, with the tube 28 inches from the plate, the skiagraph of the fractured arm will show the bones much shorter than those of the normal arm. Thus, these two skiagraphs shown to a jury would prove beyond doubt that there was permanent injury.

Fig. 4 shows error No. 2, which is caused by *varying the direction* of the tube from the plate; also that the perpendicular rays have more penetrating power than those striking the plate at an angle, regardless of the tissue interposed.

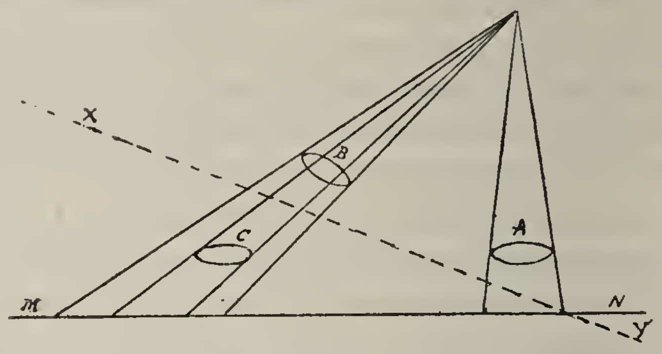


FIG. 4.—T represents the tube; M N indicates the plate horizontal; X Y indicates the plate at an angle; A, B and C show rings of equal size.

Let us arrange three rings, A, B, C, of equal size, so that A and B are each eight inches from the tube and transmit the same amount of light. Now let A be only one inch from the plate, and the rays which pass through it will strike the plate perpendicularly to the plane of its surface; whereas B is so arranged that the rays which it transmits will strike the plate at an angle.

If the plate were on the same plane as the line X Y, the light transmitted through A and B would have equal effects on it. But if the plate is horizontal, like M N, the rays transmitted by B diverge and strike a larger surface, which is also further from the tube. C represents a ring one inch from the plate, through which only a portion of the light transmitted by B can pass Therefore, the light transmitted by C is much less powerful than that transmitted by A.

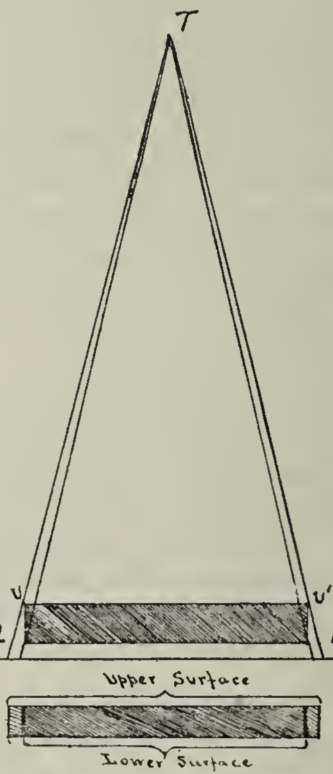


FIG. 5.—T represents the tube; U and U¹ represent the upper surface; L and L¹ represent the lower surface.

From this we learn that more light is transmitted through that part of a bone which is vertically beneath the tube than is transmitted by an equal amount of bone not vertically beneath it. Therefore, the bone which is vertically beneath the anode shows much lighter in the skiagraph print than an equal amount of bone through which the light is transmitted at an angle. This might be interpreted as osteomyelitis.

Varying the distance, between the tube and the body (Error No. 3), is the same as varying the distance of the tube from the plate, as represented in Fig. 3, or varying the distance of the body from the plate, as described in Fig. 9.

Fig. 5 shows the best possible position of the light in representing the entire length of a bone. In this, however, there is room for error, as the shadow cast by the upper surface is longer than that cast by the lower surface. This error, however, is symmetrical.

Fig. 6 shows the error caused by varying the direction of the tube laterally from the part skiagraphed. This figure represents both bones in the same position, but in Fig. 6A the tube is to the radial side, therefore the shadow of the radius is cast nearer to the shadow of the ulnar than it is in Fig. 6B, where the tube is to the ulnar side.

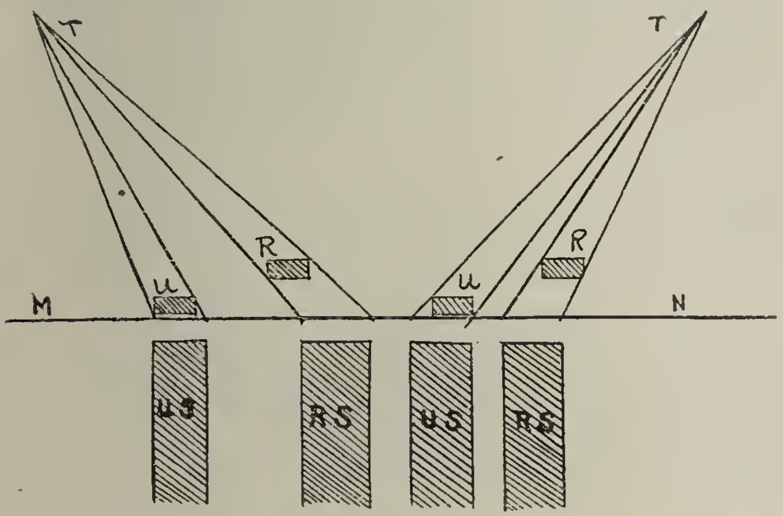


FIG. 6B. FIG. 6A.

FIG. 6.—T represents the tube; U represents the ulna; R represents the radius; U S represents the ulnar shadow; R S represents the radial shadow; M N represents the plate.

FIGS. 6, 7 and 8 represent error No. 4, caused by varying the direction of the tube from the part to be skiagraphed.

From these figures we learn that if the forearm is placed on a table of ordinary height and allowed to rest there naturally, the ulna is nearer the plate than the radius, and even if the lower ends of both bones are equally distant from the plates, the upper end of the radius is farther from the plate than is the ulna. Therefore, if any part of one bone which is to be compared to another is farther from the plate than the one with which it is compared, and the tube is situated laterally toward the bone that is raised, the shadow cast by the former is nearer the shadow cast by the latter than is the former to the latter, and vice versa.

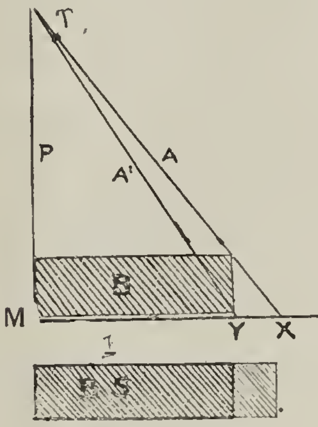
As, for example, if two skiagraphs, as shown in skiagraph No. 2, are made, one of a normal arm with the tube to the radial side, and another of a fractured arm properly reduced, in which skiagraph the tube is placed to the ulnar side, the bones will be shown in the skiagraph of the fractured arm to be much further apart than those in the skiagraph of the normal arm. Now what will a surgeon do, guided by such a skiagraph? If he reduces the deformity shown in the skiagraph, he pushes the fractured ends close to the other bone, and if they unite at all, they unite in malposition and limit the function of that limb. If, on the other hand, he leaves them where they are, he is likely to be sued for malpractice in not properly reducing the fragments.

The natural bowing of the radius may be exaggerated by placing the tube to the ulnar side, or diminished by placing the tube to the radial side.

Figs. 7 and 8 represent the errors which occur when varying the direction of the tube proximally or distally from the part to be skiagraphed.

Fig. 7A is to demonstrate the error that occurs when the tube is placed proximally to the part of the bone to be skiagraphed. It represents a straight bone, flat on the plate, viewed horizontally with the tube over the upper end of the bone, and the plate horizontal. The rays of light (P) that fall perpendicularly, outline the upper end of the bone, making a most accurate skiagraph, but those (A^1), passing at an angle through the lower edge of the distal end, strike the plate at Y, showing the actual position and length of the bone, while those, A, passing through the upper edge of the distal end strike the plate at X, beyond the end of the bone, making the bone appear longer than it really is.

Fig. 7B shows the bone and plate in the same positions as in Fig. 7A, but the tube is placed distally to the lower end of the bone. The shadow cast is similar to that in Fig. 7A, but it shows a shortening of the bone instead of a lengthening.



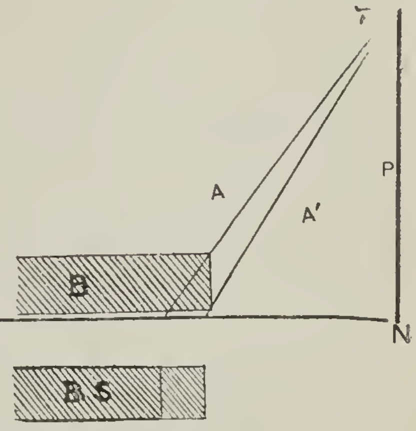


FIG. 7A. FIG. 7B.

FIG. 7A.—T represents the tube; M N represents the plate; P indicates the perpendicular rays; A and A^1 indicate the rays at an angle; B represents the bone; B S represent the bone shadow.

FIG. 7B.—T represents the tube; M N represents the plate; P represents the perpendicular rays; A and A^1 indicate the rays at an angle; B indicates the bone, and B S the bone shadow.

When the tube is placed proximally to the end of a long bone, the shadow of the end of the bone is modified by the shape of the upper surface.

Fig. 8 shows the error that occurs when placing the tube proximally or distally to the ends of parallel bones when one wishes to compare the relative lengths of two bones. In Figs. A, B, and C, the bones are in the same positions, which are also the most natural positions, with the arm resting on a table of ordinary height, namely, the ulna flat on the plate and the radius slightly raised.

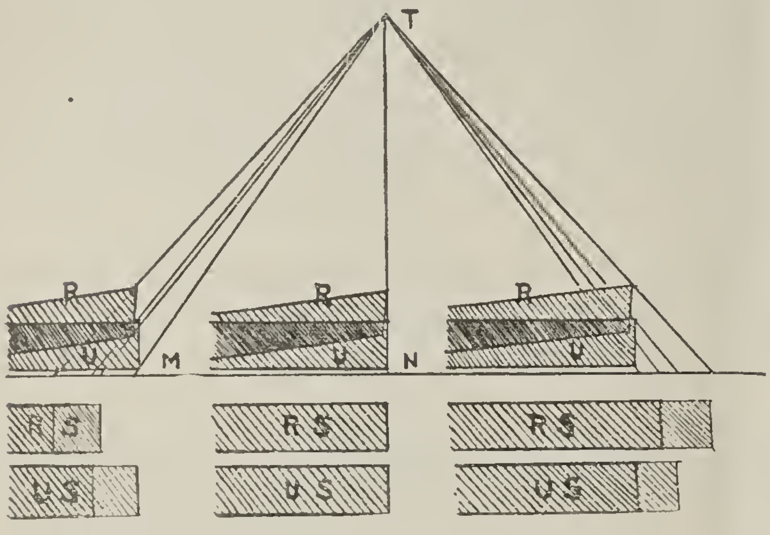


FIG. 8C. FIG. 8A. FIG. 8B.

FIG. 8.—T indicates the tube, M N the plate, R the radius, U the ulna, R S the radial shadow, and U S the ulnar shadow.

In Fig. 8A, where the tube is vertically over the ends of the bones, even though one is slightly raised, the skiagraph will show correctly the relative lengths of the bones.

In Fig. 8B, where the tube is placed proximally to the ends of the bones, the skiagraph will show the radius relatively longer than it really is.

In Fig. 8C, where the tube is placed distally to the ends of the bones, the skiagraph will show the radius to be relatively shorter than it is.

A skiagraph may be made of the lower end of the radius, for the purpose of determining the presence or absence of a Colles's fracture with little or no deformity. Again, one may be made of that part to determine the amount of deformity in a case where there is no doubt about the diagnosis.

If the skiagraph is made shortly after the injury is received, to show merely the absence or presence of a fracture, it is justifiable to move the tube, plate, or arm in any position that will show the fracture, because if there is no impaction, separation, or anteroposterior displacement of the lower fragment, a fracture might escape detection in a fluoroscopic examination and might escape detection even in a skiagraph. Under no circumstance, however, should a skiagraph of this kind be compared with a skiagraph of normal arm for the purpose of showing the amount of deformity.

A skiagraph may be made either at the time of the injury or at any time afterward that will show the real deformity, but when this is done the greatest care must be taken to place the tube and plate in the same relation to the base of the radius of the fractured arm as in the normal.

The error most likely to occur is in the case of an oblique fracture of the lower end of the radius downward and backward.

If, in such a case, there is no deformity, a fluoroscopic examination is made, which shows the fracture only when the tube is placed distally to the point of fracture. The radius, as the arm lies in rest, is slightly raised, and if the plate is horizontal the shadow cast by the lower end of the radius is shorter than that cast by the ulna, which is flat on the plate. Thus the skiagraph shows a shortening or impaction of the lower fragment.

If one is making a skiagraph of the normal forearm, one is not looking for a fracture, and consequently does not make a fluoroscopic examination, but places the tube directly over the lower end of the radius and makes an exposure.

Now, even if there is absolutely no deformity, the skiagraph of the fractured arm will show a shortening of the radius with impaction of the lower fragment. If the tube is placed proximally to the lower ends of the radius, it will appear longer in the skiagraph than it really is. Thus, at the will of the skiagrapher the deformity of the fractured arm may be increased or diminished in comparison with the normal arm.

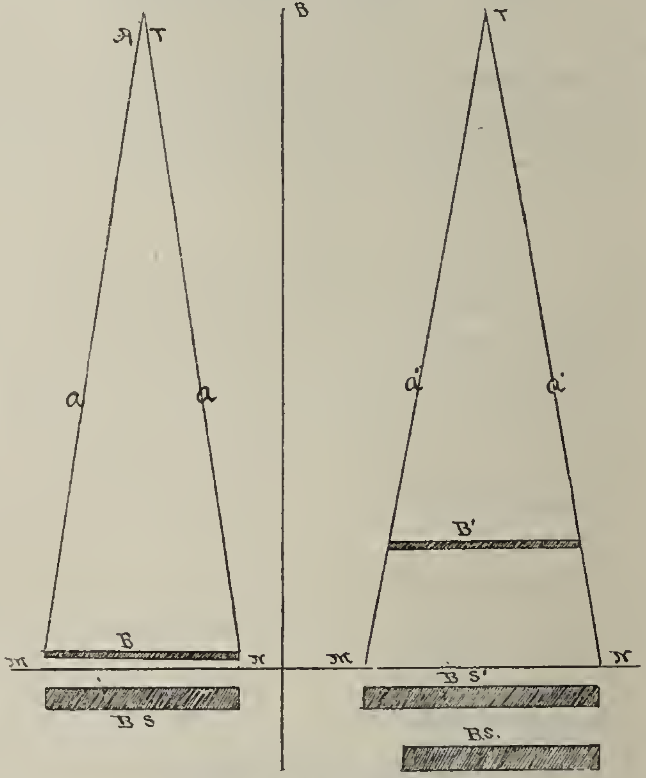


FIG. 9.—T indicates the tube, M N the plate, B and B¹ the bone, A and A¹ the ray of light outlining ends of bone, and B S the bone shadow.

Fig. 9 represents error No. 5, which occurs when varying the distance of the body from the plate. The plate should be as near as possible to the part to be skiagraphed, and not placed in a frame under the table to prevent its breaking, as is quite customary. The same danger is here encountered as is described in Fig. 3.

Fig. 10 shows error No. 6, which occurs when the relative positions of the bones are changed.

Fig. 10A shows both bones flat on the plate and the tube vertically over them. The shadow of each bone is directly beneath it, and the relative sizes and positions and distances between them are accurately displayed in the skiagraph.

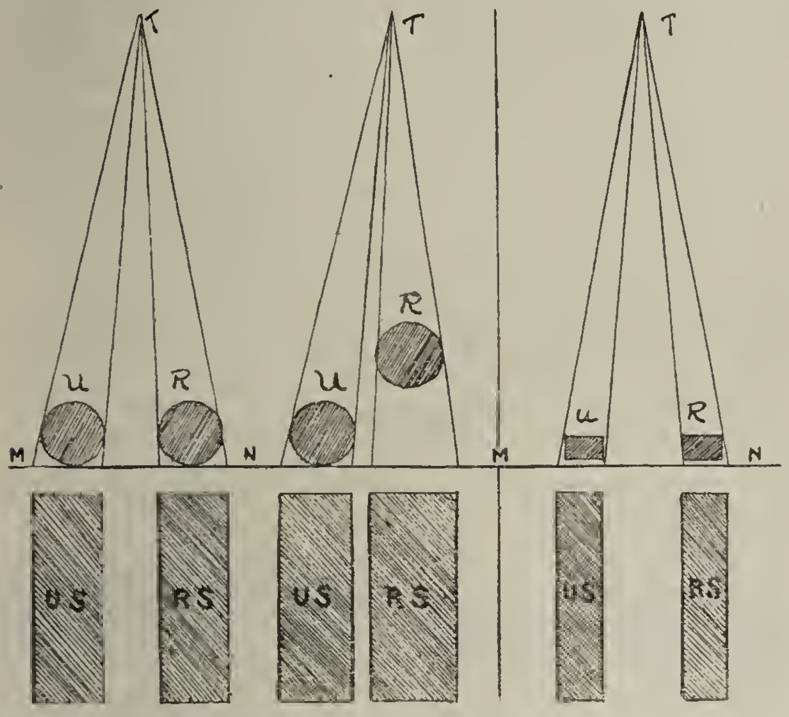


FIG. 10A. FIG. 10B. FIG. 11.

FIGS. 10 and 11.—T indicates the tube, M N the plate, U the ulna, R the radius, U S the ulnar shadow, and R S the radial shadow.

Fig. 10B. The radius is slightly radiated around the ulna, the distance between the bones remaining the same; but the shadow, R S cast by the radius is nearer the shadow U S cast by the ulna than the bones really are.

This error is much exaggerated or diminished by moving the tube to one side or the other.

In determining the deformity in a fracture by means of a skiagraph, we compare the relation of the bones in the fractured extremity with those of the corresponding normal extremity. This applies especially to the forearm and lower leg, where we compare the relation of parallel bones in the same part with parallel bones in the corresponding part. If, for example, we have a fracture of the lower third of the ulna, as shown in skiagraph III,[1] manipulation of the forearm is painful and the skiagrapher places the arm on the plate in the most natural position for the patient, viz., with the anterior surface down and the palm of the hand flat on the plate, but with the radius slightly raised from the plate and rotated around the ulna. If the tube is directly above the centre of the forearm, the radius in rotating around the ulna casts its shadow nearer the shadow of the ulna than the bones themselves are.

But in the skiagraph of the normal arm, there being no pain on manipulation, the arm is more pronated and the radius is nearer the plate and not so much rotated around the ulna as in the skiagraph of the fractured arm. Therefore, the shadow cast by it represents its true relation to the ulna.

Now, in comparing the skiagraph of the fractured arm with that of the normal, we find, first, the fracture; secondly, that the bones are nearer together, or compressed laterally, when compared with the skiagraph of the normal arm. On inspection and palpation the bones appear in perfect apposition and the contour of the arm normal. The question then arises as to whether we shall treat the case according to the old principles or according to the new ones, where we have x ray and can see what we are doing. If we treat it according to the old method it would have been far, far better not to have had a skiagraph to disturb the peace of mind of the surgeon. Or, if we treat it by the new method, where we can see what we are doing, we try to separate the fractured ends of the radius from the ulna. And if we succeed in doing this, it results in an abnormal bowing, or even angular deformity, of the ulna, and where union is complete we wonder why we fail to get as good function as when we treated them in the old way. Such trouble will result when we try to treat a deformity that exists only in a skiagraph.

The error No. 7 is caused by altering the relative position of the part skiagraphed to the body as a whole.

This seems unimportant, but it is one of the most common and dangerous causes of error. For example, we make a skiagraph of one forearm with the patient in front of a moderately low table, with the forearm pronated and the palm of the hand flat on the plate, the distal ends of both bones equally distant from the plate, the forearm at right angles to the arm, the elbow adducted and the humerus perpendicular, the plate horizontal and the tube vertically above the centre of the forearm.

Such a skiagraph would be very different from one made with the patient sitting a little lower in his chair, or with the table slightly raised. In the latter skiagraph, although the tube, plate, and forearm are in the same positions as in the previous exposure, the elbow is abducted and the humerus forms an acute angle with the plate.

We have been taught to think of the base of the radius radiating around the lower end of the ulna, but have not considered that the head of the radius may radiate about the base of the ulna. This is just what occurs when the elbow is adducted or abducted, the relation of the bones at the wrist remaining the same.

Fig. 11 demonstrates the fact that skiagraphs are most accurate when the tube is vertically above the part to be skiagraphed, the plate horizontal and the bones flat on the plate.

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[1] The skiagraphs will be published with the concluding part of the article.

Fig. 12 demonstrates error No. 8 that occurs when the plate is at an angle.

Fig. 12A represents both bones of the forearm horizontal and the tube vertically above the centre, but the plate at an angle. The shadow of the radius is larger than the radius itself, and the bones are represented as being further apart than they really are.

Fig. 12B shows that if the light is shifted to the ulnar side, the deformity is exaggerated. If shifted to the radial side, it is diminished.

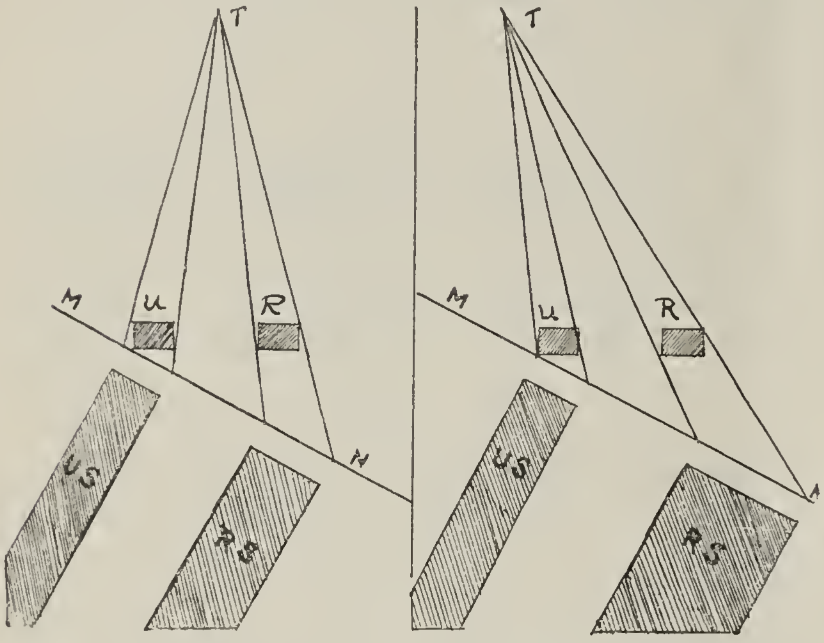

FIG. 12A. FIG. 12B.

FIG. 12.—T indicates the tube, U the ulna, R the radius, M N the plate, which is tilted; U S the ulnar shadow, R S the radial shadow.

This error is most likely to occur when the arm or leg is carefully placed on a soft pillow while the tube is being adjusted. Then the arm is raised, one side of the pillow pressed down, and the plate pushed under the arm. Now the arm is resting on a tilted plate and probably the tube is not directly above the centre of the forearm. Then we have a combination of all the causes of errors which make the skiagraph so dangerous when compared with a skiagraph of the normal arm. We find all sorts of deformities existing in the skiagraph of the injured arm, especially a bowing out of the fractured ends of the bones. If we correct this deformity by pressing in the ends of the fragments, which is far easier than pulling them away from the ulna, we can easily correct the deformity which appears in the skiagraph, but in doing so we cause a malposition of the fragments with an inward bowing or angular deformity, which, if we are unfortunate, may unite with the ulna, especially if both bones are fractured, causing ankylosis and limiting or preventing pronation or supination.

Fig. 13 demonstrates the fact that if the tube is vertically over an oblique fracture downward and backward with anterior and very slight lateral displacement of the lower fragments, the skiagraph will show accurately the relative positions of the fragments, except the anterior displacement, which it does not show at all.

The figure represents an oblique fracture of a long bone with anterior and very slight lateral displacement of the lower fragment. The tube T is vertically over the fracture, and the plate M N is horizontal. The ray of light A passing through the upper anterior point of the lower fragment also passes through the upper anterior point of the fracture of the upper fragment, thus casting their shadows at the same point, X, on the plate.

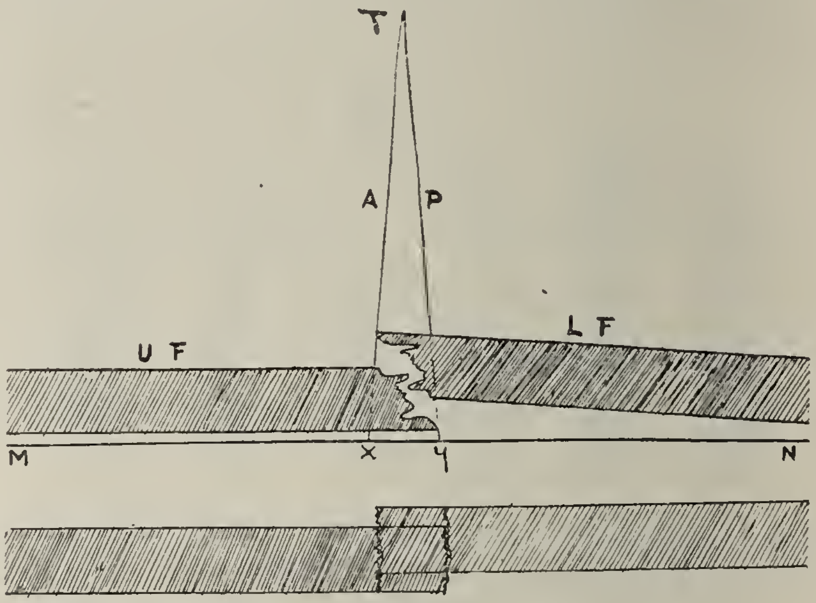

FIG. 13.—T indicates the tube, M N the plate, A the ray of light going through anterior part of fracture, U F the upper fragment, and L F the lower fragment. The shadows cast are represented below.

The ray P which passes through the lower posterior point of fracture of the lower fragment, also passes through the lower posterior point of the upper fragment, casting their shadows at the same point, Y, on the plate M N.

Thus the skiagraph shows the anterior superior point of fracture at X and the posterior inferior point at Y, which proves the all important thing, viz., that there is no overriding or separation of the fragments. It also shows the slight lateral displacement, but does not show the anteroposterior displacement, which is most marked. A lateral skiagraph should be made to show this.

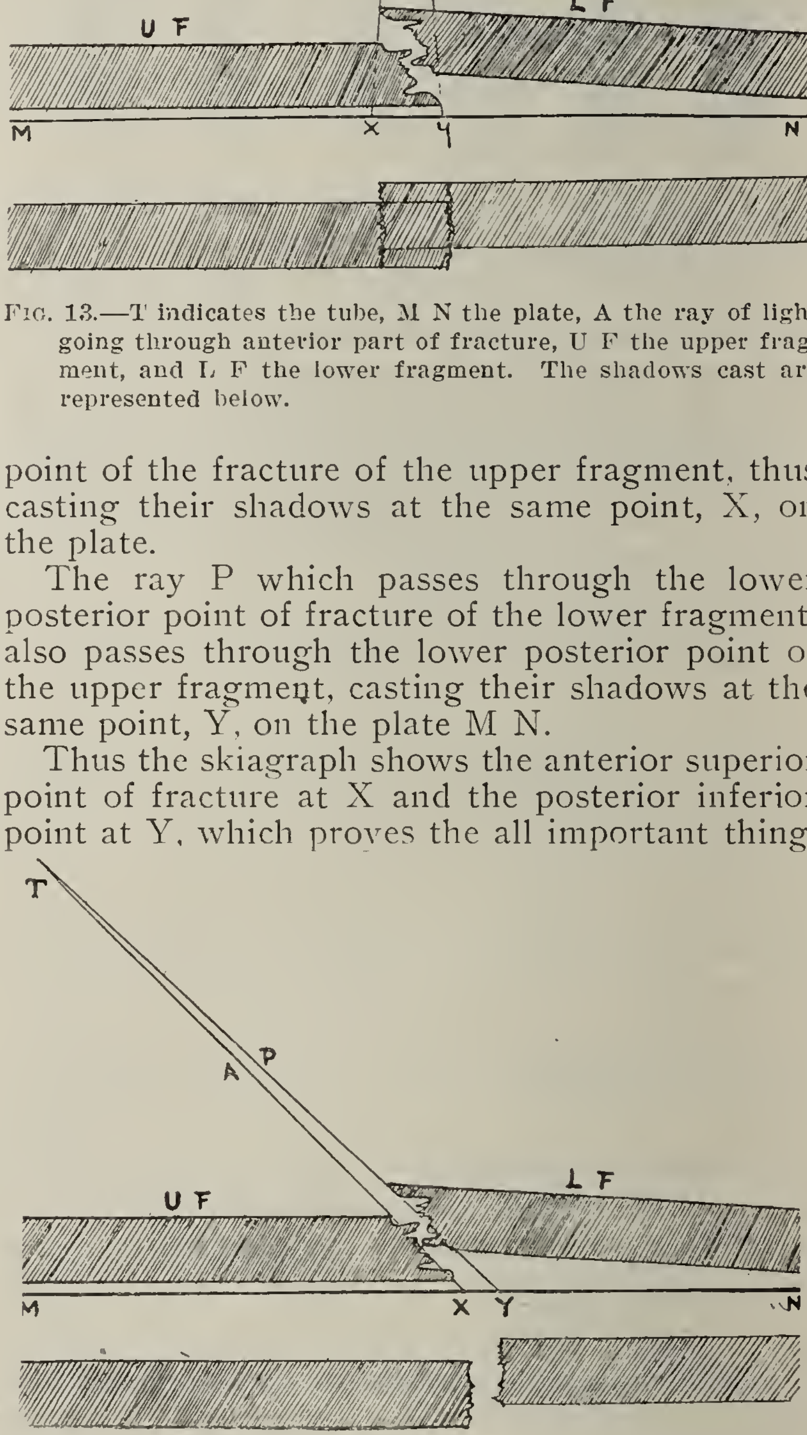

FIG. 14.—T indicates the tube, M N the plate, U F the upper fragment, and L F the lower fragment. The appearance of the shadows cast is shown below.

Fig. 14 demonstrates the fact that if the tube is placed proximally to an oblique fracture with anterior and very slight lateral displacement of the lower fragment, the skiagraph will show a separation of the fragments that does not exist.

The figure represents an oblique fracture downward and backward of a long bone with anterior and very slight lateral displacement of the lower fragment.

The tube T is placed over the upper end of the bone (proximally to the fracture) and the plate M N is horizontal.

The ray of light A passing through the anterior superior point of fracture of the upper fragment passes also through the posterior inferior point of fracture of the same fragment and casts their shadows at the same point X on the plate. The ray P passing through the anterior superior point of fracture of the lower fragment, also passes through the posterior inferior point of fracture of the same fragment, casting their shadows at the same point Y of the plate.

Thus the skiagraph shows the lower part of the upper fragment at X and the upper part of the lower fragment at Y, which shows a separation of the fragments that does not exist, but is caused by an anterior displacement of the lower fragment that does not show, and not by a lengthening of the limb, as one would think.

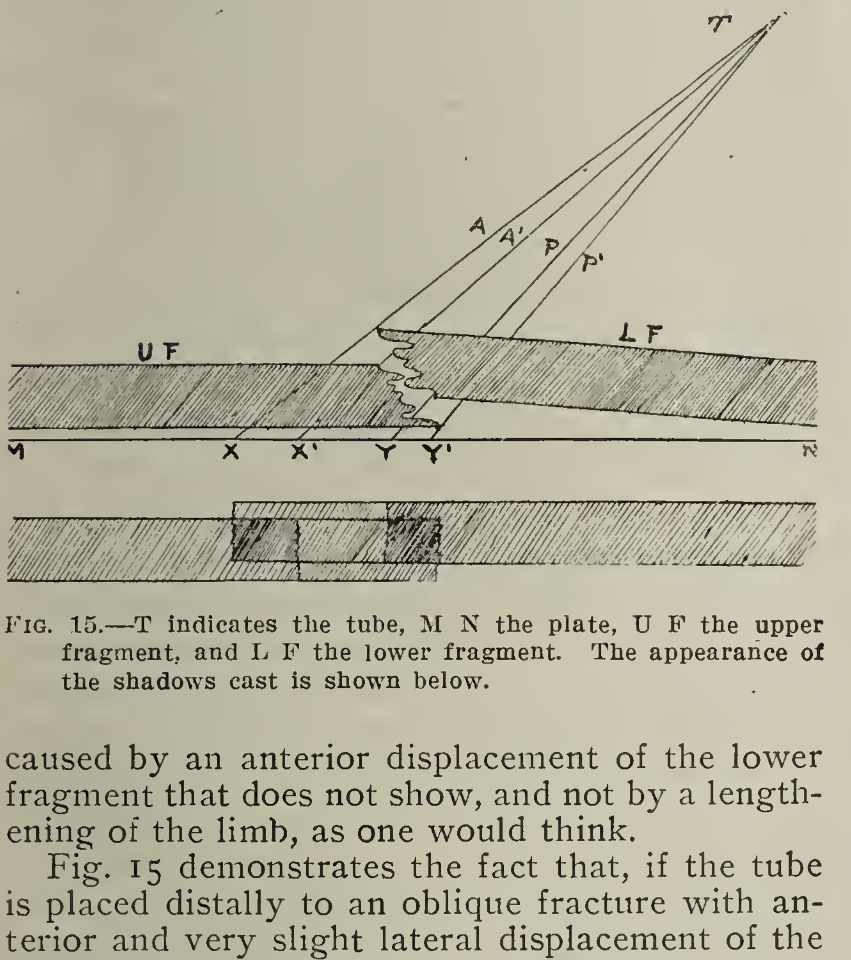

Fig. 15.—T indicates the tube, M N the plate, U F the upper fragment, and L F the lower fragment. The appearance of the shadows cast is shown below.

Fig. 15 demonstrates the fact that, if the tube is placed distally to an oblique fracture with anterior and very slight lateral displacement of the lower fragment, the skiagraph will show an overriding of the fragments that does not exist.

The figure represents an oblique fracture downward and backward of a long bone with anterior and very slight lateral displacement of the lower fragment. The tube T is placed over the lower end of the bone, distally to the fracture. The plate M N is horizontal. The ray of light A passing through the anterior superior point of the lower fragment casts its shadow at X, whereas the ray of light A passing through the anterior superior point of the upper fragment casts its shadow at X^1 on the plate M N, instead of at X, as in Fig. 13. The ray of light P passing through the posterior inferior point of the fracture of the lower fragment, casts its shadow at Y, whereas the ray of light P^1 passing through the posterior inferior point of the upper fracture, casts its shadow on the plate at Y^1 instead of at Y, as in Fig. 13, when the tube was vertically over the fracture.

Thus the skiagraph shows the lower fragment (X and Y) as being above the upper fragment (X^1 and Y^1), or gives the appearance of overriding which does not exist.

(*To be concluded.*)

A CASE OF INFECTION WITH THE BACILLUS AEROGENES CAPSULATUS.

By S. W. SAPPINGTON, M. D.,

PHILADELPHIA.

Since Welch's discovery of the *Bacillus aerogenes capsulatus,* in 1891, and his published report on the organism, in 1892, many cases of gas infection, hitherto unrecognized, have found their place in medical literature. Unfortunately, with the exception of emphysematous gangrene, the invasion of the gas bacillus nearly always constitutes a terminal infection or post mortem event, and this precludes it from any great clinical interest. But even when terminal or post mortem, the accompanying phenomena are so remarkable as surely to cause much inquiring comment on the part of all connected with the case, both lay and professional; and the proper recognition and explanation of such infections are due from every intelligent physician. The case herewith reported furnishes a good, average instance of infection with the *Bacillus aerogenes capsulatus.* The history of the case is as follows:

Case.—E. Z. B., aged thirty-nine years, widower, stenographer by profession. Weighed 165 pounds, but was tall and appeared rather thin than otherwise. Patient was born in Nova Scotia, but lived most of his life in Philadelphia, and for the last fifteen years had been attended medically by Dr. C. M. Seltzer, who kindly furnished this history. During this time, patient had general good health, with only occasional attacks of lumbago or rheumatic pains. He was prone to sexual excesses. He went on periodic sprees about once in six months, such a debauch lasting anywhere from a week to a month. In the interim, he was a total abstainer. Except in the last year, he gave no objective evidence of disease, but during the past twelve months he had had two or three attacks of jaundice, coming on just after the sprees and accompanied by some discomfort in the region of the liver.

On May 22, 1903, at 6.25 a. m., the patient was brought to the hospital with the history of sudden illness and a fall on the street. It was also learned that he had been drinking heavily for seven days, and the case was diagnosticated as acute alcoholism and the patient put to bed, in the absence of other signs and symptoms. At 11 a. m.

of the same day, patient was rational and made no complaints except of weakness. Later (4.30 p. m.), he vomited dark, grumous, coffee-ground material. He was then put in the ward and his chart gives his temperature as 98° F., pulse 104, respirations 20. Up to midnight of that day, he vomited altogether three times, the vomit consisting principally of dark, clotted blood. At 11 p. m., his temperature was 98.4° F., pulse 112, and respirations 20: he made no complaints. At midnight, he was sleeping quietly. Twenty-minutes later, the patient cried out and the nurse running to him found him cyanotic and in a few moments unconscious. At the same time, he had a bowel movement of about 50 c. c. of clotted blood. The house physician, Dr. Williams, was called, but the patient died in five minutes, eighteen hours after he was brought to the hospital.

The *autopsy* was held twelve hours later. On the post mortem table, the subject was apparently a very large man with tremendous musculature. This appearance was the cause of much surprise and comment on the part of the house physician who had attended him twelve hours before, the body being almost unrecognizable as that of his previous patient. The phenomenon was explained by palpation, which revealed over the supposedly massive parts subcutaneous crackling. Palpation over the face, neck, trunk, and limbs, practically the entire body, with the exception of the feet, showed the subcutaneous tissues to be the seat of marked interstitial emphysema, which greatly distended the superficial parts. The scrotum was distended, but no crepitation was elicited: puncture of the cavity of the tunica vaginalis on either side, however, was followed by the escape of gas. The abdomen was so distended that the walls were literally hard and tense as a board. From the mouth issued foamy blood. Post mortem lividity was marked, and rigor mortis was moderate.

The primary incision from the sternal notch to the pubes confirmed the diagnosticated condition of emphysema of the subcutaneous tissues. A slight nick in the peritonæum was at once followed by the hissing exit of a large quantity of gas under great pressure and the collapsing of the tense abdominal walls. There was no peritoneal effusion or signs of a peritonitis. There was no gas in either the pleural or the pericardial cavity. The lungs were distended and congested with frothy blood. The heart itself was normal, but the cavities contained frothy blood. This condition of "foamy" blood was also noted in various blood vessels.

The stomach was filled with about 2,000 c. c. of blood clot, and clotted blood was also found in the small and large bowel. A careful search for the cause of this hæmorrhage was futile. There were no œsophageal varices, nor was there any marked enlargement of the abdominal veins. The entire surface of the stomach was of a deep red hue and the walls were infiltrated with blood, as was also the first part of the duodenal wall. There were no evidences of ulceration in either the stomach or intestine. Perforation could not be detected anywhere along the gastrointestinal tract.

The liver was the seat of an atrophic cirrhosis. On section, it was further noted that we had to deal with a typical "schaumleber," the organ containing numerous cavities or cysts, many of which measured from 3 to 5 mm. in diameter. This condition was more marked in the right lobe. The gall bladder contained a number of small stones. The spleen was double its normal size and firm, and without any evidence of cysts. The interesting cystic condition of the liver, however, was duplicated in the pancreas, which was riddled with cavities fully as large as those seen in the former organ. The kidneys presented grossly no abnormalities. The bladder contained a small amount of urine, which was not foamy. The abdominal glands showed no special changes. The nervous system was not examined. There was no evidence of post mortem decomposition.

Unfortunately, only portions of the liver, pancreas, and stomach were saved for microscopical examination. In the hardened stomach wall, the naked eye could discern here and there minute cavities. These were by no means numerous, but the fact that they were discovered in the washed and hardened specimen makes us fear that we may have overlooked a similar cystic condition in the gut and other viscera.

Microscopical examination of sections of the liver showed the ordinary features of a chronic interstitial hepatitis. In addition were seen an enormous number of cysts varying greatly in size. The large majority of these cysts were situated in the new connective tissue of the cirrhotic liver. Some of these cavities were comparatively large and were either lined or completely filled with large bacilli; these large cavities were apparently branches of the portal vein. Other more numerous cavities resembled lymph spaces, and usually contained no microorganisms. Finally, there were many irregularly shaped spaces, some containing bacilli and some none at all. These last cavities were evidently of new formation, and, indeed, so may have been those suspected of being lymph spaces or portal branches, the identity of the tissue being more or less lost. None of the cavities in the connective tissue compared in size, however, with those seen directly among the liver cells. Scattered all through the parenchyma were quite large spaces, from five to ten times the size of the connective tissue cysts, lined irregularly by liver cells, most of which did not take the nuclear stain. The cells directly lining the spaces were flattened, as though from pressure within the cyst. Some of these parenchyma cysts exhibited a few bacilli around the periphery; others showed no organisms. The spaces were so close together in some areas as to be separated only by a trabecula of a single layer of liver cells. Many of the hepatic cells were fatty. There were no signs of recent cellular reaction in the way of round-cell infiltration.

The pancreas microscopically exhibited much the same condition as the liver. The blood vessels were partly or completely filled with bacteria similar to those seen in the liver. The connective tissue, which was somewhat increased, contained numerous cavities and within some of these were a few bacilli. The parenchyma showed larger sized cavities, many of which were lined by similar microorganisms. The nuclear staining of the parenchyma cells was poor and in many places there was complete necrosis. Here also there were no reactive inflammatory signs.

In sections of the stomach examined, cavities were not numerous, but a few were seen in the mucosa and submucosa with the same characteristics as in the liver and pancreas. Hæmorrhagic infiltrations were observed in the submucosa, and in these bacilli were abundant. The gastric mucosa was to a great extent destroyed. In the sections of the stomach, pancreas, and liver, it was noted that the number of bacilli directly among the parenchyma cells was very limited; it might be said that the bacteria were practically confined to the cystic spaces and blood vessels.

Bacteriological Examination.—At the autopsy, stab cultures in deep plain agar were made from the spleen and heart and incubated at 37° C. The culture from the spleen showed no growth after forty-eight hours. The culture from the heart, at the end of twenty-four hours, exhibited a growth on the surface and all along the stab, with the formation of numerous gas bubbles deep in the medium. Examination of the superficial growth showed it to be an ordinary staphylococcus. Specimens from the deep growth, however, revealed a large bacillus with rounded ends, 4 to 6 microns in length, corresponding morphologically and tinctorially to the *Bacillus aerogenes capsulatus.* Further cultures were made on plain agar after the method of Liborius, and these showed even more abundant gas formation. Cultures made according to Wright's method on agar slants showed a scanty, grey growth, with gas bubbles in the condensation fluid. Milk cultures grown under hydrogen exhibited in twenty-four hours acidification and coagulation of the medium and abundant gas production. Glucose bouillon cultures grown under hydrogen were quickly clouded, gas bubbles collecting on the surface of the medium.

Five cubic centimetres of a bouillon culture were injected into the ear vein of a rabbit; in fifteen minutes, the animal was killed and then placed in the incubator for twenty-four hours. At the end of this time, crepitation could be detected in the subcutaneous tissues, especially in the neck, and the abdomen was greatly distended. Upon incision, a large quantity of gas escaped from the peritoneal cavity. Areas of interstitial emphysema could be observed in the subcutaneous tissues. Miliary gas cysts were seen in the liver, and the animal's blood was foamy. Spreads made from the heart's blood, the liver, and the abdominal wall, contained a few large bacilli similar to those found in the original culture. Anaerobic cultures made from various viscera and tissues developed a scant growth of this large bacillus. Histological examination of the rabbit's liver and kidneys showed numerous cavities of new formation, but no bacilli corresponding to those seen in the spreads and cultures were demonstrable.

The bacilli observed in the sections of the man's liver, pancreas, and stomach, were identical in form and staining properties with those in the original cultures and also with those obtained from the rabbit. The bacilli in the sections stained especially well by Gram.

Remarks.—There is no reasonable doubt that this was a case of infection with the *Bacillus aerogenes capsulatus.* The organism was a large, non-motile, anaerobic bacillus, staining by Gram, and exhibiting the typical pathogenic action on a rabbit. The point not very satisfactorily demonstrated was the presence of a capsule. Cover-slip spreads should have been made from the blood of the original case, but as this was not done, attempt was made to demonstrate the capsule in the material at hand. Cultures might have exceptionally shown a capsule, but ours did not. The coverslip spreads made from the blood of the infected rabbit did not show a capsulated bacillus. Finally, attempts were made to stain the capsule of the organism in sections of the man's liver. With MacConkey's capsule stain these were unsuccessful. Welch's method was then tried on sections by flooding them with glacial acetic acid and replacing this with aqueous gentian violet; after which they were washed in water and alcohol, cleared in carbo-xylol, and mounted in xylol balsam. In these specimens, a narrow capsule could be seen.

An interesting feature of the case was the presence of the very large amount of gas in the peritoneal cavity without perforation. Jurgensen reported such a case in 1882, gas being found in both the peritoneal and pericardial cavities without perforation. Welch and Flexner in their series (1896), reported a case of non-perforative peritonitis due to the gas bacillus, which, it was asserted, was the first on record presenting conclusive evidence of the condition. Flexner has since observed another case in Manila. The development of pneumoperitonæum in our case was almost certainly post mortem, as in most others, but the possibility of gas development in the serous sacs, even though a final complication or terminal event, must be kept in mind as of clinical value. The development of gas within the serous coverings of the testes in our case was also noteworthy.

In contrast with this fairly typical infection, an atypical case came under our observation in the last week.

Case II.—J. G., a short, stocky Irishman, about sixty-five years of age, was brought by patrol to the hospital in a dying condition. A rapid examination by Dr. Carmalt, the house physician, revealed marked œdema of the lower extremities, effusion in both pleural cavities, and a rapidly failing heart. No history was obtainable, as is common in such cases. The man died within a half hour and was posted fourteen hours later.

There were no external wounds or signs of decomposition, and the autopsy revealed double hydrothorax, a hypertrophied and dilated heart, cirrhotic kidneys, and a large mound-like, nonulcerating carcinoma on the posterior wall of the stomach. Before opening the body, slight subcutaneous crepitation was noted in the face and neck and over the infraclavicular regions, but in no other part of the body could crackling be elicited. The first incision cut a large vein over the upper part of the sternum, and from this vessel there issued, apparently under considerable pressure, a large amount of gas. Part of the vessel wall was exposed, and the gas bubbles in the blood could be seen rapidly approaching the opening in the vein, where they burst with a little crackling noise. Attempts to ignite the gas were unsuccessful. The heart's blood was somewhat foamy, but the blood in the organs and vessels elsewhere was not notably so. There were no cystic cavities in any of the organs. Coverslip preparations of the blood of the superficial vein mentioned and of the heart's blood were made, and examination of these revealed enormous numbers of a large bacillus, with rounded ends, 3 to 6 microns in length, and staining by the method of Gram. We were, furthermore, able to demonstrate a capsule by Welch's method. Cultures were made from the liver by aerobic and anaerobic methods on plain agar and from these the *Bacillus pyocyaneus* only was obtained. The bacteriological examination in this case was, of course, very incomplete, but the results were very interesting. The presence of local interstitial emphysema, of a remarkable amount of gas in a blood vessel (more so than in our first case), and the demonstration from the blood of a bacillus corresponding precisely in points of form and staining reactions with Welch's bacillus, form, with the conspicuous absence of gas cysts in the organs, an atypical group of phenomena. In the tissue involved, there was absolutely no sign of inflammatory change, and we surmised the condition developed post mortem. A search for a local lesion by which the bacillus might have entered from without was futile.

SOME DRUG AND ALCOHOLIC HABITUES.

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During the past two or three years there have been treated at Bloomingdale a number of cases of liquor and drug habits, sometimes involving the minds of the patients, and in other cases only their power of resistance to the habit. In some cases an earnest effort had been made by the victim to drop the habit while still living an ordinary life, but these efforts were never more than partially successful. The drug or the liquor might be reduced to a very small daily dose, but it was never absolutely discarded. The effect of liquor upon the different cases varied very considerably, and sometimes it was very interesting, as, for instance, in the case of Mrs. A., who was a woman of good education and moral training in her home. She had some ambition and occupied a position of responsibility for some years after she reached maturity. During this time she earned and saved sufficient money to build a small apartment house, and upon the income from this she remained abroad, living with economy, but seeing many places. Having exhausted the novelty of travel, she returned to this country, but did not resume intimate relations with her family, which is eminently respectable and well to do—but took up her residence in the shabby and inconvenient quarters in her house prepared for a janitor, with almost no furniture and little care for its condition. She lived for months in this locality, preparing her food herself or eating such already prepared as she could order from the grocery, and with it ordering sherry by the bottle, of which empty bottles she had a numerous supply in her rooms. Her mind was dull, she quarreled with her neighbors, and her general condition was so wretched that her relatives were called in, and she was committed as insane to Bloomingdale. Withdrawal of the liquor and some tonic and sustaining treatment for a few days served to clear her mind of its dulness and confusion, and she continued a bright intellectual woman of much force, and apparently with no craving for stimulants during the months she remained, although she was given such liberty after a time that if she had forfeited her word she might have walked away and procured liquor. So far as I know, she has not resumed the habit.

In contrast to the case described is that of Mrs. B., a woman of about the same age, and education, position in society, and intelligence. She had a history of an earlier attack, from which she recovered. She became habituated to dependence upon liquor, which, after a time, completely unhinged her mind. She was acutely maniacal, noisy, destructive, and controlled by hallucinations. It took six months to restore her to a rational condition.

Mrs. C. and Mrs. D. both owed their insanity to indulgence in alcoholic beverages, but had they not been of a neurotic tendency their intemperance might not have resulted in an attack of insanity.

All these four patients were entirely restored, so far as their intellectual processes were concerned. A certain fatuous temperament goes with intemperance generally, and these persons all have a firm conviction that they will never relapse into their former habits; which, we hope, may prove true.

Of the men afflicted in the same way I may cite as illustrations:

Mr. E., a young man at college, where, in the social atmosphere of a secret society, he contracted the liquor habit some two or three years before he came to us. His dependence upon stimulation was so great that he was never free from it, and to get a drink he would make any pretense, or leave any company. His indulgence was not a social lapse, but a craving for stimulation to a certain level of comfort. I am not aware that he was ever drunk, but neither was he ever entirely sober. After a few months of absolute abstinence, always under observation and control, he developed so much character, and revealed so much innate refinement and fine sense of honor, that he was left to his own control while still resident here, and never (I am confident) forfeited his promise to abstain entirely from stimulants; and, from occasional observation since he was discharged, I believe he still continues to abstain.

Mr. F. was a subject of addiction to both drugs and stimulants for at least ten years. He began to take opium for the relief of pain, and recurred to it when the distress returned. He had intervals when he did not indulge, but these became shorter and dependence on the drugs more constant as time went on. During these years he did effective literary work, and gained considerable reputation in his particular field. When received at Bloomingdale he was entirely dependent on drugs for sleep, and got but little, even under their influence. Mentally he was irritable and slightly delusional, with some illusions, and a generally unmanned and emotional condition. Treatment, nourishment, and encouragement after a few weeks restored him to a fairly normal and rational condition, and later, air and exercise, with judicious friendliness and trust in his promises, built up his physical and moral nature still more, until, after eight months under personal observation during his outings, he was given parole of the grounds and later of the neighborhood, and was never known to violate his promise to absolutely abstain from drugs or liquor. The last I heard of him he had not relapsed. It was rather interesting to mention that, even after all these months of abstinence, he had little faith in his own ability permanently to reform, and perhaps not very much desire to do so.

Mr. G., with little insane manifestation, was a case of a man in his prime, educated both in arts and sciences, who, perhaps from heredity, came to rely for his ability to do his work on drugs and stimulants. A few months of abstinence and interest in wholesome and bracing activities restored him to a normal condition; but the stirring events of his outside life continued to cause an occasional relapse—a few months or weeks of treatment pulling him together again.

All the cases I have described were in members of the higher class in society. None of them had ever suffered privation, and all had enjoyed early advantages of education and breeding, and may have suffered some loss of moral stamina from too easy conditions of life.

There is no secret in our treatment of cases of insanity dependent on habits of indulgence in drugs or stimulants. In fact, each case varies in its requirements a little from the others. The moral treatment is, as affects permanent results, more important, we think, than the medicinal.

When such a patient comes out from the prostration and misery of his former state, he finds himself in a new atmosphere. Most of the other patients whom he sees are cheerful and active, and seem to find life worth living when separated from vicious indulgence, and he finds means of exercise and diversion innocent, but sufficiently active to suit almost any requirement. If he has formerly been fond of a particular exercise or game, he or she is pretty certain to find some one here who can join him in it, and perhaps put him to his best efforts not to come off second best. Tennis and billiard tournaments and such do not always go his way, and a healthy competition does him no harm. He also finds himself surrounded by people who are active and earnest in their work, who treat him with friendly encouragement, and their society no doubt disinclines him to relapse for the present into habits which they would condemn. Whatever it may be, the fact remains, that every year sees encouraging results of permanent as well as temporary value, among such cases as fall to the care of Bloomingdale. Our therapeutic treatment of drug cases has for several years involved the sudden withdrawal of the drug and the substitution of a sustaining agent, such as strychnine and capsicum, etc., upon the theory that a more thorough elimination of the opium from the system is obtained by the copious discharges which occur. The alcohol may be more gradually withdrawn, but a very quick return to the natural conditions is our usual practice. We have found the systematic bathing that we use, relieve the discomfort, itching, etc., which sometimes follows drug withdrawal, and produce a good mental impression.

◆

Correspondence.

LETTER FROM LONDON.

Compulsion Versus Bribery in Vaccination.—Bombay Medical Statistics.—Deaths from Anæsthetics.—Oysters as Food.—Municipal Milk Control.—The Bacteriological Treatment of Sewage.—Royal Medicos.—A Hospital for Ringworm.

LONDON, *March* 11, 1904.

Devoid of contrasts life would be tedious. The attitude of the French law contrasted with that of the Edinburgh authorities, in the matter of compulsory vaccination, is amusing. A law operative on April 7th requires that every one within French jurisdiction shall submit to vaccination in the first, seventh, and twenty-first years of life. Nothing short of a successful revolution can abrogate this law. The Scotchman is not a Frenchman. His make up is such that diplomacy, with him, is preferable to force. So the Edinburgh authorities, having a dislike for argument, and being dubious as to the result of force, cannily offered a reward of sixty cents to all persons submitting to vaccination. The chronicles of the day indicate that, as a result, whatever other evils may menace Edinburgh in the future, an epidemic of smallpox is among those least probable.

Some statistics from Bombay are just to hand, in which I note that, in 1902, there were 288 deaths from smallpox, as compared with 159, the number of deaths in the preceding year. The number of deaths from fevers in the above mentioned year was 4,518. Of remittent fever there were 3,847 deaths. For Bombay, however, the total number of fever deaths is 3,419 less than in the preceding year, and 1,938 less than the average in the preceding five years. The malaria-bearing mosquitoes incident to Bombay are the *Anopheles culicifacies* and the *Anopheles Lictoni.*

In Great Britain the annual number of deaths from anæsthesia is increasing. The returns of the British registrar general show that, in the year 1900, there were 140 deaths due to anæsthetics. Chloroform is the anæsthetic generally preferred in England, and Dr. Waller, of the University of London, asserts that this excessive mortality is due to the too highly concentrated vapor which is used. This indicates, according to Dr. Waller, a surprising ignorance of the elementary principles of anæsthetization. In the anæsthetization of animals Dr. Waller has made use of the pump of Dr. Dubois, of Lyons, and he asserts that, out of some thousands of cases, he has never had a death from chloroform. On human beings the results have been equally satisfactory, though the number of cases as yet is limited. He finds the best percentage of chloroform for anæsthesia to lie between one and two per cent.

Very early in the career of a food faddist do oysters become objects of his suspicion. In the purview of the bacteriologist, by no logical process can a discreet man find warrant for their use as food. Christians will eat them, however, and Londoners have reached the conclusion that official control of such edibles should depend upon a test at the market, as in the case of milk. The fourth report of the Royal British Commission on Sewage Disposal throws doubt upon the popular belief that the presence of the colon bacillus is absolute evidence of sewage. The report demonstrates that the *Bacillus coli* is so widely distributed that an uncontaminated oyster would be unusual. Oysters which have fed on sewage, however, contain many more bacilli than those from pure water.

Now that the city population is increasing at the expense of the countrysides, and the birth rate is decreasing year by year, the question of milk supply is becoming more prominent. Certain it is that with a properly supervised milk supply, fewer children would die, and so, in a measure, would the fall in the birth rate be compensated. The modern British municipality is solicitous about its milk. Battersea has a municipal supply and Lambeth contemplates a similar plan. Popular opinion, however, does not approve of the municipal idea, and the tendency seems to be in favor of a rigid supervision of the milk from the time it leaves the dairy until it is delivered to the customer. According to present laws, milk examination concerns itself solely with the percentage of fat, while in view of the numerous opportunities of contamination, it would seem far preferable that a bacteriological test should be required, and indeed, this is the general medical opinion. At present, in Lambeth, 151 infants out of every 1,000 die under the age of one year.

The bacteriological treatment of the sewage of London has been the subject of prolonged investigation. There has been, since 1893, a coke bed at Beckton, and the composition, thickness, and general management have been varied from time to time, in order that the conditions of maximum efficiency might be ascertained. The experiments demonstrate that hard coke, in fragments about the size of a walnut, is the best material, and the thicker the layer the more satisfactory will be the results. A thickness of twelve feet is considered suitable, and it is considered best first to pass the sewage through a sedimentation tank. One hour is occupied in filling the bed, and two hours thereafter the bed is drained, another hour being devoted to the draining process. After two hours' exposure to the air the bed is ready for use again, six hours being thus consumed in the cycle. The resulting effluent is such that prolonged exposure to a temperature of 80° F. evokes no unpleasant odor.

It may be interesting to note that the Prince of Wales is an honorary member of the British Medical Association, having been elected at the last annual meeting in Swansea, Wales. The King, when Prince of Wales, was also made an honorary member at the annual meeting at Ipswich, in 1900, and an Honorary Fellow of the Royal College of Physicians of London.

Mr. Carnegie believes that the ultimate happiness of the many will be in direct ratio to the number of free libraries. Is there no scathing Spanish proverb or rotund Latin aphorism to fit his case? Other good people have other fads, but I bestow the palm on the Metropolitan Asylums Board of London for having erected (at a cost of one million dollars) a special hospital for the treatment of ringworm. To date there has been just one applicant for treatment—a little ragged boy from Mile End Road.

Therapeutical Notes.

Itch in Children.—*Journal des praticiens,* for March 12, 1904, says that the best treatment for the itch in children under seven years of age is Helmerich's ointment, which is prepared as follows:

℞	Precipitated sulphur	200 parts;
	Potassium carbonate	100 parts;
	Distilled water Oil of almonds	of each 100 parts;
	Lard	700 parts.

M. Ointment.

Before Helmerich's ointment is used, however, a milder preparation is applied to soothe the skin, irritated by scratching:

℞	Zinc oxide Starch	of each 20 grammes ($^{2}/_{3}$ ounce);
	Petrolatum	40 grammes ($1^{1}/_{3}$ ounce).

M. Use morning and evening.

The application of undiluted balsam of Peru has been followed by albuminuria and death. For nursing infants, however, Brocq advocates:

℞	Olive oil	60 grammes (2 ounces);
	Storax	25 grammes ($^{5}/_{6}$ ounce);
	Balsam of Peru	5 grammes (75 grains).

M. For an ointment.

Stomach Vertigo.—*Journal des praticiens,* for March 12, 1904, gives coffee, tobacco, and constipation, as making an ætiological tripod for this condition; the drugs must be forbidden and the constipation treated. The following pill is advised:

℞	Cape aloes	8 centigrammes ($1^{1}/_{5}$ grains);
	Gutta percha	3 centigrammes ($^{9}/_{20}$ grain);
	Turpeth root	2 centigrammes ($^{3}/_{10}$ grain);
	Extract of hyoscyamus Extract of belladonna	of each 5 milligrammes ($^{3}/_{40}$ grain);
	Extract of licorice	10 centigrammes ($1\frac{1}{2}$ grains).

M. For one pill; one to three at bedtime.

At the time of an attack of vertigo, the following is useful:

℞	Potassium bromide	6 grammes (90 grains);
	Cherrylaurel water	10 grammes ($^{1}/_{3}$ ounce);
	Syrup of ether	30 grammes (1 ounce);
	Valerian hydrolate	120 grammes (4 ounces).

M. Tablespoonful at a dose.

The syrup of ether is composed of ether, 20 parts; alcohol, 50 parts; distilled water, 230 parts; and simple syrup, 700 parts.

For Infantile Colic.—According to A. McAllister *(Pædiatrics,* October, 1903), the following is a favorite prescription of Rotch:

℞	Sodium bicarbonate	40 grains;
	Aromatic spirit of ammonia	40 minims;
	Glycerin	30 minims;
	Peppermint water	2 ounces.

M. A teaspoonful between feedings.

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NEW YORK, SATURDAY, APRIL 2, 1904.

ZOSTER ATTRIBUTED TO THE ERUPTION OF A WISDOM TOOTH.

The nervous pathogeny of zoster being so firmly established, we may well admit many a source of nerve irritation as its exciting cause, but its origin in the eruption of a tooth is probably far from common. A person in whom its occurrence was attributed to dental irritation was lately shown by M. Jacquet at a meeting of a Paris society (*Bulletins et mémoires de la Société médicale des hôpitaux de Paris,* March 10th). The subject was himself a medical man, a hospital externe.

The lesions occupied the right side of the chest, chiefly on the back, with a small aberrant group on the left side, and there was profound hyperæsthesia of the whole of the right side. A week before he was shown, the young man had experienced, in the night, quite an acute pain at the angle of the jaw on the right side, and mastication on that side at once became impossible. At the same time swelling and tenderness of the gum at the site of the right lower wisdom tooth were perceived. Four days later a dentist cut away a portion of the swollen tissue and cauterized the wound. That night a group of vesicles appeared in the right inframammary region, and the next day several groups on the dorsal aspect, with intense intercostal neuralgia.

M. Jacquet said that, so far as the hyperæsthesia was concerned, he had seen a number of such cases, and added that they exemplified what he proposed to call Brown-Séquard's law—that irritation of a part rich in nerves provoked exalted sensibility of the same side. In many cases there was to be observed an exaltation, not only of sensibility, but also of organic life in its totality, leading often to affections of the skin, although he had not before met with zoster due to such a cause. We should imagine, however, that zoster, more than almost any other skin disease, might result from such nervous irritation.

TETANUS AFTER VACCINATION.

Dr. John H. Huddleston, of the New York Health Department, has been making a systematic study of the probabilities as to the conveyance of tetanus by vaccination, and he reports his observations in the February number of *Pædiatrics.* One of the most important points that he makes is the fact that calves, though but very slightly susceptible to tetanus, may impart the germ of that disease to the contents of their vaccinal pocks. In his own words: "It may be regarded as proved, therefore, that calves are so insusceptible to tetanus that, if this injection (infection?) were present in the vaccine vesicles, the calf would not present any symptoms to show it." It is stated by Dr. Huddleston that the calves furnished to the health department are old enough to have been fed on hay. In two calves out of twenty-five that had been fed with hay, tetanus bacilli were found in the fæces. But after their reception the calves furnished to the department are fed on sterilized milk, "and may therefore be considered as at least not adding to the tetanus which may have been carried in with the hay." Inasmuch as three white mice out of four injected with cultures from the fæces of the two calves showing the bacilli promptly died in convulsions, the lethal character of the cultures cannot be doubted, and we presume that Dr. Huddleston does not attach any great importance as a protective to the fact that subsequent feeding of the calves with sterilized milk precludes their becoming cumulatively infected.

But he does appear to look upon the "glycerinating" process as to some extent a protection. He thinks it clear from his experiments that "a three-fold dilution of fifty per cent. glycerin exercises an inhibiting influence on tetanus even when the temperature is best adapted for growth," though in one of the flasks, in which there was no growth, "the spores were still alive, as was shown by planting from the flask into a fresh tube of bouillon." However, neither Dr. Huddleston nor any other careful man, we fancy, would countenance the use of vaccine that had possibly been contaminated with the germ of tetanus simply because it had been subjected to "glycerination." Why, then, would it not be better to employ as vaccinifers only calves that had not been fed on hay? While we regard the conveyance of tetanus in the actual operation of vaccination as in the highest degree improbable, it does seem to us that every possibility of such a direful occurrence should, nevertheless, be most sedulously guarded against.

THE FOLKLORE OF SNAKEBITES.

Dr. T. F. Macdonald called attention, some time ago, in the *Australasian Medical Gazette,* to the practice followed by the Australian bushmen in the treatment of snakebites. They cause the patient to swallow the poison glands, where possible, of the snake that has bitten him, and assert that this practice confers immunity from the bite. As it appears clear, he says, that no one antivenomous serum will cure all kinds of snakebites, and since it is obviously impracticable to keep on hand sera prepared against the bite of every kind of snake, he suggests that experimenters might wisely direct their attention to the investigation of this and similar folklore prevailing among the natives of countries where venomous snakes abound. In support of this particular practice he adduces a case in which a dog was bitten by a large Australian blacksnake while in the act of killing it, and died a quarter of an hour later. A cat, nevertheless, very soon afterward ate the head of the snake without apparently incurring any harm whatever.

There are, however, several flaws in Dr. Macdonald's reasoning in considering this fact presumptive evidence in favor of the bushmen's practice. In the first place, all snakes are not equally poisonous to all kinds of animals, and he does not tell us whether the cat enjoys any special immunity in regard to this particular snake. It is, however, fair perhaps to assume that, had such immunity been known, he would have mentioned it; still, we should like to know if there is any evidence to the contrary, indicating that cats are as susceptible as other animals to the bite of this particular snake. Secondly, it is, we believe, conceded that several venoms that are fatal when introduced through a wound may be taken into the stomach with impunity, always provided that there is no abrasion of the mucous membrane over which they pass. And finally, and most important, it is probable that after the sac has been emptied by the act of biting and ejection of the venom, it is in any case almost harmless until a sufficient time has elapsed to allow of the secretion of a fresh supply of venom; and the snake in question was killed at the time of biting.

For all that, we are of opinion that the folklore of all times and places almost universally enshrines some kernel of truth, overlaid though it may be with a mass of error, or applied with inconsequent logic, and at least it would not be any waste of time for investigators to collect and examine the folklore of native tribes concerning snakebites. While the native theories might fall to the ground, sidelights might be forthcoming which would lead research in the direction of valuable truths.

AN ORGANIZED PROFESSION.

I.

The most superficial observer of current events involving the interests of the medical profession is perforce compelled to acknowledge that there has been a progressive and marked backsliding in respect to professional *esprit de corps.* That the practice of medicine has arrived at a stage in its evolutionary adaptation to its environment when it may fairly be classed in action, if not in theory, as a business rather than what was once understood as a profession, will, I think, be admitted by every impartial observer. I well remember the time when the term business applied to the practice of the physician was a stench in the nostrils of the man imbued with higher ideals of what the profession should be, or, rather, of what it was then universally believed to be. Only the individual of freakishly supersensitive psychic organization is likely to be disturbed by the term nowadays. Even the appellation "customer" applied to one's patients in these modern times does not jar upon one's nerves as it once did. The *soubriquet* of "doc" can hardly be resented at the present time by anyone who knows thoroughly his professional environment. Even the consciousness that the term "doc" bears the same relation to doctor that "gent" does to gentleman does not prevent one submitting to the appellation without the administration of an anæsthetic. Prevalent customs on the part of medical men have so minimized the shock incidental to a lowering of professional standards that there is little room for refinement of professional sensibility.

Time was when the ideals of our profession were so high, and the public so appreciative of the doctor and his work, that nothing more than a common interest in humanity's weal, and professional *esprit de corps,* was necessary to stamp the medical profession as a great brotherhood. Ideals were high, ethics was more than a name, and, whatever individual differences existed, however many black sheep appeared here and there in the flock, the high-toned medical man was wont to recognize his confrère as a gentleman and a brother. But times have changed. The good old family doctor is rapidly passing into the valley of shadows. The path that he is treading is, as the Indians say, "the one way trail." One by one the old men of the old régime are disappearing forever from the stage. And they go not without honor. Their work, their personality, their influence for good remain as sacred traditions. But traditions alone they soon will be. We who would fain profit by their example, who, walking in the paths their feet have trod, would fain be better and more useful men, are confronted with conditions which make the attainment of the old ideals impossible. This is an ultrapractical, a strictly commercial age. Sentiment is no longer fashionable. Rosy ideals are no longer compatible with success in the battle of life. He who would succeed must push sentimentalism to the rear. The higher emotions, things artistic, all that is beautiful in life, he may cultivate, it is true, but he must build him a shrine in the innermost recesses of his own heart and worship there in secrecy—alas, too often in utter solitude.

All of those things which ennobled the past generation of physicians must be made subservient to that curse of modern times—practicality. Idealize as he may, man must adapt himself to his environment, else his life's end might o'ertake him with his work still undone.

The man who stops by the wayside to gather the flowers of sentiment is likely to be crushed by the wheels of the car of progress. What a monster the car of medical progress is, to be sure! Loaded down with one's own ambition, with the ambitions of others, with competition—not always fair or friendly—with the Old Man of the Sea, the medical school in its multiplicity, with free hospitals and clinics, with quackeries manifold and various—for even they are put aboard the car by the public and by professional renegades—what wonder that he who lingers by the way is lost?

In the good old days the doctor was the best loved and most important man of his community. Wisest of philosophers, broadest of thinkers, best and truest of friends was he. He was the social and intellectual beacon of the social system in which he worked. He was a centre of influence from which all things radiated. And he was appreciated by his clientèle. They regarded him as the world of science did Darwin—as "a mighty intellectual ocean toward which all rivers ran." But, as I have said, this is a practical age. The layman changes his physician precisely as he would his cook, with this difference—he is compelled to settle with his cook. Changing doctors is with some people a far less serious matter than a change of shirts. The great unwashed cling fondly to the shirt, while giving short shrift to the doctor. And the doctor not only endures, but is so humble that he gratefully accepts the crumbs from the layman's table. He is content to enact the rôle of Lazarus at the feast. He thankfully takes the patients who have unceremoniously and viciously kicked the other doctor out. He sometimes even listens with mute admiration to the deadbeat and slanderer who regales him with the abuse and contumely heaped upon the previous medical attendant. Never was patient so mean, so poor, so vicious, so contemptible in his treatment of one physician that he could not get another to take his case.

Surprising as it is that the public should have so changed in its appreciation and treatment of the physician, it is more surprising that there has been an overzealous attempt on the part of the physician to acquiesce in, and even to further, this change, in far more instances than the superficial observer would suppose. Not content with the relatively slow process of evolutionary adaptation, some of the brethren have pushed the pendulum to the other extreme, and fairly tumbled over themselves in an effort to outstrip the lay iconoclast in the destruction of high professional ideas. The commission man has sprung up like a poisonous fungus. Let us hope that when the searchlight of general professional conscience is thrown upon him he may shrivel and die, even as fungi perish in the noonday sun.

G. FRANK LYDSTON.

DR. WEIR MITCHELL IN A NEW FIELD.

In the April number of the *Century Magazine* there is begun the publication of an article by Dr. S. Weir Mitchell entitled The Youth of Washington, Told in the Form of an Autobiography. We have all been charmed with Dr. Mitchell's fiction, and probably this article may be said to border on fiction, though abounding in historical facts. The author imitates Washington's style of writing, necessarily. Without inquiring too closely as to the success of the imitation—a most difficult task—we may say that in the main this first installment of the article has the Washingtonian quaintness, and certainly does not misrepresent the great man. Furthermore, it is intensely interesting. It is embellished with an excellent portrait of the author.

THE VOLUNTEER SURGEONS OF THE SPANISH WAR AND PENDING LEGISLATION.

We deprecated last week the enactment of a bill at present pending before Congress that seemed to involve discrimination, in the matter of promotion, against such medical officers of the army as were by previous legislation entitled to have counted in their favor the period of their service as volunteer surgeons before their appointment on the regular corps. We are glad to be able to say now that the loss sustained by the few ex-volunteers affected by the proposed law will be but temporary and very trivial, and that the provision inflicting it was the only alternative to "jumping" the said ex-volunteers over 143 other medical officers. We learn, further, that the provision is quite acceptable to the great majority of the former volunteer officers.

THE FERTILITY OF QUACKERY.

The latest addition to quack theories is that of the German charlatan, Schroeter, who was recently sentenced to two years' imprisonment. This astute person claimed the power of diagnosis by an examination of the eyes for the "spectrum lines" of various diseases which appeared there. He also asserted his ability to see the "death mark" in the eye some time before any external indications gave warning of the approaching dissolution. Is this the highest development of the "refracting optician's" art?

THE NECESSITY OF SPEEDY RATIFICATION OF THE RESOLUTIONS TO CONSUMMATE HARMONY IN THE STATE OF NEW YORK.

The president and secretary of the Medical Society of the State of New York have very properly issued an appeal to the delinquent county societies calling on them to hold special meetings in April for the purpose of taking action upon the ratification resolutions sent to them in February, in order that the necessary legal steps for consummating unification may be taken before the Supreme Court in May. It appears that fewer than half the county societies have thus far acted in the matter.

Obituary.

JOHN METCALFE POLK, M. D.,

OF NEW YORK.

Dr. John Metcalfe Polk died of pneumonia at the home of his parents, 7 East Thirty-sixth Street, on Tuesday, March 29th, at 1.30 a. m. He was the son of Dr. William M. Polk, dean of the Cornell University Medical College, in New York City, and grandson of Bishop Leonidas Polk, of Tennessee, Lieutenant-General in the Confederate Army. He was born May 6, 1875, and graduated from the Sheffield Scientific School of Yale University with the degree of Ph. B. in 1896. He was one of the prominent men in his class and a member of the Delta Psi Fraternity. In the following year he began the study of medicine and graduated from the Cornell University Medical College in 1899, second in his class. From January, 1900, until January, 1902, he served as interne on the second medical division of Bellevue Hospital and during the following year took a postgraduate course abroad, chiefly in Vienna. On returning to this city in December, 1902, he was immediately appointed one of the instructors in the medical college from which he received his M. D. degree, and at the time of his death was instructor in medicine and in physical diagnosis. Last fall his industry, his thorough training, and his remarkable clinical abilities won him the position of adjunct assistant physician in Bellevue Hospital. Dr. Polk was a man of attractive personality, unusual force of character, and of great promise. During the past winter he had been conducting experimental work upon the hæmolytic action of the blood in infectious disease which his colaborers in the laboratory considered of remarkable value. This had practically been completed when he was taken ill, and it is earnestly hoped that the results interrupted by his death may be collected and published. The loss of so fine a man will be greatly felt by the profession at large, and particularly by the faculty and students of the medical college, and the large circle of those who know and so highly esteem his father will feel the keenest sympathy with his parents in their great sorrow.

News Items.

Society Meetings for the Coming Week:

MONDAY, *April 4th.*—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association (annual meeting); Providence, R. I., Medical Association; Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society (annual meeting).

TUESDAY, *April 5th.*—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, *April 6th.*—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; New York Genitourinary Society; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, *April 7th.*—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, *April 8th.*—New York Academy of Medicine (Section in Neurology); Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, *April 9th.*—Obstetrical Society of Boston (private).

Change of Address.—Dr. H. B. Epstein, to 465 High Street, Newark, N. J.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending March 26, 1904:

	Week end'g Mar. 26.		Week end'g Mar. 19.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	1,554	29	1,454	35
Diphtheria and croup	359	44	406	46
Scarlet fever	494	25	491	28
Smallpox	1	..	..	1
Chickenpox	87	..	102	..
Tuberculosis	454	199	457	209
Typhoid fever	21	9	29	9
Cerebrospinal meningitis	..	13	..	16
Totals	1,970	319	2,939	338

New York Eye and Ear Infirmary.—Assemblyman McManus introduced a bill on March 28th providing for the appropriation of $20,000 per annum for the use of this institution.

New York Fire Department.—Dr. Linnaeus J. Hunter, for the Boroughs of Manhattan and the Bronx, and Dr. James A. Kennedy, for the Boroughs of Brooklyn and Queens, have been appointed medical officers in the fire department at salaries of $2,000 per annum.

Watertown, N. Y., Epidemic.—On March 23rd Governor Odell signed the bill of Assemblyman E. R. Brown authorizing the city of Watertown to expend $25,000 to devise means of preventing further typhoid fever epidemics.

The Contention of the Loomis Laboratory that the New York University is not entitled to the lands or properties of the former has been upheld by the Court of Appeals. The properties are now valued at about $200,000.

Ambulance Surgeon Returns as Patient.—Dr. W. B. Westcott, of the J. Hood Wright Memorial Hospital, was severely injured while bringing a typhoid fever patient to the hospital on March 21st. As the ambulance was hurrying over the slippery car tracks on Amsterdam Avenue, it was struck by one of the cars, the driver of which had lost control of the motor. The doctor fell on his face, and catching hold of the step of the car, was dragged about thirty feet. He was carried to the hospital by the side of his patient.

New York Academy of Medicine.—The next meeting of the Pædiatric Section will be a meeting before the whole academy on April 7, 1904, at 8.15 p. m. Programme: Modes of Infection in Tuberculosis, by Philip S. Sabine, M. D.; Infantile Tuberculosis, Its Port of Entry, Topography, and Clinical Manifestations, by Rowland Godfrey Freeman, M. D.; The Influence of Bovine Tuberculosis on Human Health, by Mazyck P. Ravenel, M. D., of Philadelphia; The Prevention of Tuberculosis in Children, by Herman M. Biggs, M. D.; Discussion of the papers by Dr. Darlington, Commissioner of Health; Dr. Northrup, Dr. Holt, Dr. Dowd, Dr. Hamill, of Philadelphia, and others.

Death of Dr. Edward Fridenberg.—At the March meeting of the New York Otological Society, the undersigned having been appointed to draft resolutions on the death of Dr. Edward Fridenberg, reported as follows:

Whereas, The death of Dr. Edward Fridenberg has removed one of its original and most earnest members, whose ability and energy had won for him an eminent and honorable position among the members of the medical profession, whose broad education had earned the esteem of his colleagues, and whose kindness and devotion to duty had endeared him to many friends and patients; therefore, be it

Resolved, That the New York Otological Society place upon its minutes this expression of its loss, that it extends its sympathy to his family in their great sorrow, and that a copy of these resolutions be sent to them and be published in the medical press of the city.

(Signed) CHARLES H. MAY, M. D.,
JOHN L. ADAMS, M. D.

Resignation of Professor George M. Lefferts.—Professor Lefferts, who recently announced to the faculty of the College of Physicians and Surgeons his intention of shortly resigning his post as professor of laryngology, delivered his farewell lecture on Monday, March 28th. To all intents and purposes, it developed into a valedictory address, for the occasion became one in which presentations and speeches assumed the greater share of importance. His clinical assistants and the fourth year class seized upon this opportunity to make the presentation to him of silver loving cups. The first presentation was the handsome cup of the class of 1904, which was presented by the class president, Mr. G. H. Lathrope. The incoming professor of laryngology, Dr. William K. Simpson, then presented an artistic cup from the staff of clinical assistants. Professor Lefferts, in replying, remarked on the difference between himself and Sir Thomas Lipton, the latter of whom had failed on several occasions to lift one cup, while he had lifted two cups in one day. He gave a brief history of the clinic from its foundation in 1875 to date, regarding it from the educational point of view. He stated that he had conveyed to the trustees of Columbia for the free use of future medical students the valuable museum of teaching apparatus. He concluded with a few words of farewell, first to his assistants and then to the students.

The Current Issue of Charities states that nearly a million and a half dollars is now being spent, or is about to be spent, in some nine different States for new buildings for the insane. This is exclusive of New York State, where between $600,000 and $900,000 is annually expended for this purpose. It would seem pertinent to inquire whether there might not be an increase in efficiency and decrease in cost if the experience of the different States were in some way made available to one another. We have practically the same classes of patients to be provided for in all cases, and there is little reason why buildings which have been found suitable in Massachusetts should not be suitable in Oregon. The building operations now under way, or already planned, include entirely new institutions at Norwich, Conn.; Allentown, Pa., and Parsons, Kan., and additions to existing buildings at Morristown and Harrisburg, Pa.; Spring Grove and Sykesburg, Md.; Dunning and Watertown, Ill.; Lyons View, Tenn.; Hopkinsville, Ky.; San José, Cal.; Eloise, Mich.; Las Vegas, New Mexico; Norfolk, Neb., and Pineville, La. The buildings include administration buildings, nurses' homes, cottages for convalescents and buildings for almost all other classes of patients. These buildings are probably designed in most cases by architects who have little familiarity with the requirements of the insane or with expert opinion on the subject of their accommodation. It is not customary for architects to specialize on institution construction, and the appointment of an official State architect has probably never been considered in most cases. Problems which have been solved only after many failures in some of the older States are, perhaps, worked out afresh without adequate data. In 1891 William P. Letchworth, a member of the New York State Board of Charities, wrote a valuable paper on Poorhouse Construction, which was transmitted by the State Board of Charities to the Legislature and was afterwards reprinted and circulated for the information of the public. How helpful it would be if some expert in hospital construction would prepare a treatise on the construction of institutions for the insane, illustrated with plans and elevations and equipped with references to localities where successful exponents of sound theories of construction could be seen and studied!

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g Mar. 19.		Week end'g Mar. 26.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	30	7	35	8
Diphtheria	67	11	88	12
Scarlet fever	101	4	116	5
Typhoid fever	141	21	148	17
Consumption	..	79	..	60
Cerebrospinal fever	..	..	..	..

Dr. John V. Shoemaker will go to Hartford, Conn., on April 7th, to deliver an address to the physicians of that city on The Abuse of Drugs. The lecture will be delivered under the auspices of the Walnut Lodge Hospital, which is superintended by Dr. T. D. Crothers.

Tuberculosis Attacked in Chester.—The Board of Health of Chester is contemplating a campaign against tuberculosis in that city. The local physicians have been asked to cooperate in this movement by reporting all cases of tuberculosis, in order that fumigation may be satisfactorily carried out.

Pennsylvania Hospital Training School for Nurses.—The following young women received on March 24th diplomas as trained nurses: Amy E. S. Lattuck, Emily Willits Carter, Maude MacDougall, Margaret Gordon, Augusta Fair Graham, Waleska Sadler, Mabel Clark, Sophia Buchanan Duckett, Mary Eleanor McCandless, Elizabeth Gilpin, Amelia Agnew, Bertha Lee Redman, Margaret Lehman, Carolyn Edith Emerton, and Mary Elizabeth Voris.

Lecture on Artistic Anatomy.—Dr. George McClellan, Demonstrator of Anatomy at the Pennsylvania Academy of Fine Arts, delivered a lecture last week, entitled The Relation of Anatomy to Art. During the course of the lecture, which was illustrated by lantern slides, Dr. McClellan laid stress upon the study of anatomy for the intelligent conception of the relation of art to the structure of the human body. He is of the opinion that the Herculean type indicates an unnatural exaggeration and emphasis of the muscles, rather than grace, symmetry, and harmony.

Unfortunate Incidents in Smallpox Epidemics.—The smallpox epidemic in Philadelphia, which has been receding for several weeks, has been the cause of some unfortunate errors in diagnosis, as well as in the handling of the cases by attending physicians. Last week a man died from smallpox, which, it is said, was reported as Bright's disease. In this instance it became necessary to search for many people who attended the funeral, in order that they might be vaccinated. Unfortunately, many errors are made in mistaking subcutaneous hæmorrhages occurring in the hæmorrhagic variety of smallpox for other diseases. On one occasion a man infected with smallpox walked directly into the office of the board of health.

A Few Interesting Statistics.—In the issue of this *Journal* for March 26th attention was called to the unusually large number of cases of measles that were prevalent in Philadelphia. The following statement in a lecture delivered by Dr. Jay E. Schamberg last week carries with it a decided ring of truth: "It is one of the greatest of mistakes to believe that the contagious diseases generally regarded as trivial are not attended with danger." In addition to this the fact should not be forgotten that the contagious diseases usually accepted as ordinarily mild may have severe complications, and that a severe infection may be contracted from an apparently mild one. These are some reasons why public records of all such diseases might be of benefit.

The Study of Tuberculosis in the United States.—For the purpose of discussing the question relating to organizations for the study of tuberculosis in this country, the following met at the College of Physicians, Philadelphia, on the afternoon of March 28th:

Dr. Howard S. Anders, of Philadelphia; Dr. J. M. Anders, of Philadelphia; Dr. William M. Angney, of Philadelphia; Dr. Henry G. Beyer, of the U. S. Navy; Dr. Herman M. Biggs, of New York; Dr. John J. Black, of New Castle, Del.; Dr. Oliver A. Blumenthal, of Syracuse, N. Y.; Dr. Vincent Y. Bowditch, of Boston; Dr. M. J. Brooks, of New Canaan, Conn.; Dr. Herbert C. Clapp, of Boston; Dr. J. Solis Cohen, of Philadelphia; Dr. Solomon Solis Cohen, of Philadelphia; Dr. W. M. L. Coplin, of Philadelphia; Dr. Frank A. Craig, of Philadelphia; Dr. Alexander H. Davisson, of Philadelphia; Dr. B. H. Detweiler, of Williamsport, Pa.; Dr. A. H. Doty, of New York; Dr. J. W. Ellenger, of Harrisburg; Dr. W. B. Fetterman, Jr., of Philadelphia; Dr. Lawrence F. Flick, of Philadelphia; Dr. F. Forchheimer, of Cincinnati; Dr. Albert C. Getchell, of Worcester, Mass.; Dr. William B. Hackenburg, of Philadelphia; Dr. H. A. Hare, of Philadelphia; Dr. Charles J. Hatfield, of Philadelphia; Dr. Henry D. Holton, of Brattleboro, Vt.; Dr. A. Jacobi, of New York; Dr. Henry Barton Jacobs, of Baltimore; Dr. Edward G. Janeway, of New York; Dr. Herbert M. King, of Liberty, N. Y.; Dr. S. A. Knopf, of New York; Dr. Alexander Lambert, of New York; Dr. H. R. M. Landis, of Philadelphia; Dr Charles M. Lewis, of Philadelphia; Dr. Daniel Lewis, of New York; Dr. D. J. McCarthy, of Philadelphia; Dr. James Alexander Miller, of New York; Dr. Charles H. Miner, of Wilkes-Barre, Pa.; Dr. Charles L. Minor, of Asheville, N. C.; Dr. J. H. Musser, of Philadelphia; Dr. Estes Nichols, of Augusta, Maine; Dr. George W. Norris, of Philadelphia; Dr. William Osler, of Baltimore; Dr. Jay Perkins, of Providence; Dr. W. H. Peters, of Providence; Dr. C. O. Probst, of Columbus, Ohio; Dr. John H. Pryor, of Ray Brook, N. Y.; Dr. Mazyck P. Ravenel, of Philadelphia; Dr. DeLancey Rochester, of Buffalo; Dr. Milton J. Rosenau, of Washington; Dr. J. T. Rothrock, of Montalta, Pa.; Dr. W. B. Stanton, of Philadelphia; Dr. George M. Sternberg, of Washington; Dr. Elwell Stockdale, of White Haven, Pa.; Dr. Arthur K. Stone, of Boston; Dr. J. Edward Stubbert, of New York; Dr. J. M. Taylor, of Boise, Idaho; Dr. James Tyson, of Philadelphia; Dr. T. Mellor Tyson, of Philadelphia; Dr. Josephus T. Ullen, of Germantown, Pa.; Dr. Agnes C. Vietor, of Boston; Dr. Joseph Walsh, of Philadelphia; Dr. Samuel B. Ward, of Albany; Dr. William H. Welch, of Baltimore; Dr. J. M. Wilcox, of Philadelphia; Dr. Francis H. Williams, of Boston; Dr. J. C. Wilson, of Philadelphia.

Professor William Osler, of Baltimore, presided, and Dr. Henry Barton Jacobs acted as secretary.

After a full discussion, participated in by Dr. Daniel Lewis, Dr. Minor, Dr. Flick, Dr. Knopf, Dr. Solomon Solis Cohen, Dr. James Tyson, Dr. Stubbert, Dr. Pryor, Dr. Holton, Dr. Biggs, Dr. Rothrock, Dr. Jacobi, Dr. Janeway, Dr. Hare, Dr. Sternberg, Dr. Welch, Dr. Forchheimer, Dr. Ravenel, Dr. Rochester, and Dr. Ward, Dr. Lawrence F. Flick, of Philadelphia, offered the following resolution, which was seconded by Dr. Forchheimer, and carried unanimously: Resolved, That we here assembled do now organize ourselves into a United States society for the study of tuberculosis. It was then moved by Dr. George M. Sternberg, of Washington, and seconded by Dr. Hare, of Philadelphia, That the chair appoint a committee of five to prepare a constiution and by-laws for such a society. This motion was carried unanimously. The chair appointed Dr. Edward L. Trudeau, Dr. Herman M. Biggs, Dr. Lawrence F. Flick, Dr. William H. Welch, and Dr. George M. Sternberg as that committee.

It was further moved by Dr. Sternberg, and carried unanimously, That the chairman and secrectary of this meeting be ex-officio chairman and secretary of the committee. Dr. Ravenel then moved, and it was unanimously carried, That it is the sense of this meeting that the committee call us together for organization at Atlantic City during the week of the meeting of the American Medical Association.

The meeting then adjourned.

Previous to the meeting an abstract of Professor Maragliano's lecture was read.

The anniversary dinner of the Henry Phipps Institute was given by the staff at the University Club on the evening of the 28th. The delegates to the convention, which was called to consider the question of forming a national organization for the study of tuberculosis, were all invited as guests of the occasion. Sixty-two persons were present, among whom were many of the most eminent physicians of the United States.

The feature of the evening was the presentation of a silver pitcher to Dr. Lawrence F. Flick, the director of the Henry Phipps Institute, by the members of the staff, as a token of their esteem. Mr. Henry Phipps, the founder of the institute, was present, and made the presentation in the name of the staff.

Among those who spoke after dinner were: Dr. Abraham Jacobi, of New York; Dr. William H. Welch, of Johns Hopkins University; Dr. Vincent Y. Bowditch, of Boston; Dr. John H. Prior; Dr. Charles L. Minor, of Asheville, N. C.; Dr. George M. Sternberg, former surgeon general of the army; Dr. John B. Huber, of New York; Dr. Leonard Pearson, State veterinarian of Pennsylvania; Dr. S. A. Knopf, of New York; Dr. Ward, of Albany, N. Y.; Dr. Henry B. Holton, of Brattleboro, Vt.; Dr. John Musser, Dr. James Tyson, of the University of Pennsylvania, and Dr. J. C. Wilson, of Jefferson Medical College.

Dr. L. F. Flick acted as toastmaster and chairman, and Dr. M. P. Ravenel spoke for the staff of the Henry Phipps Institute. Mazyck P. Ravenel, Assistant Medical Director.

GENERAL

A Severe Epidemic of Measles prevails in Morgan county, Ky. Up to the present time over forty deaths have occurred.

The American Neurological Association has fixed the time of its meeting at St. Louis for September 15th, 16th, and 17th; and this will be immediately followed by the sessions of the various medical departments of the Congress of Arts and Sciences, beginning September 19th.

Dr. Roswell Park, of Buffalo, has sailed for Germany, where he will attend the annual congress of the German Surgical Society in Berlin, April 4th to 9th.

Sisters' Hospital, Buffalo, N. Y.—Dr. David E. Wheeler has been appointed visiting physician to this institution to succeed the late Dr. Byron H. Daggett.

Statement of Mortality in Chicago, Ill., for the Week Ending March 26, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on estimated mid-year populations of 1,950,000 for 1904 and 1,820,000 for 1903:

	Mch. 26, 1904.	Mch. 19, 1904.	Mch. 28, 1903.
Total deaths, all causes	626	578	564
Death rate per annum, per 1,000	16.32	15.44	15.58
Important causes of death—			
Acute intestinal diseases	31	14	19
Apoplexy	17	24	10
Bright's disease	42	24	33
Bronchitis	18	22	22
Consumption	76	74	60
Cancer	25	22	15
Convulsions	10	19	12
Diphtheria	9	10	14
Heart diseases	50	32	54
Influenza	4	2	10
Measles	1	0	3
Nervous diseases	22	28	27
Pneumonia	156	137	121
Typhoid fever	8	7	9
Scarlet fever	1	5	9
Suicide	11	7	8
Violence—other than suicide	25	26	20
Whooping cough	0	2	11

Statistics of consumption and pneumonia mortality in New York and Chicago for the week show the proportion of consumption deaths in the former city to be stationary and the pneumonia proportion markedly decreasing, while both causes of death are increasing in Chicago.

The total 1,803 deaths from all causes reported up to 12 m. of Saturday, March 26th, in New York includes 200 from consumption and 251 from pneumonia—proportions per cent. of all deaths 11.1 and 13.9, respectively, as compared with previous averages of 11.1 and 21.4. For Chicago the 76 consumption deaths form 14.4 per cent. and the 156 pneumonia deaths form 24.9 per cent. of the total 626 deaths from all causes, as compared with previous averages of 9.9 and 21.6, respectively.

Following are the figures for the two cities for the current pneumonia season, November 1, 1903-March 26, 1904:

	New York.	Chicago.
Total deaths, all causes	31,484	11,832
Deaths from consumption	3,514	1,200
Deaths from pneumonia	6,589	2,606
Proportion per cent. of all deaths—		
From consumption	11.1	10.1
From pneumonia	20.9	22.0

American Academy of Medicine.—The twenty-ninth annual meeting of the American Academy of Medicine will be held at the Shelburne, Atlantic City, beginning on Saturday, June 4th, at 11 a. m., and continuing through Monday, the 6th. The programme includes: The report of the council on the recommendation of a paper read at the last meeting by Dr. H. Bert Ellis, of California, on The Necessity for a National Bureau of Medicine and Foods.

The report of the committee to investigate the teaching of hygiene in our public schools.

In order that this report may be discussed intelligently, the committee will publish the laws relating to the teaching of hygiene now in force in the United States, in the *Bulletin of the American Academy of Medicine*, to be published in April, 1904. It is believed this is the most complete and accurate compilation of these laws published, and the only compilation issued in an easily accessible and low priced publication. (Any number of the *Bulletin* will be sent to any address upon receipt of 50 cents).

The reports on the results of the examinations before the various State Boards of Medical Examiners of 1903; a symposium on the Relation of Physicians to Dentists and Pharmacists (several papers of value are promised for this symposium and the subsequent general discussion will be helpful); a symposium on Are Modern School Methods in Keeping with Physiological Knowledge? There will be several papers upon independent topics, affording a variety to the programme.

Dr. John B. Roberts, of Philadelphia, has selected The Doctor's Duty to the State as the title of his address as president. This address will be delivered on Saturday evening and the social session will be held on Monday evening. The usual charge of two dollars a person will be asked of those who attend this function. Ladies as well as gentlemen are welcomed.

Membership in the academy is open to the reputable physicians who are graduates of a recognized college or science school. Application blanks will be sent upon application.

The transactions of the meeting will appear in the Bulletin of the American Academy of Medicine, a bimonthly journal published by the academy at an annual subscription of three dollars, which may be sent to the secretary. Charles McIntire, M. D., secretary, Easton, Pa.

Seventh Annual Meeting of the American Gastroenterological Association to be held at Haddon Hall, Atlantic City, N. J., June 6 and 7, 1904.—Preliminary programme: Monday, June 6th, morning session: Symposium on Gastric Ulcer: Introduction, by Dr. J. C. Hemmeter, of Baltimore, Md.; Bibliography, by Dr. Charles D. Aaron, of Detroit, Mich.; Pathological Anatomy, by Dr. Harlow Brooks, of New York; Pathogenesis, by Dr. W. G. McCallum, of Baltimore, Md.; Incidence of Gastric Ulcer in the United States, by Dr. Campbell Howard, of Baltimore, Md.; Gastric Ulcer in Children, by Dr. E. G. Cutler, of Boston, Mass. Discussion.

Afternoon session. Continuation of Discussion: Symptomatology and Course, by Dr. Max Einhorn, of New York; Atypical Forms, by Dr. G. W. McCaskey, of Fort Wayne, Ind.; Complications and Sequelæ, by Dr. M. Manges, of New York; Conditions of Blood and Urine, by Dr. T. Futcher, of Baltimore, Md.; Differential Diagnosis, by Dr. H. W. Bettman, of Cincinnati, Ohio; Further Remarks on the Use of Orthoform in the Diagnosis of Gastric Ulcer, by Dr. F. H. Murdoch, of Pittsburgh, Pa. Discussion.

Tuesday, June 7th, morning session. Continuation of Symposium: Medical Treatment, by Dr. S. W. Lambert, of New York; Surgical Treatment, by Dr. Joseph A. Blake, of New York; Classification of Gastric Ulceration and Hæmorrhage. Report of Case of Perforating Angeiosclerotic Gastric Ulcer, by Dr. A. L. Benedict, of Buffalo, N. Y. Discussion.

Paper: Concerning Heterochylia, by Dr. J. C. Hemmeter, of Baltimore, Md. Discussion limited to five minutes. It is requested that those wishing their names placed on the programme for discussion notify the secretary. The annual dinner will take place on the evening of June 6th, at 7.30.

Medical Members of the Canal Commission.—Colonel William C. Gorgas and Major Louis A. LaGarde, of the Army Medical Department, have been selected to go with the Panama Canal Commission to the isthmus for the purpose of making recommendations for the sanitation of the canal zone. Each of these officers has been in Washington recently in consultation with the members of the canal commission. They will not take with them, at the present time, any other members of the medical department, but at a later date, after their plans have been perfected, a detachment of hospital corps men may go to Panama, and also several other officers of the medical department.

Civil Service Examinations for the New York State and County Service.—The State Civil Service Commission announces general examinations to be held April 19, 1904, including the following positions: Apothecary in State hospitals and institutions, assistant in entomology in the State museum, health officer for the town of Coventry, physicians in State hospitals and institutions of both regular and homœopathic schools.

Applications for these examinations must be made on or before April 14th. Full particulars of the examinations and blank applications may be obtained by addressing the Chief Examiner of the Commission, at Albany.

Tenth International Congress of Ophthalmology, to be held in Lucerne, Switzerland, September 13, 14, 15, 16, and 17, 1904.—In compliance with the request of numerous foreign colleagues, the date of the congress has been advanced a few days. The official reception of members will now take place in the evening of September 13th; the mornings and afternoons of the 14th, 15th, and 16th will be devoted to scientific work, and on the 17th an excursion will bring the congress to a close. Our readers already know that only those papers will be discussed which have been printed and sent beforehand to all the members of the congress. Manuscripts must be mailed before the 1st of May (latest date) to Professor Mellinger, Bâle.

The first part of the proceedings of the congress containing these works will be sent to the members at the same time as their tickets in receipt for the subscription (25 francs, or $5.00).

Any object of interest to oculists, either practical or even historical (instruments, books, illustrations, appliances, etc.), will be gladly received, and should be announced before July 1st to Professor Siegrist, Berne.

Those colleagues wishing to secure accommodation at Lucerne beforehand are advised to apply before the first of September to Dr. F. Stocker, president of the local committee at Lucerne. He will engage for them a room at one of the best hotels (early breakfast included), at 5 francs a day each person.

The town of Lucerne is treating the congress most liberally, throwing open all objects of interest and arranging fêtes of all descriptions.

Pith of Current Literature.

VIRCHOW'S ARCHIV.

Volume 175, 2.

1. Alcoholism and Degeneration, By G. von Bunge.
2. Origin of Plasma Cells, By Leo Ehrlich.
3. On Scar Tissue, By R. Minervini.
4. The Salivary Glands After Removal of Their Ducts, By O. Langemak.
5. Hidradenoma and Adenoma Hidradenoides, By L. Pick.
6. Pachymeningitis Carcinomatosa Hæmorrhagica Interna Productiva with Colibacillosis Agonalis, By M. Westenhoeffer.

1. **Alcoholism and Degeneration.**—Bunge, in an exhaustive statistical table based upon inquiries in various European countries, seeks to show that chronic alcoholism in the father is responsible for the inability of their daughters to nurse their children. Chronic alcoholism, too, he says, acts upon offspring in giving them diminished resistance against tuberculosis and nervous diseases.

2. **Plasma Cells.**—Ehrlich concludes that the plasma cells described by Unna have but one source of origin thus far discovered—that is, they arise from hypertrophic connective tissue cells by means of peculiar transition cells. He describes a method of staining the plasma cells.

3. **Scar Tissue.**—Minervini has examined numerous fresh and old scars, and some which he evoked experimentally. He concludes that the abdominal scars of pregnancy are not to be regarded as atrophy of the skin, but as genuine scars, representing residua of lacerations of the corium more or less widely stretched.

4. **The Salivary Glands.**—Zangemak reports two cases of occlusion of the salivary ducts of the submaxillary gland by calculi. He experimented upon dogs by ligating the excretory gland, and found a dilatation of the duct and a hyperplasia of the entire glandular structure caused by the gradual venous hyperæmia. Eventually the parenchyma of the gland is destroyed.

5. **Hidradenoma.**—Pick adds two new cases to those recorded in the literature of adenoma of the sweat glands. His cases were represented by small growths of the labia majora. He is inclined to regard hidradenomata as neoplasms originating in maldeveloped embryonal sweat glands.

6. **Pachymeningitis Carcinomatosa.** — Westenhoeffer reports the case of a woman, twenty-nine years of age, upon whom the clinical diagnosis had been made of retroperitoneal tumor, paralysis of the abducens and serous cerebrospinal meningitis. The autopsy and the succeeding microscopical examination threw light upon the case. There was a diffuse infiltrating cancer of the stomach with metastases in the retroperitoneal glands, the liver and the pancreas, as well as in the meninges. The colon bacillus was found in the brain and in the other organs, the distribution of the germ being probably preagonal.

BERLINER KLINISCHE WOCHENSCHRIFT

February 29, 1904.

1. Action of the Galvanic Current Upon Tetanus Toxines and Antitoxines and a Toxine-Antitoxine Mixture, By P. H. Roemer.
2. Bactericidal Reaction in the Blood Serum of Typhoid Patients, By R. Stern, and W. Korte.
3. Combination of Toxine and Antitoxine, By T. Arrhenius.
4. Comments on the Preceding, By P. Ehrlich.
5. Megalerythema Epidemic, By Plachte.
6. Osmotic Pressure of Exudates and Transudates, By C. v. Rzentkowski.

1. **Galvanic Current and Tetanus Toxines.**—Roemer has carried out a series of experiments with the galvanic current upon tetanus toxines, antitoxines, and a mixture of the two. His paper does not lend itself to a short abstract, but his most important conclusion is that the galvanic current influences solutions of tetanus toxines in a most decided manner. Weak currents increase the minimal fatal dose per gramme, in the neighborhood of the anode and cathode, having the same effect upon the general fluid, so that it seems possible to convert a less active toxine, by the help of galvanism, into one of a desired strength. Stronger currents (under two ampères) diminish the minimal fatal dose per gramme at the anode and in the fluid generally, while the strength remains stationary or is increased at the cathode. These experiments apply only to the mouse; as far as the guinea pig is concerned, no change was noticed. Another observation was that by the passage of a relatively weak current for a short time through tetanus antitoxine serum, a general diminution of the antitoxic power of the whole fluid was found. [These experiments were performed in connection with the ultramicroscopic methods of Sedentopf and Zsigmondy by which the colloidal solutions of proteins become visible. For those interested, the whole paper, with von Behring's conclusions added, is worthy of close study.]

5. **Megalerythema.**—Plachte describes a form of eruption consisting of very large erythematous blotches, sometimes very few in number, which run their course in a few days, without marked constitutional disturbance. The disease has also been known as localized rötheln, erythema infectiosum, erythema infectiosum febrile seu afebrile, erythema simplex marginatum. Megalerythema attacks the face by preference; it appears in epidemic form; it never appears in papular, vesicular, bullous, circinate, serpiginous, or zoster forms; there is little or no itching; there is rarely any elevation of temperature; it lasts from five to ten days only; it never, so far as is known, attacks the same person more than once; and the affected area always feels very hot. In all these respects it differs widely from erythema multiforme (Hebra). The prognosis is always good and the treatment is hygienic and symptomatic.

6. **Osmotic Pressure of Exudates and Transudates.** — Rzentkowski says that the freezing point—that is, the molecular concentration of exudates (in tuberculous pleurisy, tuberculous peritonitis, carcinoma of the peritonæum), is dependent upon the molecular concentration of the blood; while the molecular concentration of transudates in circulatory disturbances and renal inflammations is in general greater than that of exudates, and is entirely dependent upon the character of the primary disturbance of the chemical composition of the blood. The author has reached no definite conclusion as to the molecular concentration of ascitic fluid in cases of cirrhosis of the liver, as it appears that the composition of such fluids is dependent to a certain degree upon the food introduced into the intestines, such as salts, sugar, etc., so that an analysis of them is exceedingly difficult and leads to no definite conclusions.

ZENTRALBLATT FUER GYNAEKOLOGIE.

February 27, 1904.

1. Treatment of Fresh Lacerations of the Perinæum, By G. Vogel.
2. Treatment of Fresh Lacerations of the Perinæum, By J. Eversmann.
3. Is Œdema of the Vulva During Parturition a Safeguard for the Perinæum or Not? By R. von Budberg.
4. Yeast Treatment of Gonorrhœa in the Female, By O. Abraham.
5. Untoward Accident Following Lumbar Puncture, By P. Mathes.
6. Cure of Postoperative Vesicovaginal Fistula, By H. Bertram.

1 and 2. **Treatment of Fresh Lacerations of the Perinæum.**—Vogel and Eversmann both attack Hegar's statement that lacerations of the perinæum occurring during parturition should not be primarily repaired. Both give statistics from hospital practice and practice among the poor to prove that the primary repair can be safely and aseptically undertaken, and that the results are uniformly good. The practicability and safety of the operation are especially emphasized by both writers.

3. **Œdema of the Vulva as a Safeguard to the Perinæum.**—Budberg believes that the œdema of the vulva during parturition offers protection to the perineal body. He suggests that in instances where the perinæum seems likely to be torn, that an artificial œdema be provoked by pressing firmly against the vulva during a pain when the head is on the perinæum. This can be done by encircling the perinæum and vulva with the hand. It might be well to bring about œdema by injection or by Schleich's infusion method. The perinæum must be kept moist during the time it is œdematous, and care must be taken not to interfere with the arterial supply while evoking the venous congestion essential to causing œdema.

4. **Yeast Treatment of Gonorrhœa.**—Abraham has instituted a number of experiments to determine the bactericidal influence of yeast upon various bacteria. He found that the gonococcus was destroyed most quickly, while from five to seven times as long was required to kill off strep-

tococci and staphylococci. The conclusion must not be reached that yeast is a specific against the gonococcus, but that this germ is more quickly destroyed by the yeast, which has a deadly influence upon all forms of cocci. Nevertheless, the yeast treatment of gonorrhœa is clinically a specific, forming an unusual harmony between clinical and bacteriological experiments. Still, the entrance of the gonococci into the cells and the many folds in the mucous membrane make the bactericidal action of the yeast more difficult and prolong the period necessary to a cure.

PRESSE MEDICALE.

February 20, 1904.

1. Myelæmia: Its Symptomatic Value, By P. EMILE WEIL, and ANTONIN CLERC.
2. Hereditary Syphilitics, By AL. BOISSARD.
3. Therapeutic Action of Induced Leucocytoses, By F. RAMOND.

1. **Myelæmia.**—Weil and Clerc point out that the mother cells, characteristic of the embryo, disappear soon after birth and that their reappearance is a pathological sign. Myelæmia may be leucæmic or aleucæmic, the former being characteristic of myelogenous leucæmia, usually manifested in great splenomegaly and hæmatologically by a tremendous leucocytosis. If the causative disease is cured, the blood becomes normal again. A leucæmic myelæmia is found in the course of many chronic diseases with splenomegaly, and occasionally hepatomegaly, but without icterus or ascites. When occurring in infants, this form is due to rickets or syphilis. In adults, it may accompany essential or symptomatic anæmia, malignant tumors, diphtheria, pneumonia, malaria, articular rheumatism, smallpox, and, rarely, chickenpox. Examination of the blood is particularly valuable in splenomegaly which often seems to be malignant, but in which surgical interference would be absolutely contraindicated if it was accompanied by myelæmia.

2. **Hereditary Syphilitics.**—Boissard says if both parents are syphilitic the child will be severely affected; if only one parent is attacked, the child has a better chance with a syphilitic father. Maternal syphilis is so serious that a woman who has once given birth to a syphilitic child will never have a perfectly healthy baby even if the second father is perfectly sound, and personally she has long ceased to show any signs of syphilis. The signs may be very faint in the later children, amounting simply to a marasmus, but they betray their origin by yielding promptly to mercury, the use of which must be persisted in. Persistence of syphilis unto the second generation is incontestable.

3. **Artificial Leucocytosis.**—Ramond, admitting that the production of artificial leucocytosis seems to be admirable from the *a priori* viewpoint, denies that it has much clinical value at present and suggests that to be of real value, the leucocytosis must be specific. Ramond's experiments have shown him that after an artificial leucocytosis produced by nuclein, an injection of Eberth's bacilli remained unaffected until a natural leucocytosis was induced later on in the animal apparently by the presence of the bacilli and only the cells of the latter seemed to be phagocytic.

RIFORMA MEDICA.

February 10, 1904.

1. Lymphomatous Pleurisy (*To be continued*), By ANGELO SIGNORELLI.
2. The Existence in Nature of the Reinforced Virus of Rabies, By LUIGI D'AMATO.
3. Roux's Method of Gastroenterostomy, By NICCOLA GIANNETTASIO.

2. **Reinforced Virus of Rabies in Nature.**—D'Amato says that the reinforced form of the virus of rabies may exist in some cases in dogs affected with the disease. The virus of rabies may exist in two forms; namely, as the "fixed virus" and "the virus of the street." When the first is inoculated to a rabbit, the period of incubation is almost constant, while the "virus of the street" has a very variable period of incubation, but in a great majority of cases this period is much longer than that of fixed virus. According to Pasteur, virus of the street, which gives rabies to rabbits after from twelve to fifteen days, may be transformed into fixed virus (i. e., into virus which gives rabies in from seven to eight days) by being passed from 120 to 130 times from rabbit to rabbit. The transformation of one species of virus to the other has never been observed after two or three passages from one animal to the other, and yet this is what D'Amato found in the case reported. He concludes that a reinforced form of the virus exists in dogs which have not been treated in any way. It is difficult to explain how such a virus becomes reinforced in dogs wandering on the street. Possibly this reinforcement takes place in its passage through other animals which experimentally have been shown to reinforce the virulence or the poison, e. g., cats, foxes, and wolves. It is possible that the virus which, ordinarily, in passing from dog to dog, tends to become attenuated, becomes reinforced by passing through other animals.

ROUSSKY VRATCH.

January 24, 1904.

1. The Curative Power of Nature, By C. D. MIKHNOFF.
2. A Comparative Estimate of the Methods of Operative Treatment in Hypertrophy of the Prostate, and the Indications for the Same, By B. N. KHOLTSOFF.
3. The Toxine of the Bacillus of Chancroid, By Z. V. SOVINSKY.
4. On the Organization of Dispensaries for Alcoholics, By F. E. RYBAKOFF.
5. Popular Remedies Against Drunkenness in Russia, By V. F. DEMITCH.

2. **Prostatic Hypertrophy.**—Kholtsoff says that there is no single method of operative treatment for the hypertrophied prostate. In selecting the operation suitable for a given case, we must consider its danger, its immediate results, its effect upon the permanent relief of the trouble, and its technical difficulties. Castration is the most difficult and most dangerous operation of this class, and, inasmuch as it rarely leads to the normal restitution of the bladder functions, it should not be employed. Kholtsoff makes no exceptions in his condemnation of castration, even in those cases in which the testes are so diseased that they have lost their significance as sexual organs. The least dangerous operations are vasectomy and Bottini's prostatotomy, while prostatectomy, either abdominal or perineal, is a difficult and dangerous operation. An immediate favorable

result as regards bladder function is obtained most frequently with prostatectomy, and with Bottini's operation, and least often with vasectomy. Perineal prostatectomy is the most thoroughly radical operation, and is superior to the method of Bottini in that it removes both the median and lateral portions of the prostate. Suprapubic prostatectomy is not so radical, because it removes only the part of the prostate which projects into the bladder. Technically, the easiest operations are vasectomy and Bottini's. All the methods named have their advantages and the proper method must be selected in each case.

Vasectomy is indicated in the early stages of the disease, when catheterization is difficult, in the hope that vasectomy may arrest the process. If this does not prove efficient, either Bottini's operation or prostatectomy must be employed. In the advanced stages, perineal excision of the prostate is indicated. When there is a distinct pedunculated growth of the part of the prostate projecting into the bladder, the suprapubic method should be employed. In old men and in patients with greatly impaired general health, Bottini's operation should be preferred; but if the prostate has reached a large size, a good result cannot be expected from this procedure. Bottini's operation should be employed preferably in the indurated hypertrophies.

3. **Toxine of Soft Chancre.**—Sovinsky considers the diplobacillus of Ducrey the essential cause of soft chancre. A pure culture of this germ will produce chancroids in man and in animal. He found that the toxine of this germ obtained by the precipitation of the fluid culture produced both local and general effects. Injected into the peritoneal cavity it caused suppuration and was fatal to the animal within from twelve to fifteen hours. Small doses injected subcutaneously produced local suppuration. This toxine is found in the bodies of the bacillus, and not in the fluid portion of the culture, for the filtrate of this preparation contains but very little toxine, while the precipitate dissolved in distilled water produces the phenomena already described. The local and general suppurative foci produced by the injection of this toxine have a tendency to become absorbed, and the pus in these foci, when injected into the peritonæum, etc., in large amounts does not cause any pathological changes. Pus obtained from buboes in man do not give any local suppuration in animals. The occurrence of bubo accompanying soft chancre cannot be explained bv the absorption of toxines without the presence of the bacillus itself. The bacillus is carried to the glands and perishes there after giving rise to suppuration, and the reason why the bacillus is not found in buboes, is that it is destroyed early in the process.

4. **Dispensaries for Drunkards.**—Rybakoff advocates the establishment of municipal dispensaries for the prevention and treatment of alcoholism. In these establishments hypnotic suggestion should be employed as the principal method of treatment. The first establishment of this kind was founded by the author, in 1896, in connection with the Moscow Psychiatric Clinic, and since then several dispensaries of the same class have been opened in various parts of Russia. Rybakoff thinks that the entire country should be divided into districts, in each of which there should be one or more of these dispensaries.

The organization of these dispensaries should be undertaken by physicians in connection with national and local temperance societies. Such dispensaries should be also established as branches of municipal and rural hospitals. If a sufficient number of these dispensaries is opened, the question as to the establishment of special sanatoria for alcoholics will assume secondary importance. The author does not think that anything can be done with drugs in the treatment of chronic alcoholism, except symptomatically. The modern treatment of alcoholism reduces itself to one of two measures: Either the isolation of alcoholics in special sanatoria, or the systematic employment of hypnotism in ambulant cases.

5. **Popular Remedies for Drunkenness in Russia.**—Demitch reviews the various methods which the Russian people employ in dealing with drunkenness. A variety of empirical and superstitious remedies are employed, for the most part substances which are so disgusting that they excite nausea and vomiting. A number of plants distinguished by their bitter taste, strong odor, and sometimes poisonous properties, have been used by the people in "curing" drunkards. Most of them are of no value but do a great deal of harm. As regards the methods of bringing a drunken man to consciousness, which are still in vogue in the rural districts of Russia, they are evidences of inhumanity which characterizes a low state of civilization. The idea of these methods is that a drunkard must be brought to his senses, no matter at what cost, and thus be cured of his pernicious habit. In one place the peasants cover the scrotum and perinæum with tar, and the resulting headache, lasting for a day or two, is supposed to "sober him up." In another town, ammonia is given to inhale, or the juice of fresh horses' fæces is given to drink. In the Tchernigoff province there is a tradition that a drunkard must be brought to by pouring fresh human urine into his mouth. In the Krasnoslobodsk district the peasants use a mixture of hens' excrement and woman's urine, and in Kaluga, Orloff, etc., they give drunkards the juice of horse manure. In another place they wash the head with hot water, or rub the ears with snow until they are terribly deformed. Other inhuman methods are used also, such as whipping with leather straps, throwing into the air upon blankets, holding by the feet with the head down, tearing out the hair or beard, etc., the drunkard being passed from hand to hand with a view of "not allowing him to sleep." In one case a man was boiled to death by pouring a quantity of boiling water upon his naked body.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 26, 1904.

1. The Dietetics of Atonic Dilatation of the Stomach, Based on a Study of the Physiology of Gastric Movements, By Fenton B. Turck.
2. The Mathematics of Diabetic Diet, By Alfred C. Croftan.
3. The Relation of Nature's Provision for Heart Stimulation and Control to the Use of Cardiac Drugs in Acute Disease, By Louis Faugeres Bishop.
4. Obstruction and Consequent Distention the Cause of

Appendicitis, as Proved by Cases and by Experimental Appendicitis in Dogs,
By C. Van Zwalenburg.

1. **Atonic Dilatation of the Stomach.**—Turck concludes that physical and mechanical disturbances of digestion require that more attention be paid to the physical and mechanical effects of dietetics on the physiology of the gastric muscle. The author's practical deductions are that in atonic dilatation large and infrequent meals should be employed in place of the small and frequent meals usually recommended. The author's line of reasoning is rather complicated, and his argument does not lend itself to condensation. A half-dozen cases are briefly reported in order to illustrate the results that can be obtained by the methods he suggests.

2. **Diabetes.** — Croftan believes that the amount of sugar allowed to diabetic patients can be determined with mathematical accuracy. All, or nearly all, diabetics can assimilate a certain amount of sugar, and all diabetics require a certain amount of sugar. The problem of feeding diabetics, therefore, resolves itself into determining experimentally the boundary of sugar assimilation for each patient. This, according to the author, can be done if sufficient care is taken. Exact rules for determining each patient's point of toleration for sugar are given.

3. **Heart Stimulation.**—Bishop deprecates the indiscriminate use of drugs for heart stimulation. Stimulation in itself is not so desirable as many assume. The physician's rational aim should be to regulate, rather than to stimulate, the heart's action.

4. **Appendicitis.**—Zwalenburg has conducted a number of experiments upon dogs in order to determine the cause of appendicitis. The conclusions he has reached are: (1) Simple infection does not account for the suddenness of the attack or the early severity of the pathological changes in acute appendicitis. (2) The evident interference with the blood supply is best accounted for by an increased intraappendicular pressure. (3) Simply injecting bacteria into the appendix will not produce appendicitis unless used in abnormal amounts and virulence. (4) Subperitoneal ligation of the appendix with a simple ligature without distention cannot be made sufficiently permanent to produce a general infection of the appendix, typical of appendicitis in the human being. (5) Experiments in dogs show that hydraulic pressure equal to the arterial tension maintained within the lumen of the appendix for a short time is promptly followed by typical appendicitis. (6) The blood supply in an extremity may be cut off with impunity for hours; but in the appendix the ever present bacteria at once begin an infection, their entrance into the tissues being facilitated by the opening of normal and traumatic avenues by the very distention which cuts off the circulation. (7) The importance of making a complete diagnosis and prognosis during the first twelve hours of the attack is emphasized. (8) This study suggests the possibility of infectious or other lesions being produced in other hollow viscera, especially in the gallbladder, the stomach, and intestines, by temporary overdistention.

BOSTON MEDICAL AND SURGICAL JOURNAL.

March 10, 1904.

1. Blood Pressure Observations in Surgical Cases. Report of the Committee on Research for the Division of Surgery. Harvard Medical School, January, 1904. At the Boston City Hospital,
By William E. Faulkner.
At the Boston Children's Hospital, By James S. Stone.
At the Massachusetts General Hospital,
By Fred T. Murphy.
Summary of Results,
By Committee on Surgical Research.

1. **Blood Pressure.**—The title of the paper sets forth fairly well its scope and authorship. All who are interested in the subject of blood pressure should consult the original, as it is not feasible to give an abstract of what is really a collection of four papers under one title. A large number of charts enable the reader to see at a glance what the effect of shock, hæmorrhage, and compression of the brain are on blood pressure. The committee in charge have summarized as follows: "It may be said that the value of the Riva-Rocci apparatus in determining the blood pressure in surgical patients is limited to a comparatively small number of cases. The conditions of cerebral compression and of surgical shock produce the most marked and definite alterations in the blood pressure. When these conditions are present and other confusing causes of alteration in the blood pressure are eliminated, the value of the blood pressure determinations, as an indication for or against operation, is increased. Under other circumstances the value of these observations is at present not apparent. The adoption of blood pressure observations in surgical patients does not at present appear to be necessary as a routine measure."

MEDICAL RECORD.

March 26, 1904.

1. Is Iodide of Potassium a Specific in Lobar Pneumonia? By H. Altshul.
2. Report of a Case of Kidney Decapsulation, with Some Observations on the Operation, By A. G. Grunwell.
3. Cases of Urethral Stricture and Their Management, By James Pedersen.
4. Some Observations While Serving in the Philippines, By J. A. Guthrie.
5. Value of Total and Differential Leucocyte Counts During the Course of Typhoid Fever, By Henry A. Higley.
6. A New Sign of Basilar Meningitis, By G. W. Squires.

1. **Pneumonia.**—Altshul asserts his belief that potassium iodide is as much of a specific in lobar pneumonia as are quinine in malaria, mercury and the iodides in syphilis, and iron in anæmia. His belief is founded on the observation of sixty-two personal cases, treated by the method he proposes, and on three times as many cases treated by colleagues according to his suggestions. The mortality, by the author's method of treatment, was only one per cent. in over 250 cases. No cases are reported in detail. The author briefly reviews the physiological action of potassium iodide and then

enumerates the various symptoms which require attention in the treatment of pneumonia. The method of giving the iodide is of the greatest importance. Lack of success in treating the disease should probably be attributed to faulty methods or to lack of courage in administering the drug. As soon as the diagnosis of lobar pneumonia is made an initial dose of ten to fifteen grains of potassium iodide should be given. The dose must be repeated every two or three hours and increased in size, each time, by five or ten grains, according to the severity of the case. The dosing must be kept up day and night. The condition of the heart is the only index to the quantity of the drug needed. From 1,000 to 3,000 grains a day can be taken, as a rule, with no distress to the patient. The author is of opinion that the tolerance for the iodide in pneumonia is a sign that the drug is fulfilling a useful purpose. The disease is not cut short by the treatment advocated, but it always runs a mild course and ends by lysis.

3. **Urethral Stricture.**—Pedersen reports in great detail seven cases of urethral stricture. Each case is more or less typical of its kind and serves to illustrate the various methods resorted to by the author in treating difficult cases of urethral stricture

5. **Typhoid Fever.**—Higley reports the blood findings in three cases of typhoid fever in order to illustrate the value of differential leucocyte counts during the course of this disease. He concludes: " These cases show that so long as the typhoid infection remains pure the characteristics of the total and differential leucocyte counts peculiar to this disease are maintained. In the presence of complicating infections these characteristics are altered. Such an alteration precedes the clinical picture of the complication. Therefore frequent and careful total and differential leucocyte counts during the course of typhoid fever are of great value in enabling the clinician to keep in touch with the variations in any given case."

6. **A New Sign of Basilar Meningitis.**—Squires has found his sign invariably present in cases of basilar meningitis, often as early as the fourth or fifth day of the disease. The sign consists in the rhythmical contraction and dilatation of the pupil when the child's head is manipulated as follows: Place the child's head between the knees face upward, with the body supported. Grasp the sides of the child's head with each hand and produce gradual and forcible extension of the head on the spinal column. As the head is brought back in extension the pupils will commence to dilate simultaneously with the commencement of extension; the more extreme the extension the more the dilatation. Upon flexion the pupils contract so that when the chin is forcibly brought to the manubrium the pupils are well closed.

MEDICAL NEWS.

March 26, 1904.

1. Pneumatic Tourniquets: With Especial Reference to Their Use in Craniotomies, By HARVEY CUSHING.
2. A Case of Strangulated Inguinal Hernia: Death from Fæcal Drowning During Etherization, By EDWARD H. GOODMAN.
3. A History of Saliva: Its Physiology, Chemistry, and Pathology, By HAROLD M. HAYS.
4. Surgery of the Gallbladder and Ducts, By JOHN F. ERDMANN.
5. The Regulation of the Duration of Exposure and the Distance from the Tube in X Ray Therapy, By ENNION G. WILLIAMS.
6. Sea Bathing in Some Forms of Skin Diseases, By R. ABRAHAMS.
7. Pericarditis: With the Report of Cases, By GEORGE P. PAUL.
8. Indicators in Gastric Analysis: With Special Reference to Tropeolin OO, By A. L. BENEDICT.
9. Physiological and Clinical Aspects of Hydrotherapy: With Its Special Reference to the Treatment of Pyschoses, By R. D. BAKER.

1. **Pneumatic Tourniquets.**—Cushing advises the use of pneumatic pressure, exerted through a rubber ring, in place of the usual solid rubber band, for the purpose of controlling hæmorrhage. The chief advantages he claims for the device are two: First, ease of manipulation and freedom from danger of injuring the nerves and other tissues and, second, less likelihood of infection if the tourniquet has to be readjusted during the course of an operation. The author concludes his paper with a description of his methods of performing operations upon the brain.

2. **Strangulated Hernia.**—Goodman reports the case of a man who died during etherization preparatory to an operation for strangulated hernia. Before consciousness was lost and before any of the reflexes were abolished, reflex peristalsis set in. Fæcal matter began to pour from the nose and mouth and the patient, although conscious and capable of voluntary movements, began to drown in his own fæces. Artificial respiration and oxygen were resorted to in vain. Tracheotomy was then performed and fæcal matter poured out of the larynx. The patient soon afterwards died. An autopsy was not procured.

4. **Surgery of the Gallbladder.**—Erdmann reviews the surgical affections of the gallbladder and ducts and considers their ætiology and symptomatology. The various operations on the gallbladder are described and the after treatment considered. Eight cases are reported.

7. **Pericarditis.**—Paul writes to emphasize three points: First, the insidious development of pericarditis, and how frequently it is overlooked unless particularly sought for. Second, that pericarditis of a severe type may develop during the course of a very mild pneumonia. Third, the difficulty of distinguishing obliterative pericarditis from acute general tuberculosis involving the serous membranes. Three cases are reported. The author concludes by summarizing the important signs of adherent chronic pericarditis thus: (1) A systolic retraction in the region of the apex. (2) The sign described by Broadbent, which is a distinct systolic retraction of the chest wall in the region of the eleventh and twelfth ribs on the left side. (3) Friedreich's sign, a collapse of the cervical veins during diastole, and, according to Kussmaul, a swelling of the cervical veins during inspiration. (4) The pulsus paradoxus is significant of adherent pericarditis or rather of the dilatation which follows. The pulse

becomes small and feeble during inspiration, due to traction on the adhesions during the inspiratory expansion of the lungs. As these bands are drawn upon it causes a constriction of the vessels of the mediastinum; thus resulting in a small feeble pulse wave during inspiration.

AMERICAN MEDICINE.

March 26, 1904.

1. Abdominal Pain, By J. H. MUSSER.
2. Some Practical Points in Abdominal Surgery, with Special Reference to Simple Technics for Appendicectomy and Intestinal Anastomosis, By FREDERICK HOLME WIGGIN.
3. Torticollis and Spinal Curvature Due to Eyestrain, By GEORGE M. GOULD.
4. Fatal Pulmonary Embolism Following Ascending Phlegmasia Alba Dolens, By JOHN G. SHELDON.
5. Raynaud's Disease, By DAVID G. PEYTON.
6. Bradycardia, with Report of an Unusual Case, By J. WILLIAM WATSON.

1. **Abdominal Pain.**—Musser reviews the various kinds of abdominal pain and attempts to indicate its diagnostic significance when studied in relation to some of the usual associated symptoms. We can only call attention to a few of the points emphasized by the author. (1) Muscular spasm, when present, is of great import. Its absence does not exclude the possibility of a gross lesion. *(a)* Spasm is wanting when there is little or no muscle overlying the seat of the lesion. *(b)* Spasm disappears on the advent of toxæmia. (2) Cutaneous hyperalgesia may often exist. The point to bear in mind is that if it has once made its appearance and subsequently disappears, without general improvement in the patient's condition, the outlook is ominous. Gangrene or perforation must, in such cases, be suspected. (3) The intoxications are capable of producing severe abdominal pain. Special attention is called to the abdominal pain due to uræmia. (4) Hysteria and the neuroses have too often been invoked to explain away a pain. Such an explanation is as a rule a confession of ignorance. (5) Finally this general caution is given: "The occurrence of relief to suffering must not lull us into false safety. Such disappearance may be of diagnostic importance. Apart from termination of the disease in its natural course, such subsidence may be due to the *(a)* onset of gangrene, *(b)* to an oncoming toxæmia, *(c)* to both, *(d)* to perforation of a hollow viscus, as the stomach or gallbladder or appendix, or the rupture of an abscess. If pain disappears suddenly there must be gradual but prompt amelioration of all general and local symptoms if the patient is safe."

2. **Abdominal Surgery.**—Wiggin discusses a number of subjects specifically: (1) The general care of patients about to undergo an abdominal section and their after treatment. (2) The author's method of performing appendicectomy and his method of treating the stump. (3) The author's method of performing end to end intestinal anastomoses. The paper contains much good advice, none of which, however, is specially new.

3. **Eyestrain.**—Gould reports one case of torticollis and spinal curvature cured by properly adjusted glasses. Both the conditions had evidently been brought about by the efforts of the patient unconsciously to neutralize her astigmatism. References to a number of similar cases, collected from the literature, are given. The practical lessons to be learned from these cases are: (1) Habitual abnormal position of the head is frequently the cause of spinal curvature. (2) These abnormal positions may be due to some error of refraction, which necessitates the torticollis, wry-neck, cant, or depression, in order to secure clearer vision. (3) The error of refraction is usually a slight asymmetry of the axes of astigmatism, whereby the clearer-seeing or most used eye (usually the right in right-handed persons), has an axis 10° or 15° to either side of 90° or 180°, *i. e.*, at about axes 75°, 105°, 165°, or 15°. (4) The heterophoria, which has been the supposed cause of the functional torticollis, etc., is itself usually a result of the refractive error, proper correction of which at a sufficiently early age, cures the heterophoria, the torticollis, and the spinal curvature.

6. **Bradycardia.**—Watson reports in full the following case: A man, aged 78 years, of fair physical condition, whose normal pulse rate was usually about 66 beats per minute, suddenly went into an alarming syncopal, apoplectiform, or epileptiform condition. His pulse rate fell to 18 per minute, and he presented the Stokes-Adams syndrome. From this attack the patient eventually recovered, but his pulse rate never again went above 32. In all, the patient had four or five similar attacks and eventually died, six months after coming under the author's observation. Just before death the pulse rate rose to 66 beats per minute. An autopsy was refused.

BRITISH MEDICAL JOURNAL.

March 12, 1904.

1. Remarks on Extensive Carcinoma of the Œsophagus, with Unusual Nervous Complications, By R. SAUNDBY, and J. T. HEWETSON.
2. A Case of Syphilitic Convulsions Preceded by Marked Somnolence of Long Duration, By W. B. BENNETT.
3. Bilateral Neuritis of Fifth and Sixth Cervical Nerves, By C. H. CATTLE.
4. Deep Ulnar Nerve Paralysis, and Functional Powers, By T. PATMORE.
5. Reflex Disturbances Associated with Adherent Prepuce, By R. M. SIMON.
6. Tetany Associated with Mucomembranous Colitis and Phthisis, By H. HYSLOP-THOMSON.
7. A Case of Hemiplegia Occurring During Whooping Cough and Diphtheria, By H. FRASER.
8. Lesion of Post Central Convolution without Paralysis, By C. BIRT.
9. On the Alleged Increase of Diseases of the Nervous System, By J. M. RHODES.
10. On a Case of Properitoneal Hernia, By H. B. ROBINSON.
11. Abstract of a Report Upon a Recent Outbreak of Illness Due to Milk, By H. KENWOOD.

1. **Œsophageal Cancer.**—Saundby and Hewetson report a case of extensive carcinoma of the œsophagus, occurring in a man aged fifty, which is a distinct exception to what is generally known as "Simon's law." This law is that "the occur-

rence of an isolated paralysis of the abductor filaments of the recurrent laryngeal nerve in cases in which the roots or trunks of the spinal accessory, pneumogastric, and recurrent nerves are injured or diseased is not an isolated pathological curiosity. There is a distinct proclivity of the abductor fibres to become affected in such cases, either at an earlier period than the adductor fibres, or even exclusively." In the case here reported both physiologically and pathologically the adductor disablement was earlier and more intense in degree than the abductor.

2. **Syphilitic Convulsions.**—Bennett reports the case of a man, aged thirty-four years, suffering from convulsions of a syphilitic origin. For five months preceding the attack the patient had a remarkable tendency to sleep—thus somnolence apparently replaced the characteristic headache, which is so frequent and so diagnostic of such cases. Other prominent symptoms following the convulsions were profound stupor and motor aphasia. The lesion was probably extensive syphilitic endarteritis of the cerebral arteries, without thrombosis or embolism, but possibly with spasm of the arteries. Under appropriate treatment the patient entirely recovered.

5. **Adherent Prepuce.**—Simon reports three cases of reflex disturbance due to adherent prepuce. In the first case there was inability to walk of sudden onset, and pain in the hip—simulating incipient hip disease. In the second case the symptoms were those of obstinate and severe intestinal colic. In the third case there were sudden nocturnal attacks of severe abdominal pain, relieved by urination. In all the cases suitable treatment of the adherent prepuce gave immediate and lasting relief.

LANCET.

March 12, 1904.

1. The Treatment of Cancer of the Breast by Operation, By W. W. Cheyne.
2. The Evolution and Action of Certain Muscular Structures of the Heart. (Hunterian Lectures: III), By A. Keith.
3. The Congenital Origin of Hernia, By R. H. Russell.
4. The Ambulatory Treatment of Fractures of the Lower Extremity by Hoefftcke's Modified Hessing's Splint Case Appliance, By T. H. Openshaw.
5. An Inquiry into the Source of Scarlatinal Infection and Its Bearing Upon Hospital Treatment, By R. E. Lander.
6. Abstract of a Contribution to the Study of the Action of Indian Cobra Poison, By R. H. Elliot.
7. The Treatment of Incontinence of Fæces by the Submucous Injection of Paraffin, By A. H. Burgess.
8. The Therapeutics of the Ichthyol Compounds: with Special Reference to Ichthoform and Ichthargan, By J. Burnet.
9. A Case of Metritis and Cellulitis in the Puerperium Treated with Antistreptococcic Serum, By J. W. Duncan.

1. **Cancer of the Breast.**—Cheyne reviews the history of the modern operation for cancer of the breast. The essential points of the modern operation are as follows: 1. The skin cannot be removed too freely. None of the skin over the prominent part of the breast should be left behind. The incision must not go straight down to the muscle, but must gradually shelve away from the breast. Unless this is done lobules of the breast will be left behind. 2. The pectoral fascia must be completely removed, as it is so intimately connected with the muscle that an attempt to separate them would lead to lymphatic vessels and breast nodules being left behind. All or a portion of the pectoral muscle should be taken away, otherwise it is very difficult thoroughly to clean out the axilla. The whole of the sternal portion of the pectoralis major should be removed. There is seldom need for the removal of the clavicular portion, and it is of value in connection with the motility of the arm. 3. All the glands and fat in the axilla should be removed in one mass, along with the breast. The breast should not be taken away first, lest infected glands be opened and cancer cells distributed over the wound. The author clears out the supraclavicular space more often than formerly—it should always be done if there is evidence of gland infection there. But any marked enlargement of the supraclavicular glands renders the case inoperable. He has never followed the glands down into the mediastinum. The author has followed up ninety-nine cases of operation for cancer of the breast, and finds that of all cases operated on, favorable or otherwise, about fifty per cent. will remain well for a number of years. The successes are greatest in cases where the tumor is small and well limited, and the glandular infection slight. Where recurrence takes place it is most usually internally and the suffering of the patient is less than if no operation had been performed, while life is considerably prolonged. These results are due to the more precise and extensive removal of all possibly infected areas, and also to the fact that the cancerous deposits are not cut into at the time of operation. Cancer is a local disease at its commencement, and if all the existing disease can be got rid of, there is no reason for further development from the primary focus. But the author does believe in the existence of a general tendency to cancerous development, and that a person who has had cancer of one organ would be rather more prone to develop cancer elsewhere than the average healthy person.

4. **Hessing's Splint.**—Openshaw reports three cases of fracture of the lower extremity in which Hessing's splint case appliance was used with most excellent results. By its means the patient in nearly every case of fracture of the leg can be made to walk, with or without the aid of a stick, at the end of a week. It enables old people with fracture of the femur to be got out of bed, and the tendency to hypostatic congestion of the lungs and bedsore is thus counteracted. A cast is made of the thigh, leg, and foot, and from this the leather casings are modelled. They are strengthened by steel bands, and lace up the front. The weight of the body is transmitted to the leather thigh casing in two ways: first, the tuber ischii on that side rests on the top of the

casing; and, secondly, the thigh fits into the casing like one cone into another.

5. **Scarlatina Infection.**—Lander holds that the respiratory tract is the main focus and disseminator of infection in cases of scarlet fever. Young persons, who are the most susceptible to scarlet fever, are also most subject to abnormal conditions of the tissues of the nasopharynx and tonsillar region. These lymphoid tissues offer a most favorable nidus for infection. The period of incubation is short and the changes in the mucous membrane of the respiratory tract appear early. The constitutional symptoms and fever are, as a rule, proportional to the condition of the respiratory passages. The great majority of "return" cases (i. e., those cases infected from a convalescent case discharged from hospital as free of infection) are associated with discharges coming from the upper respiratory passages and ears. Enlarged glands are in proportion to the crowding of the ward and the introduction of fresh acute facts. Acting on these facts the author has extended the principle of segregation. Acute cases are segregated from convalescent cases from the start. At the end of the third week, if free from complications, but regardless as to whether peeling is still occurring or not, the patients are passed through the out-bathing establishment just as if they were to be discharged. They are then put in an isolated pavilion that has been previously disinfected, for one week, during which time the nose, ears, and throat are douched daily. They are then bathed again, and discharged. By this procedure the number of "return" cases has been reduced almost fifty per cent. Further, the average stay in hospital was reduced from forty-eight days to thirty-four days. Peeling *per se* is not infectious; 204 patients discharged in a peeling condition were responsible for only two "return" cases.

6. **Cobra Poisoning.**—Elliot's conclusions, derived from his investigations into snake venom, are as follows: 1. Cobra venom acts directly on the muscular tissue of blood vessels or through their vasomotor nerve endings, constricting the arterioles and thus raising the blood pressure. 2 and 3. It also acts on the isolated heart ventricle, killing it in firm systole if sufficiently concentrated. When perfused through the coronary circulation the heart is powerfully affected, the venom having a direct action on the muscular fibres and also on the intracardiac vagal mechanism. 4 and 5. When given subcutaneously in low lethal dose cobra venom kills by paralyzing the respiratory centre, and also raises the blood pressure at first. 6. When injected intravenously in large doses cobra venom causes: *(a)* a sudden fall of blood pressure; *(b)* a subsequent rise provided the dose has not been too large; and *(c)* a final fall to zero.

7. **Incontinence of Fæces.**—Burgess reports two cases of incontinence of fæces due to complete paralysis of the sphincter ani, in which great benefit was obtained by the submucous injection of paraffin into the lower portion of the rectum, as originally suggested by Gersuny in 1899.

Letters to the Editor.

STERILE WATER ANÆSTHESIA.

718 NORTH SIXTH STREET,
HARRISBURG, PA., *March* 18, 1904.

To the Editor,

Sir: In his article of January 23, 1904, in your *Journal,* Dr. Gant states he has been unable to find reports of operations about the rectum and anus in which the local anæsthesia was produced by sterile water. Up to six years ago I had used Schleich's solution B-eucaine and cocaine solutions. It occurred to me that the small quantities of cocaine, morphine, etc., in the Schleich solution had very little to do with the local anæsthesia; that the effect must be produced by the pressure in some way of the water used upon the peripheral nerve endings. I used sterile water and found the anæsthesia complete and have since used it regularly in treating hæmorrhoids either by ligation or by cautery. When I read Dr. Rose's letter in the issue of March 12th I decided to record my experience in the use of sterile water. I have used it successfully in the treatment of anal fissure, blind external fistula, external thrombotic and internal hæmorrhoids, and the excision of external tags and condylomata. The method was somewhat similar to the one described by Dr. Gant. The only trouble I found was that I was too much in a hurry to anæsthetize the parts, thus causing more pain than necessary.

C. M. RICKERT.

"KORSAKOFF'S DISEASE."

100 STATE STREET,
CHICAGO, *March* 22, 1904.

To the Editor,

Sir: It affords me special pleasure to have Dr. Osler, in his letter published in the *Journal* of March 19th, urge upon your readers not to regard "Korsakoff's disease" as a distinct *disease;* for that was my own purpose, in my editorial of February 27th in putting the title "Korsakoff's disease" in quotation marks and in stating in the second sentence that it was merely a syndrome. The term is used, however, in literature, and I have been frequently asked what it meant. I fear, therefore, that it will be some time unfortunately before it will be dropped entirely.

In regard to the psychosis being a mere "accident" of alcoholic neuritis, there is a diversity of opinion. Moreover such a summary disposal of it leaves it utterly without an explanation. Gudden, Jolly, Babinski, Bonhoffer, Régis, Raymond, Lepine, and many others do not believe that the polyneuritis is a necessary accompaniment of the psychosis. If that is so, its accidental association so often with alcoholic neuritis must be taken to mean that it is merely a coincident trouble depending upon the same cause. If it were due directly to the polyneuritis, we should expect to see it more frequently in this disease, and never in the absence of other polyneuritic symptoms, but it is often seen prior to the polyneuritis and sometimes when the polyneuritis never appears. If it were due to alcoholism alone, there must be some reason for its appearance in some alcoholics and not in others.

The peculiar characteristics of this psychosis in regard to the memory and orientation are amply vouched for by Oppenheim and others.

So far, only two explanations have been offered to account for the psychosis, and both of these are based upon the theory of its neuritic origin. The first, supported by some recent observations of Cole (*Brain,* No. xxv, p. 99) makes it depend upon a sort of central polyneuritis involving the neurones and tangential fibres of the cortex. The second attributes it to the practical isolation of the patient's mind, through the shutting off of his normal centripetal nervous impulses by the widespread polyneuritis. It seems to me that the former explanation is the more plausible of the two. It is founded upon highly suggestive postmortem findings; it is consistent with the absence of a peripheral polyneuritis; and it is in harmony with what we know of the histopathological changes commonly produced by chronic alcoholic intoxication.

I regret that the necessary limitations of a signed editorial forebade my treating of Korsakoff's syndrome more *in extenso.* J. HARRISON METTLER.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE, SECTION ON ORTHOPÆDIC SURGERY.

Meeting of December 18, 1903.

Dr. T. HALSTED MYERS in the chair.

End Result in Congenital Dislocation of the Left Hip, Lorenz Method.—Dr. W. R. TOWNSEND presented N. V., female, age nine and one half years, had had no treatment until at the age of five, when the hip was easily reduced by the Pacci method and placed in plaster of paris. At the end of six weeks, the plaster having become soiled, it was necessary to change it, but the parents refused to have it reapplied, and nothing further was done. The child walked with marked hip, but did not tire, except after excessive exercise. November 3, 1902, 1½ inches shortening; trochanter one inch above Nélaton's line. On December 26, 1902, Dr. Friedrich Mueller, at the Polyclinic Hospital, before the class reduced the hip by the Lorenz method and applied a short spica bandage. Three months after the operation the plaster was reapplied, as it had become soiled. Six months after the operation the limb was brought down to about 45 degrees of abduction. On November 2, 1903, the plaster was entirely removed. Since then the child had been allowed to walk. December 11, 1903, the child walked with very little limp, had no pain, did not tire easily. R. A, 25½; L. A., 25; trochanter about a quarter of an inch above Nélaton's line, limb held in abduction. There was one eighth of an inch shortening of the bones of the leg, and the radiograph showed great difference in development of the two femora and the head of the bone in the acetabular cavity. Passive motions: Flexion could be carried beyond a right angle, abduction and inward rotation not limited, extension nearly perfect. This case was presented as a success in a patient beyond the age limit that had been suggested by Lorenz, in which success can be reasonably expected by the non-bloody operation.

Double Congenital Dislocation of the Hip.—Dr. H. L. TAYLOR presented photographs of a case with peculiar features. The child, twelve years old, walked cross-legged with the left leg in front of the right, crossing at or above the knees. The dislocation was not posterior on the dorsum, but superior anterior. The head of the bone was easily felt behind the anterior superior spine of the ilium, and the trochanter and neck could be easily palpated. An x ray had confirmed the diagnosis. In addition, the child had an equinovarus of the right foot and a left pes valgus. These congenital deformities of the feet had never been treated, and the first step was to correct them, which he had done; the flat foot by manipulation and tenotomy of the peroneals, and the equinovarus, which was very severe, by a modified Phelps's operation. The hip joints at present were firm in their new sockets, and for that reason, and considering the age of the child, the speaker did not think it advisable to attempt reduction, but preferred to correct the deformity by the Gant's operation.

Study of Relapse After Reduction of Congenital Femoral Dislocation.—Professor E. H. BRADFORD, of Boston, made the following main points: The bony acetabulum nearly always was well formed, but shallow. The cotyloid ligament was the main instrument holding head of femur in position; therefore, in reducing dislocation just as little force as possible should be used, so as not to weaken or destroy this ligament. This was generally torn by the motions of overextension and pressure forward of head while limb was in extreme abduction. Other causes of relapse were poor support of plaster spica after ecchymosis and swelling had disappeared and muscular atrophy had occurred. Contractures of the injured parts formed and held great trochanter in its position close to tuberosity. When the limb was brought down to normal position, trochanter was held by these adhesions, and the head of bone was therefore forced to move over the edge of acetabulum forward and upward. The paper was illustrated by specimens, lantern slides, and models.

Dr. ADAMS, of Boston, had seen a large number of cases come back out of place, and he thought ecchymosis and hæmatosis resulting from much manipulation during operation might be one of the causes. He thought in a fair percentage of cases relapse could be attributed to the insufficient holding of the hip by the plaster cast. An apparatus could be put on a month after operation, which could be slipped off and on in two or three minutes, and the patient examined every two weeks.

Dr. V. GIBNEY had an impression that the very things criticised were the things we were trying to obtain, viz., atrophy of the muscles and looseness of the plaster, so long as the head had been placed in position and there was good abduction. The constant thumping and weight-bearing function of the body tended to thicken the capsule and make it shrink more or less into a pretty firm capsule about the head. Whether the bone slipped out of place in the plaster or not, was not clearly proved. He had seen cases after removal of the plaster, where the head of the bone was not in good position. Dr. Bradford's contention was that this muscular tissue which had been torn, cicatrized, became firm, dense tissue, which as the attempt was made to bring the shaft around into position, did not yield, but that the head slipped forward and later on there was, as he had seen in a number of cases, an anterior position, when he had felt sure at the time the plaster was changed that there was no relapse. He thought Dr. Bradford had made it very clear that if there was this shortened dense tissue as opposed to the imperfectly contracted capsule, as the limb was brought around on its axis recurrence resulted. Dr. Bradford's point was not to overstretch the capsule. The next way of preventing recurrence was to take down the plaster earlier than six months, if the bone was in place, and not give the tissues time to become dense and shortened. These were the two points: Not to stretch the capsule too much, and not to leave too long in position.

Dr. **Bradford** (in response to Dr. V. Gibney's remarks) said the idea was to take the head of the femur and bore a hole large enough to get the centre of the head in the centre of the socket as nearly as possible, and as much of the capsule and cotyloid ligament that held it should be saved as practicable. If one wanted to have his trousers held up, he did not destroy his suspenders. Too much stretching should not be done. After the head of the bone was in place, it should be looked at to see whether it had slipped. If it had slipped in the first month, it could be put back.

Dr. V. **Gibney** asked how he brought it down in good position without interfering with this tissue?

Dr. **Bradford** said his idea was that in a month that tissue would be cicatrized. It was comparatively loose. One could take the x ray and see where the head was, and move it or do what was required. It was in a pliable condition in a month. In six months it would not be so easy.

Dr. W. R. **Townsend** said he was much interested in this matter, especially of late, since the cases done by Lorenz had been taken down. The patient presented at the meeting, operated on by Mueller, was one of the best results he had seen of any operated on at that time, in New York. Because failure occurred, it did not follow that the Lorenz method was not good. As far as reducing the dislocations was concerned, Lorenz was the best operator in the world, but the end results showed that there was something in the after treatment or dressings that needed improvement, as hips apparently perfectly reduced, months afterward slipped out. The studies Dr. Bradford was making would probably prove of great value. He was working to ascertain why so large a percentage of cases relapsed. Dr. Townsend was not sure the reason of failure was damage of the capsule, or the facts as stated by Dr. Bradford in regard to position. The speaker thought there was no question that the less a part or tissue was damaged, the better the result would be. Damage might have been done in the past by demonstration to show how a hip could be slipped in and out. The use of a machine in reduction might prove a success, especially in the older cases. The percentage of perfect results or cures, he thought, when all the cases were tabulated, would probably be under 25 per cent. He did not consider an anterior reposition a cure, as the femoral head was not in the acetabular cavity, nor was it proper to report a case as cured under a year, as many that had been apparently cured relapsed shortly after removal of the cast. Those in which the head of the bone slipped out of the socket before the removal of the dressing could only be classed as failures and the shrinking of the body away from the plaster spica might permit this to occur in some cases.

Dr. **Taylor** had been interested in Dr. Bradford's demonstrations and also in his experiences in taking down congenital hips in the last few months and noting results, and in some things he had seen on the other side last summer. In Paris there were two men who had some ideas on the management of congenital hip which were new to the speaker. Kirmisson made a great point of making the reduction over the inferior border of the acetabulum. After overcoming resistance of the abductors he used overflexion, bringing the head opposite the inferior border, and by rotating outward, it slipped over the rim. Dr. Calot, of Berck, made a great point of putting the legs up in the inverted position. He said, as did Dr. Bradford, that closer apposition of the head to the acetabulum might be obtained by inverting the legs. The knees had to be flexed and fixed in that position, and that meant that the child could not walk if it was two-sided. But the child could not get along without walking, and the weight-bearing feature of the treatment was not necessary. The first actual case of reduction seen was in Paris, by Dr. Redard, whose procedure was similar to Kirmisson's. In the case of a girl, aged twelve years, very thin and delicate, everything was done with the greatest possible deliberation. No massage of the adductors whatever was used, they were simply stretched and gave way easily. The hip was reduced in fifteen minutes, including pauses, with very little exertion, and no violence. In Paris and Berck they were taking off plaster splints in five to six months. In Berlin they were taking off the plaster in three months. Some of the cases seen by Dr. Taylor, where the splints were removed in three months, seemed to be as perfectly reduced as those seen here at the end of six, eight, and twelve months. An important point was that the operations should be done with more deliberation and less violence. He had done several operations this fall without massage, but they were in very young patients, and not convincing. The ecchymosis afterward was very much less. He thought there was a future for mechanical reduction; although he had had no experience with it, it appealed to him on rational grounds.

Dr. **Murphy** had seen the work of Professor Lorenz in Vienna this spring. He had seen a great many good results and some poor ones. He saw Lorenz's after treatment of all his cases. A great many were attended to by his wife, who seemed to be the head of that department, and was very successful.

Dr. **Fisk** said that, between 1896 and 1899, he had had charge of twelve cases. The last time he had looked up the record, about 60 per cent. had relapsed. He did not mean to say that 40 per cent. were cured. Many cases relapsed because reposition had not been done in a perfect manner, and many secondary displacements occurred through careless after treatment. The cases should be kept in the wards for the first three months and watched very carefully and the position of the head of the femur noted by x ray.

Dr. **Townsend** said that Dr. Lorenz himself returned to this country and removed several plaster casts. He dictated the notes. He examined four cases; there was not a case of the four which he said was a perfect anatomical reposition. They had been in the plaster he originally applied six months, therefore, there was no question as to change of dressing, etc., by different physicians.

Dr. **Jaeger** said in 1900-1901 Dr. Schäder was using an orthopædic appliance in preference to plaster of paris after reduction of dislocation, as did Dr. Hoffa. Dr. Jaeger thought subtrochanteric osteotomy valuable in cases of anterior or posterior twists of the neck of the femur; thus allowing the feet to be made parallel without danger of redislocation.

Dr. **Myers** mentioned a case reduced three times with the ordinary manipulations of Lorenz, each time relapsing. About one and a half years ago he reduced the hip by the open method with the assistance of Dr. Harry Sherman. The head was strongly anteverted, and the capsule, tightly constricted about the head, had previously been reduced with it into the acetabulum. The limb was put up in marked inversion, flexion, and abduction. Three months later, after subtrochanteric osteotomy, the leg was rotated forward 45 degrees, leaving the head in good position. The boy had a perfectly reduced hip, with almost no motion. Lorenz left the plaster on for six months, for the express purpose of allowing contracture of the abductors, stating that when the limb resumed its original position the head would thus be driven more firmly into the acetabulum. As to manipulation, Dr. Myers did not think he had gained anything by massaging the adductors. After being held in plaster for six months, the muscles became atrophied, and it would be better to shorten the treatment if possible.

Dr. **Adams** said that Dr. Bradford had shown in one specimen the leg put up in a posterior position. He thought it would not do in a shallow acetabulum. He thought in a large number of cases, when the leg was put up in that position and the leg forcibly adducted, the trochanter acted as a fulcrum on the side of the pelvis to pry the head out of the socket.

Dr. **Homer Gibney** said that, since Dr. Lorenz had visited this country at the Forty-second Street Hospital, they had been putting up cases of hip disease in which practically all disease had been arrested and the brace removed, in the short, light-weight plaster spica. The men in the plaster room, out-patient department, at the hospital put on these casts without any assistance whatever, except such as given by the mother or father of the child. He had recently seen one of the staff applying one. The patient, a child, was on the table, securely balanced on the hip rest with cushions under the shoulders. The doctor was putting on the cast with great dexterity, with no assistance whatever. This was being done every day at the hospital by almost every one on the staff, from house surgeon down to junior's assistant.

Dr. **Bradford** said that when using the Bartlett machine, in order to protect the skin, they covered the foot with felt and then over the felt they put some leather free of oil which by soaking was made as soft as moose hide. That was shaped around the ankle the night before. A close hitch of rawhide was put around that. In this way a 300 kilo pull could be put on without the slightest injury to the ankle or knee. For the past year he had been trying to get the joints in position without operation of any sort. He was inclined to think if, as in the case of Dr. Myers, in order to secure the head in place, it was necessary to turn the toes in and keep them in, a subsequent osteotomy would be necessary. Dr. Bradford said we did not know how many children had a twist of the femur pointing forward or how much of a twist was compatible with locomotion; until that was known, care must be exercised about osteotomy. Dr. Adams had examined a number of cases, in which the Bartlett machine was used. A man did not want to talk of cures until the patient had been out of plaster and walking about for a year. Dr. Adams's cases ranged in age from thirteen years to four. Of the older cases one had failed absolutely. That was a boy of thirteen, with strong muscles. He was cut down upon and afterward it was found that the head was misshapen, and the socket small. By no manipulation could it be put in. The head was shaved and an attempt made to put it in the socket, but it slipped. In two patients, aged twelve years, it was thought to be put in; they were still in plaster. Dr. Adams had examined them and thought they had slipped. In a double case, ten years of age, one had been put in, but had slipped; it would be put in again. The other would be put in also. In a girl, aged nine years, the bone was put in; x ray showed that it had slipped; it was thought because the plaster was loose. In one of four years of age it went in very easily. It had been taken out of plaster. The capsule was now loose; it might slip. Up to date the record of machine cases was pretty good. Thirty per cent. of cases had been failures; the others apparently had not relapsed.

Display of Instruments, Etc.—Dr. **Taylor** showed plaster cutters; acetabulum scoop in different sizes, giving a firm grip; another plaster tool—the old Wolf forceps for separating plaster and prying it up after cutting it; the Adams saw, modified by Mr. Jones, having a very beautiful handle modeled after the ordinary carpenter's saw, giving perfect control; tenotomes devised and used by Mr. Jones, with straight edges somewhat advanced from the handle; Dr. Becker's hook for hooking up tendons, etc., etc.

Dr. MYERS presented several plaster of paris pelves, showing the result in cases of congenital dislocation not operated upon.

Dr. BRADFORD showed a three months' fœtus having a very strong cotyloid ligament, also an older fœtus having the same ligament well developed. In another fœtus showing congenital dislocation, the ligament was not seen. He showed a specimen of double congenital dislocation in a child aged two years. The hips on both sides had been reduced, but did not stay. One was cut down upon and that remained reduced. The child died of whooping cough before the second hip was cut down upon. It was found that the bloodless operation failed because the acetabular ring was much smaller than the head. Another specimen was shown, of a child not operated on. The capsule was stretched over the acetabulum, covering it like a drum head. A specimen was shown of congenital dislocation which had been cut down on with the old Hoffa method. A good socket, as was thought, was bored out. The child died of diphtheria. On making a section, it was found that so far from making a satisfactory socket, the new socket was half an inch above the natural socket, which was quite deep, and very good.

Book Notices.

Vorlesungen über die Pathologie und Therapie der Gonorrhœ des Mannes. Von DR. W. SCHOLTS, Privatdozent an der Universität Königsberg, i. Pr. mit einer Tafel. Jena: Gustav Fischer, 1904.

This brochure on gonorrhœa in the male is dedicated to Neisser, whose teachings up to the present time have found their ablest support mainly in the scattered writings of Jadassohn. The first and second chapters embrace the bacteriology and pathology of the disease. The culture methods of obtaining the gonococcus at various stages in the course of the disease are passed in review, and it is only too evident that a ready, simple, and reliable method of clinical value has yet to be found. The affinity of the gonococcus for cylindrical epithelium, as taught by Finger, and the changes it thus effects, are accepted.

The prevalence of gonorrhœa in the male population is put down at nine tenths. Ophthalmia neonatorum exists to the extent of fourteen per cent. in lying-in institutions, while thirty per cent. of all cases have local complications, and seven tenths are afflicted with metastases. The usual methods of spreading the infection are enumerated, but one is certainly novel, the likelihood of causing infection of the vulva and vagina by using one bath tub for all the children in an institution.

The very rational advice is given that the treatment should be adapted to social circumstances. Microscopical examinations, it is pointed out, are of the greatest importance when the discharge is merely due to bacterial urethritis. The indulgence in a single glass of beer with meals is not objected to. Of the internal remedies, sandal wood oil and copaiba are most warmly endorsed. The shortcomings of even the newer antiseptic remedies to ferret out the gonococcus are admitted, but the writer places his hopes high that it will yet be possible to find a remedy to come up to these requirements. Though the highest estimate is placed on protargol, in the same breath we are told that nitrate of silver has the additional advantage of astringency. Whatever the medicinal agent, one is struck by the advocacy of a rather free use of cocaine preliminary to the injection of these.

Words of praise as to the abortive treatment of gonorrhœa are but lukewarm, and in most instances the use of the large hand syringe and catheter are preferred in anterior as well as posterior irrigations.

For a protracted gonorrhœa frequent changes of remedies are recommended, and when the chronic stage is established beyond a doubt, the use of the endoscope is advised, though, in the words of the author, "often enough endoscopic examinations reveal nothing." Massage of the deeper parts of the urethra, both for diagnostic and for therapeutic purposes, is best done with the finger protected with rubber cot. In the deep urethra and in chronic urethritis, silver nitrate again figures prominently, and it is mainly for the postgonorrhœal, also styled catarrhal, affections occurring in the absence of gonococci that the mechanical treatment with sounds and dilators is in place.

In all the complications of the accessory genitourinary tract, the author urges the use of silver. So, when the last word is spoken of the school of Neisser, it may be said that it is identified with the discovery of the gonococcus and the rational use of nitrate of silver in variable strength as its arch enemy.

Infectious Diseases: Their Ætiology, Diagnosis, and Treatment. By G. H. ROGER, Professor Extraordinary in the Faculty of Medicine of Paris, Member of the Biological Society, etc. Translated by M. S. GABRIEL, M. D. Illustrated with 43 Engravings. New York and Philadelphia: Lea Brothers & Co., 1903. Pp. iv-874.

The English-speaking public will undoubtedly welcome most cordially this excellent translation of Professor Roger's work. The author has included practically the whole of internal medicine as well as some modern surgery. The subject matter is so extensive and covers so large a field that a brief review of it is almost impossible. Throughout the book the author has given us the benefit of original work upon the subject, and everywhere subordinates experimental to clinical researches, never losing sight of the fact that the purpose of the laboratory is secondary.

He first takes up pathogenic agents in order and inquires carefully into their distribution in nature, the conditions under which they attack men, and their mode of invasion. Later due consideration is given to their influence upon the human economy. Heredity, immunity, etc., are also considered very carefully, the author closing with articles on diagnosis, prognosis, and treatment.

The book is excellent and is thoroughly modern throughout, the chapters upon immunity and predisposition and those upon the therapeutics, and hygiene and prophylaxis in infectious diseases meriting special mention. It is well written, accurate, and complete, forming a very readable and excellent reference book. The work of the translator has been admirably performed.

Organic and Physiologic Chemistry. A Manual for Students and Practitioners. By ALEXIUS MCGLANNAN, M. D., Associate Professor of Physiologic Chemistry, Instructor in Clinical Laboratory, College of Physicians and Surgeons, Baltimore. Series Edited by V. C. PEDERSEN, A. M., M. D., Instructor in Surgery, and Anæsthetist and Instructor in Anæsthesia at the New York Polyclinic Medical School and Hospital, etc. Illustrated with 9 Engravings. Philadelphia and New York: Lea Brothers & Co. Pp. 246.

This little volume presents in a familiar form a type of the "quiz compend" so much in vogue at the present time in the preparation for examinations. It is difficult to reconcile the use of the word "physiologic" in the title with "physiological" in the author's preface. The work follows in many respects the arrangement adopted by Simon in his *Manual of Chemistry,* which the author has frankly stated. Each chapter is completed by a set of questions relating to the subject matter therein contained, making the volume especially adaptable to its particular purpose.

The Self-Cure of Consumption. With a Chapter on the Prevention of Consumption and Other Diseases. By CHARLES H. STANLEY DAVIS, M. D., Ph. D., Member of the Connecticut State Medical Society, Physician to the Curtis Home for Old Ladies and Children, etc. New York: E. B. Treat & Co., 1904. Pp. 172. (Price, $0.75.)

Realizing the great importance of this widespread disease, the author, in this little volume, attempts to show how consumption can be cured, in at least ninety-five per cent. of the cases, if treatment is begun before "actual decay" takes place. The book is intended primarily for the laity, and even though nothing actually new is contained in it, it includes much that is valuable and instructive. It is divided into short chapters, in which such subjects as heredity, the proper diet of consumptives, exercises for consumptives, etc., are discussed in a concise but fairly complete manner. The book is well written, and although one of many works on this subject, it will, we believe, prove of distinct value to the public.

Spotted Fever (Tick Fever) of the Rocky Mountains. A New Disease. By JOHN F. ANDERSON. Washington: Government Printing Office, 1903. Pp. 50.

In this little monograph, the author discusses carefully and scientifically this comparatively unknown disease. According to him it is localized in western Montana, with some few cases in Idaho and the neighboring States. It is due to a parasite which resembles somewhat the malarial parasite. Infection seems to be caused by the tick bite, although this, the writer says, has not been proved beyond dispute. The disease is accompanied by an eruption which at first is erythematous, but later petechial in character. There is a certain amount of fever, with digestive, circulatory, and nervous disturbance. Favorable cases usually last about two or three weeks; in unfavorable ones the patient usually dies between the sixth and the twelfth day. The mortality is about seventy per cent.

The diagnosis is usually not very difficult, and can always be made with certainty by blood examination. Typhus fever is most apt to be mistaken for the disease. Quinine in large doses, frequently repeated, seems to offer most relief. The pamphlet is illustrated with numerous photographs of the parasite and of various cases. The medical profession is certainly greatly indebted to the author for the complete, concise, and most excellent account of this disease that he has given.

The Treatment of Fractures. With Notes Upon a Few Common Dislocations. By CHARLES LOCKE SCUDDER, M. D., Surgeon to the Massachusetts General Hospital. Fourth Edition, Thoroughly Revised. With 688 Illustrations. Philadelphia, New York, and London: W. B. Saunders & Co., 1903. Pp. 534. (Price, $5.00 net.)

This new edition demonstrates the endeavors of the author to keep his excellent book abreast of the times. The additions comprise a large number of well reproduced half-tones of "skiagraphs" and "radiograms" of the epiphyses at different ages. The tracings of x rays are replaced by actual "skiagrams" of the fracture. The text, too, has been elaborated. All in all, the book has been materially improved by revision.

BOOKS, PAMPHLETS, ETC., RECEIVED.

Proceedings of the Academy of Natural Sciences of Philadelphia. Volume lv. Part III. October, November, December. 1903. Pp. 625 to 850.

Are We To Have a United Medical Profession? By CHARLES S. MACK, M. D. Published and For Sale by the Author, La Porte, Indiana. 1904. Pp. 44. [Price, $0.25, postpaid].

Transactions of the College of Physicians of Philadelphia. Third Series. Twenty-fifth Volume. Printed for the College, Philadelphia, Pa. 1903. Pp. xxxviii-194.

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Miscellany.

Notes on American Hospitals.—Campbell Douglas, L. R. C. P. Ed., has the following article in the *Glasgow Medical Journal* for February, 1904:

(Concluded from page 624.)

ANÆSTHETIZATION METHODS.

While the surgeon is sterilizing his hands and donning his operating clothes the patient is being anæsthetized in an adjoining room. In almost every hospital in the United States the patient is first put under with nitrous oxide gas, and the anæsthesia is kept up with ether. The Bentley [Bennett?] inhaler, which could be used for both gas and vapor without removing the mask from the patient's face, was the favorite instrument in New York, but elsewhere the cone-shaped towel was generally used for ether administration. Amongst the many administrations which I witnessed in different cities, from New York to San Francisco, I never saw a single alarm given, or artificial respiration resorted to. I have seen ether given badly, yet without seeing any evil result to the patient, and seldom was there any retching or vomiting. The usefulness and safety of ether as an anæsthetic agent was one of the things which impressed me most during my stay in the country. Most American surgeons maintain that the supposed bad results in bronchial and renal cases are greatly exaggerated. I seldom saw chloroform given, and never saw it given well. The administrator is generally the junior interne, students seldom being allowed to give an anæsthetic before graduation. Before leaving the subject of anæsthesia, I should like to mention the method of operating under spinal cocainization, which I saw practised by Dr. Morton, of San Francisco. Though he had no operations to do on the morning that I visited his hospital, he was kind enough to arrange a circumcision there and then, so as to demonstrate the practical working of the method he has been using for some years. Dr. Morton has performed, under the subarachnoid injection of cocaine or tropacocaine (Merck), more than a thousand operations, without pain and with little shock, and these included such major operations as 63 abdominal sections, over 100 hernia operations, 2 disarticulations at the hip, and 5 cases of trephining. Briefly, his method is as follows: Chemically pure cocaine hydrochloride is sterilized by exposure to a temperature of 300° F. for fifteen minutes, in tiny sterile glass tubes. The exact amount required for one operation is put into each bottle, generally, .3, .4 or .5 of a grain, depending on the age of the patient, and the extent of the anæsthesia required. When the patient is placed on the table the lumbar region of the back is cleaned, and then the needle, made of steel wire tubing, number nineteen gauge, and three inches long, is thrust into the space between the third and fourth lumbar vertebræ, and pushed upward and forward until it meets with diminished resistance, or until cerebrospinal fluid passes. One of the little sealed bottles is opened, the contents emptied into a graduated glass hypodermic syringe, with glass plunger (Lure's syringe), and the syringe is fitted on to the end of the long needle, with the plunger nearly closed. Gradual withdrawal of the plunger until the barrel is half filled with cerebrospinal fluid, a moment's delay till the cocaine dissolves in the fluid, and the gradual return of the fluid into the spinal canal, by pressing home the plunger, complete the administration of the anæsthetic. Should analgesia be desired in the upper extremities or head, introduce the needle into the third space, and use the same method, except that the dose should be .4 or .5 of a grain, and introduced as rapidly as the piston of the syringe can be pressed, then withdraw the needle, and seal with collodion. The analgesia is complete, for operations in the lower extremities, in from three to five minutes, and for operations in the upper part of the body, in from fifteen to twenty-five minutes, and lasts from one to three hours. The only ill effects, and they are very transient, seen after this method of spinal cocainization, may be nausea or vomiting within the first fifteen minutes. Although the operation I saw was a trivial one, the patient made no complaint whatever of pain. Had I been able to wait two days longer in the city, which I could not, I should have seen abdominal hysterectomy under tropacocaine.

The spectator at an operation in an American hospital is struck by the attention to detail, or apparent attention, observed by the various actors in the drama, and by the general tendency toward an aseptic *régime,* which is the aim of most of the surgical institutions. Yet every now and again one sees things which make him wonder whether after all they are not missing the greater in too careful attention to the lesser things which make toward idealism. Thus patients in the Johns Hopkins Hospital, undergoing operation for hernia and appendicitis, and not urgent cases, were placed on the table without any preparation of the patient's skin beforehand. The shaving and scrubbing up of the abdomen and genitalia were then carried out in a few minutes by the theatre porter, whose duties are to clean up the place and make himself generally useful. In one big New York hospital, with a more than local reputation for being up-to-date, I watched a surgeon don sterilized gloves without having sterilized his hands, transfer his eyeglasses from his vest pocket to his nose, and proceed to open a cerebellar abscess through the mastoid process, in a patient whose head had not been shaved, and whose hair had not been clipped. Later on, I asked the house surgeon if that was one of their best surgeons, and he assured me that he was—one of their finest. Frequently, after an abdominal section, the house surgeon was left to close the abdomen and apply the dressing. Surely, if the operation were worth beginning, it was worth finishing by the surgeon.

In closing the operation wound, nearly every kind of suture material was used—catgut, chromic gut, iodized kangaroo tendon, horsehair, and silver wire. This last was used in the Johns Hopkins surgical service for a subcuticular suture after most operations, especially hernias. The use of silver leaf to cover in the wound was common, as was also the use of strips of adhesive plaster to retain dressings in place over an abdominal wound. In the Johns Hopkins, plaster of Paris bandages were used to exert pressure over the dressing in abdominal and hernia operations, and prevent yielding of stitches. After the operation, patients are sent to a special room, called the recovery room, where they remain until they have recovered consciousness and got over any after sickness, before being sent back to the ward.

AMERICAN SURGEONS.

This short sketch is on the subject of American hospitals and their ways, and therefore I have said little about the individual men whom it was my privilege to meet; the more so because I have not asked their consent to paint their portraits with my pen, and because I met only very few of the really well known men of the American medical profession. Those whom I did meet were nearly all surgeons. If you were to say to any one in the old country, "I have been to Chicago," he would not ask, "Did you see the Rush Medical College, or the Wesley Hospital?" but almost certainly, "Did you see Murphy, Senn, or Van Hook?" I am sure that the writings of these men will have for me now an added interest, a personal feeling, as if they were standing before me expounding with moving lips and hands the words that I am reading in their books. I met Murphy in his operating room at eight o'clock one cold morning, all his six feet something of stature swathed in white, with only his nose and eyes visible. He was geniality itself to the medical men who had come to see him operate, demonstrating everything to us. During the operations (there were four abdominal sections and a few other odd things) he kept up a running conversation about the case and about other cases, told stories about himself and against himself, which the cases brought to mind, and was not above cracking a joke with one of the graduates who had come back to refresh his knowledge. Senn, on the other hand, was of a different type. Not so tall, stouter, heavy in build and in features, he spoke slowly, and was more theatrical perhaps in style. Yet he demonstrated six cases, and operated on six other cases, in less than two hours. Before one operation was completed, the next case was wheeled in on another operating table, anæsthetized, and ready. After seeing the house surgeons in the Eastern cities, do abdominal sections, it was a surprise to see Senn tackle a simple circumcision, yet that was one of his operations that afternoon. Every step of his operation, every incision, every ligature was announced before it was made. An example of this attention to detail was the New York gynæcologist whom I saw spending fully twenty minutes in explaining and showing to his class how a piece of cotton-wool should be rolled on the end of an intrauterine applicator. Of Deaver, in Philadelphia, I saw little more than I did of Murphy, his eyes and his hands, for he operated without gloves. I was fortunate in seeing him do an appendicectomy. I have heard that his average is one a day. He did his work from beginning to end without saying almost a single word; and, having stitched the peritonæum, left his house surgeon to finish the operation and the dressing, and rushed away to a private operation in some other part of the city. His manner of treating the stump of the appendix was by inversion into the cæcum, and suture of the peritonæum over it. In New York, where I saw a greater number of surgeons and more operative work than in the other cities I visited, the man who impressed me most, both by his personality and his work, was Lilienthal, of the Mount Sinai Hospital. Small, wiry, with bright restless eyes, he seemed to be possessed of superabundant energy; quick and neat in his operative technics, much addicted to the use of "damn" in its various forms, yet always saying it in a gentlemanly way, and with a great contempt for silver filigree, as he reiterated its uselessness more than once during his operations. When the patient on whom he was operating suddenly cleared his throat, Lilienthal jerked out, "What did he say, doctor; I'm sure he spoke;" and later, when nearly forgetting to remove a small piece of gauze from the interior of the stomach in the Finney operation for benign constriction of the pylorus, it reminded him of the man who made the bass fiddle and left the glue pot inside.

ORTHOPÆDIC GYMNASIA.

While going through the Pennsylvania Hospital I inspected one department which I have never seen in any other hospital. This was a children's gymnasium attached to the orthopædic wards. In this long room, under the charge of a nurse who thoroughly understood and was in love with her work, were all manner of instruments and appliances for developing the muscles and strengthening the limbs and joints of children. Instruments for massaging the limbs, worked by an electromotor, bicycles suspended off the floor for those with weak legs, Whiteley exercises, ladders for climbing, parallel bars, dumbbells, appliances slung from the roof for supporting paralyzed children learning to walk—all these were there, and when the children came down daily for the exercises prescribed by Dr. De Forrest Willard, it was all made like a new game to them by the nurses, so that the little ones grew happy and enthusiastic in their exercises. It was a department which ought to be in every large hospital, and which was here doing an immense amount of good. While on the subject of the Pennsylvania Hospital, I may say that it was a pleasure to find that a covered way from the hospital to the nurses' home had been directly copied from a similar, though larger, one in the Glasgow Royal Infirmary. Thus the influence of the "Royal" abroad was evident, even in architecture.

The American medicine man of to-day is a worthy descendant of all the great men of the past; young, and keeping young even when his years are many; restless, energetic, bold, he is ever striving toward an unseen ideal. He is, like the art he practises, in a transition stage, sifting the great mass of chaff for the few grains of wheat, and with a resolute determination to find them. He is jogging along in no rut, he is travelling over unbroken ground, with all the magnificent energy of his race. The future of our profession seems well assured in the hands of such a man, and the day may come, I think, when the younger members of our calling will go to extend their knowledge and finish their education, not in Berlin, or Paris, or Vienna, but in New York, and Baltimore, and Chicago.

For the scientific attainments of our American brethren I have great respect, and of their pleasant comradeship I have many happy memories. If any of their number should come within hailing distance of my wigwam, let him come in, and welcome.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending March 25, 1904:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
California—San Francisco	Mar. 6-13	4	4
Delaware—Wilmington	Mar. 12-19		1
Dist. Columbia—Washington	Mar. 12-19	1	
Florida—Jacksonville	Mar. 12-19	2	
Illinois—Chicago	Mar. 12-19	5	
Illinois—Danville	Mar. 12-19	1	
Illinois—Galesburg	Mar. 12-19	3	
Kentucky—Covington	Mar. 12-19	1	
Louisiana—New Orleans	Mar. 5-19	3 2 imported.	
Maine—Bradley	Mar. 18	2	
Maine—Madawaska region	Mar. 12-19	7	
Maryland—Baltimore	Mar. 12-19	1	
Massachusetts—Fall River	Mar. 12-19	1	
Massachusetts—Lowell	Mar. 12-19	1	
Michigan—Detroit	Mar. 12-19	1	
Michigan—Grand Rapids	Mar. 12-19	1	
Missouri—St. Louis	Mar. 12-19	6	
New Jersey—Camden	Mar. 12-19	6	1
New Jersey—Trenton	Mar. 12-19	1	
New York—Buffalo	Mar. 12-19	1	
New York—New York	Mar. 12-19		1
New York—Niagara Falls	Mar. 12-19	4	
Ohio—Cleveland	Mar. 11-18	3	1
Ohio—Dayton	Mar. 12-19	8	1
Ohio—Hamilton	Jan. 30-Feb. 6	1	
Pennsylvania—Allentown	Mar. 12-19	2	
Pennsylvania—Altoona	Mar. 12-19		1
Pennsylvania—Carbondale	Mar. 14-21	2	
Pennsylvania—Philadelphia	Mar. 12-19	30	7
Pennsylvania—Pittsburgh	Mar. 12-19	1	1
Pennsylvania—Williamsport	Mar. 12-19	1	
Tennessee—Memphis	Mar. 12-19	21	
Tennessee—Nashville	Mar. 12-19	13	
Wisconsin—Milwaukee	Mar. 12-19	6	
Smallpox—Foreign.			
Austria—Prague	Feb. 27-Mar. 5	4	
Austria—Trieste	Feb. 27-Mar. 5	1	
Belgium—Antwerp	Feb. 27-Mar. 5	7	3
Belgium—Brussels	Feb. 20-Mar. 5		2
Brazil—Bahia	Feb. 13-20		1
Brazil—Pernambuco	Feb. 1-15		17
Brazil—Rio de Janeiro	Feb. 7-14	128	67
China—Shanghai	Feb. 3-10	16	
China—Tientsin	Feb. 3-10	Reported.	
France—Lyons	Feb. 20-27		1
Great Britain—Edinburgh	Feb. 27-Mar. 5	6	2
Great Britain—Glasgow	Mar. 4-11	19	1
Great Britain—London	Feb. 27-Mar. 5	13	
Great Britain—Manchester	Feb. 27-Mar. 5	1	
Great Britain—Nottingham	Feb. 27-Mar. 5	14	1
Great Britain—Sheffield	Feb. 20-27	4	
Great Britain—South Shleids	Feb. 27-Mar. 5	1	
India—Bombay	Feb. 16-23		20
India—Karachi	Feb. 14-21	4	2
Java—Batavia	Feb. 6-13	19	9
Mexico—Mexico	Feb. 28-Mar. 6	9	5
Mexico—Vera Cruz	Mar. 5-12	1	1
Netherlands—Amsterdam	Mar. 5-12	1	1
Russia—Moscow	Feb. 17-24	13	1
Russia—Odessa	Feb. 27-Mar. 5	1	
Russia—Warsaw	Feb. 28-Mar. 6		11
Spain—Barcelona	Mar. 1-10		9
Spain—Santander	Feb. 29-Mar. 7	3	
Turkey—Constantinople	Feb. 28-Mar. 6		5
Smallpox—Insular.			
Philippine Islands—Antimonan	Feb. 5-12	Present.	
Philippine Islands—Cebu	Jan. 1-31	5	1
Yellow Fever.			
Brazil—Rio de Janeiro	Feb. 7-28	15	4
Mexico—Merida	Mar. 6-12	1	2
Mexico—Tehuantepec	Mar. 6-12	4	
Mexico—Vera Cruz	Mar. 5-12		1
Cholera—Insular.			
Philippine Islands—Manila	Jan. 30-Feb. 6	2	2
Philippine Islands—Provinces	Jan. 30-Feb. 6	53	35
Cholera—Foreign.			
Turkey in Asia—Basra	Feb. 6-12	6	3
Plague—Insular.			
Philippine Islands—Manila	Jan. 30-Feb. 6	3	2
Plague—Foreign.			
Brazil—Para	Feb. 15	2	
Brazil—Rio de Janeiro	Feb. 7-28	13	6
India—Bombay	Feb. 16-23		718
India—Karachi	Feb. 14-21	97	74

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending March 24, 1904:

BAKES, E. C., Acting Assistant Surgeon. Granted leave of absence for three days from March 19, 1904, under paragraph 191 of the regulations.

CARTER, H. R., Surgeon. To report at Bureau for special temporary duty. March 19, 1904.

FOSTER, M. H., Passed Assistant Surgeon. Granted leave of absence for ten days from March 30th.

GOLDBERGER, JOSEPH, Assistant Surgeon. Relieved from duty in Hygienic Laboratory, and directed to proceed to Tampico, Mexico, for duty in office of the United States Consul. March 22, 1904.

KING, W. W., Assistant Surgeon. Granted leave of absence for six days from March 18th.

LUMSDEN, L. L., Passed Assistant Surgeon. Relieved from duty at New Orleans, La., and directed to proceed to Vera Cruz, Mexico, for duty in office of the United States Consul. March 21, 1904.

MACKALL, B. McV., Acting Assistant Surgeon. Granted leave of absence for fifteen days from March 31st.

McMULLEN, JOHN, Passed Assistant Surgeon. Bureau order of February 29, 1904, directing Passed Assistant Surgeon McMullen to report to Chief Quarantine Officer of Hawaii for duty, revoked.

PECKHAM, C. T., Surgeon. Detailed for duty on Revenue Cutter Service retiring board at New York, N. Y. March 21, 1904.

ROBERTS, NORMAN, Assistant Surgeon. Relieved from duty at San Diego, Cal., and directed to proceed to New Orleans, La., and report to medical officer in command for duty and assignment to quarters. March 23, 1904.

ROSENAU, M. J., Passed Assistant Surgeon. To proceed to Boston, Mass., Albany and New York, N. Y., for special temporary duty. March 22, 1904.

SALMON, T. W., Assistant Surgeon. Relieved from duty at

Philadelphia, Pa., and directed to proceed to New York, N. Y. (Stapleton), and report to medical officer in command for duty and assignment to quarters. March 18, 1904.

SMITH, A. C., Passed Assistant Surgeon. Detailed for duty on Revenue Cutter Service retiring board at New York, N. Y. March 21, 1904.

TIDD, R. M., Acting Assistant Surgeon. Granted leave of absence for fourteen days from April 1st.

Board Convened.

Board convened to meet at Washington, D. C., March 25, 1904, for the physical examination of an officer of the Revenue Cutter Service. Detail for the Board—Assistant Surgeon General L. L. WILLIAMS, chairman. Assistant Surgeon General W. J. PETTUS, recorder.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending March 26, 1904:

BISHOP, L. W., Assistant Surgeon. Detached from the *Annapolis* and ordered to the Naval Hospital, Mare Island, Cal., for treatment.

FITZSIMONS, PAUL, Medical Director. Ordered to the Navy Yard, Washington, D. C.

GREEN, E. H., Medical Inspector. Detached from the *Kentucky* and ordered to the *New Orleans*.

LEDBETTER, R. E., Assistant Surgeon. Detached from the *Newark* and ordered home to wait orders.

MCCLANAHAN, R. K., Assistant Surgeon. Ordered home and granted sick leave for three months.

MCDONNOLD, P. E., Assistant Surgeon. Detached from the *Olympia* and ordered home to wait orders.

MUNSON, F. M., Assistant Surgeon. Detached from the *Frolic* and ordered to the Naval Station, Pollok, P. I.

PLUMMER, R. W., Passed Assistant Surgeon. Detached from the *Maine* and ordered to the *Bancroft*.

PRYOR, J. C., Passed Assistant Surgeon. Detached from the *Bancroft* and ordered home to wait orders.

SCOTT, S. L., Assistant Surgeon. Detached from the Naval Museum of Hygiene and Medical School and ordered to the *Massachusetts*.

TRAYNOR, J. P., Assistant Surgeon. Detached from the Naval Station, Pollok, P. I., and ordered to the *Frolic*.

The following named assistant surgeons have been detached from the Naval Museum of Hygiene and Medical School and ordered to the Asiatic Station, via the *Solace*: F. W. S. DEAN, J. P. DE BRULER, J. R. DYKES, A. J. GEIGER, C. C. GRIEVE, W. S. HOON, W. H. RENNIE, and W. W. VERNER.

The following named medical officers, having been detached from the Naval Museum of Hygiene and Medical School, have received orders as follows:

ABEKEN, F. G., Assistant Surgeon, to the naval training station, San Francisco, Cal.

DESSEZ, P. T., Assistant Surgeon, to the Naval Academy, Annapolis, Md.

ELY, C. F., Assistant Surgeon, to the Naval Academy, Annapolis, Md.

DORSEY, B. H., Assistant Surgeon, to the *Illniois*.

MANCHESTER, J. D., Assistant Surgeon, to the *Columbia*.

MCLEAN, A. D., Assistant Surgeon, to the *Alabama*.

KOHLHASE, O., Assistant Surgeon, to the *New York*.

PEASE, T. M., Assistant Surgeon, to the *Hartford*.

PUGH, W. S., JR., Assistant Surgeon, to the *Prairie*.

RANDALL, J. A., Assistant Surgeon, to the *Maine*.

REEVES, I. S. K., Assistant Surgeon, to the *Minneapolis*.

RIDER, C. E., Assistant Surgeon, to the *Missouri*.

RIGGS, R. E., Assistant Surgeon, to the *Newark*.

ROSSITER, P. S., Assistant Surgeon, to temporary duty at the naval recruiting station, Baltimore, Md.

SMITH, W. B., Assistant Surgeon, to the *Olympia*.

SUTTON, R. L., Assistant Surgeon, to the Bureau of Medicine and Surgery.

WOODWARD, J. S., Assistant Surgeon, to temporary duty at the Naval Proving Ground, Indian Head, Md.

Births, Marriages, and Deaths.

Born.

PAGE.—In Malahi Island, Philippine Islands, on Monday, February 8th, to Dr. Henry Page, U. S. A., and Mrs. Page, a son.

PENCE.—In Fort Monroe, Virginia, on Saturday, March 19th, to Dr. William Perry Pence, U. S. A., and Mrs. Pence, a son.

Married.

GARRETT—MCCLURE.—In Frankfort, Kentucky, on Saturday, March 19th, Dr. Nevil McClure Garrett and Miss Julia B. McClure.

HARBAN—HAZELL.—In Washington, D. C., on Wednesday, March 16th, Dr. Louis Lee Harban and Miss Grace Worthington Hazell.

HUDSON—JOHNSON.—In Baltimore, Maryland, on Wednesday, March 16th, Dr. William B. Hudson and Miss Katharine J. Johnson, both of Washington.

RODMAN—CASTELBERG.—In Baltimore, Maryland, on Sunday, March 20th, Dr. Harry Rodman, of New York, and Miss Stella Castelberg.

SLATER—RABOLD.—In Philadelphia, Pennsylvania, on Wednesday, March 16th, Dr. S. Wishart Slater and Mrs. M. L. Rabold.

STAPLES—KNOWLTON.—In Washington, D. C., on Wednesday, March 16th, Dr. Aubrey H. Staples and Miss Maude Knowlton.

Died.

CAMPBELL.—In Kansas City, Kansas, on Friday, March 18th, Dr. Farquhard Campbell, in the forty-eighth year of his age.

DUPERIER.—In New Iberia, Louisiana, on Thursday, March 24th, Dr. Alfred Duperier, in the seventy-eighth year of his age.

DUFF.—In Allegheny, Pennsylvania, on Wednesday, March 23rd, Dr. Josiah S. Duff, in the forty-ninth year of his age.

GORDON.—In Hobart, Indiana, on Tuesday, March 8th, Dr. P. P. Gordon, in the seventy-first year of his age.

HARMON.—In Waterloo, Iowa, on Tuesday, March 15th, Dr. John B. Harmon.

HEIBERG.—In Northfield, Minnesota, on Friday, March 18th, Dr. A. O. Heiberg.

IRVING.—In Newark, New Jersey, on Saturday, March 19th, Dr. Frank K. Irving in the thirty-sixth year of his age.

JANNEY.—In Winchester, Virginia, on Sunday, March 20th, Dr. John Edward Janney in the fifty-first year of his age.

JANUARY.—In Crowley, Louisiana, on Thursday, March 17th, Dr. Derrick P. January, in the sixty-sixth year of his age.

MCKAY.—In Dallas, Texas, on Wednesday, March 23rd, Dr. David McKay, in the seventy-third year of his age.

MUGUET.—In Louisville, Kentucky, on Friday, March 18th, Dr. Francois Muguet, in the eighty-fifth year of his age.

OSGOOD.—In Chicago, Illinois, on Sunday, March 20th, Dr. William O. Osgood.

PALMER.—In Brunswick, Maine, on Friday, March 18th, Dr. Nathaniel T. Palmer, in the eighty-eighth year of his age.

RIMES.—In Savannah, Georgia, on Monday, March 21st, Dr. William B. Rimes, of Pembroke, in the thirty-seventh year of his age.

ROBISON.—In Milledgeville, Georgia, on Friday March 18th, Dr. Winfield R. Robison, in the sixty-third year of his age.

SEIP.—In Easton, Pennsylvania, on Monday, March 21st, Dr. Amos Seip, in the eighty-second year of his age.

SMALL.—In Chicago, Illinois, on Tuesday, March 15th, Dr. Henry Newell Small, in the sixty-third year of his age.

TAYLOR.—In New Orleans, Louisiana, on Friday, March 18th, Dr. Benjamin F. Taylor, in the eightieth year of his age.

WATKINS.—In Brooklyn, N. Y., on Thursday, March 17th, Dr. Thomas W. Watkins, in the seventy-sixth year of his age.

New York Medical Journal
AND
Philadelphia Medical Journal.
CONSOLIDATED.

A Weekly Review of Medicine

VOL. LXXIX, NO. 15. SATURDAY, APRIL 9, 1904 WHOLE NO. 1323.

Original Communications.

THE WIRING OF BONE FOR RECENT AND UNUNITED FRACTURE WITH REPORT OF CASES.*

BY STEWART LEROY McCURDY, M. D.,

PITTSBURGH, PA.,

PROFESSOR OF ORTHOPÆDIC AND CLINICAL SURGERY, WEST PENN MEDICAL COLLEGE; PROFESSOR OF ANATOMY, ORAL, AND GENERAL SURGERY, PITTSBURGH DENTAL COLLEGE; ORTHOPÆDIC SURGEON, PRESBYTERIAN HOSPITAL; SURGEON P. C. C. AND ST. L. RAILWAY.; ETC.

When a fracture does not unite promptly the condition is known as *delayed union;* after the course of six weeks or two months there may be evidence of union, and the bone may eventually become solid. Certain fractures on the other hand remain ununited indefinitely.

The frequency of non-union occurs in individual bones in the following order: humerus, tibia, femur, radius, and ulna. Non-union occurs once in about five hundred fractures.

The causes which may interfere with the normal process of repair are general constitutional depravity following acute sickness, exhaustion from hæmorrhage or deficient nutrition to the bone from local causes, diseases of the bone and blood vessels, nonadjustment of the fragments, or the intervention of soft structures between the ends of the fragments. Another source of interference with union lies in meddlesome doctors, who, not being sure whether the bones were properly adjusted at the time of the accident, frequently remove the dressings out of curiosity to inspect, and, by so doing, jostle the ends of the bones. The bandages may be too tight, interfering with the circulation to the parts, or they may be too loose, allowing mobility, both of which conditions may cause non-union. In cases of nonunion, the ends of the bones become round and may be separated and the medullary canal is closed. Atrophy of the soft parts is generally found.

In all cases of six months' standing or more, the only method which promises union is by cutting down on the fracture, freshening the ends of the bones by sawing or otherwise, and securing them by one of the various methods. For this purpose, nails, ivory pegs, kangaroo tendon, and wire have been used. In the writer's opinion, the latter method is the one *par excellence*, which under every condition positively secures temporary adjustment of the fragments, resulting in union when this is possible.

It has been my practice for some time to leave the bones down in their normal position while wiring, so as to preserve their nutrition. When the end of a bone is poked out through the wound during sawing, drilling, and insertion of the wires, there must necessarily follow much damage to the periosteum; the muscle and fascial attachments are torn away for some distance and damaged further back; and when the bone is returned into the wound and adjusted, union is less likely to take place, and necrosis of the ends that have been wired quite frequently follows.

The method of wiring with the bones down in the wound and *in situ* may be described as follows: An incision is made over the fracture, sufficiently long to permit the removal of the ends of the bones. The ends of the bone should not be sawed off unless they override or are uneven. When they are soft and covered with callus, they can be removed with a Macewen or other chisel. When a saw is necessary to square the ends, or when they override, a Gigli wire saw is just the thing, since it can be used down through a very narrow wound. To protect the sides of the wound, shoehorn retractors are better than the usual instruments, since they are concave and permit more freedom for the saw, and more protection to the soft tissues.

In wiring bones it is not necessary to pass the wire entirely through the bone, and indeed it is not desirable. I witnessed a wiring recently, in which not only were the periosteum and soft tissues stripped from the bone well back on the surface, but in drilling and wiring, the medullary substance was dug out from the central canal for nearly an inch. It is needless to say that union did not take place in this case. How could it?

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* Read before the American Orthopædic Association, at Washington, D. C., May 14, 1903.

I have been for some years passing the drill through the external surface half an inch from the end, obliquely through to the medullary margin and out. Two wires are used instead of one. The first as far around on one side of the bone as the tissues will permit, and the second around on the opposite side. These points will usually be about one third of the circumference of the bone apart. The wire is passed through the other side of the bone from within outward, while the first is passed from without inward toward the medullary canal. With care, the medullary substance is not disturbed to speak of, and the nutrient vessels remain intact. True, there is no wire on the under side to hold the bones, but this has not been found necessary. In every instance where it could be produced, broom wire No. 20 or 22 has been used instead of silver, and in no case has this material caused the slightest irritation.

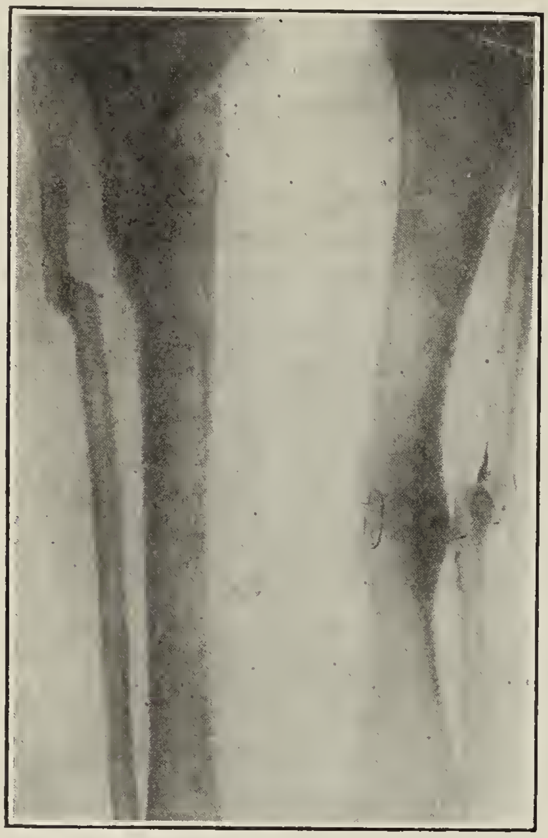
Fig. 1.—Four compound fractures of legs. Iron wire shown in left tibia.

The principal argument in favor of the use of iron instead of silver as a material for wiring bones, and in every department of surgery where silver is used, is that iron is a normal constituent of the blood, while silver is not found in the system, except in combination, and then only during transit through the body.

Physiological studies show that substances that are normal constituents of the blood are less irritating than those not found in the system.

Silver has such an affinity for sulphur that it is capable of extracting it from any compound in which it is found. The blackening of silver wire after it has been in the tissues for a time, proves beyond any question the formation of silver sulphide as a result of the union of the metal with the sulphur abstracted from the albuminous compounds of the tissue. A homely illustration known to all is shown in the action of a boiled egg upon a silver spoon.

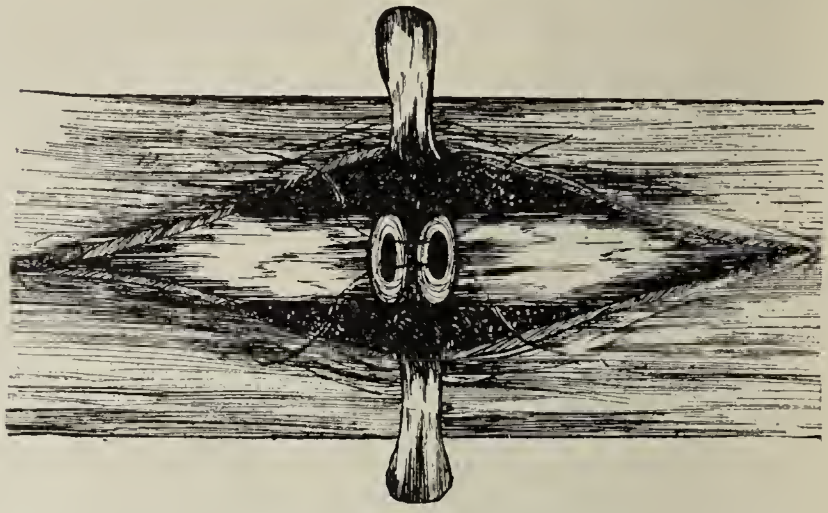
Fig. 2.—Shows wire through ends of bones ready to be twisted.

Silver sulphide, as well as all other compounds of silver, is physiologically active when applied to tissues or absorbed; so that irritation from the presence of silver wire in the tissues, when chemically acted upon by the constituents of the body, must necessarily act as an irritant. In the absence of any knowledge to the contrary, we are justified in assuming that no new combinations of iron, other than those from oxidation, are formed.

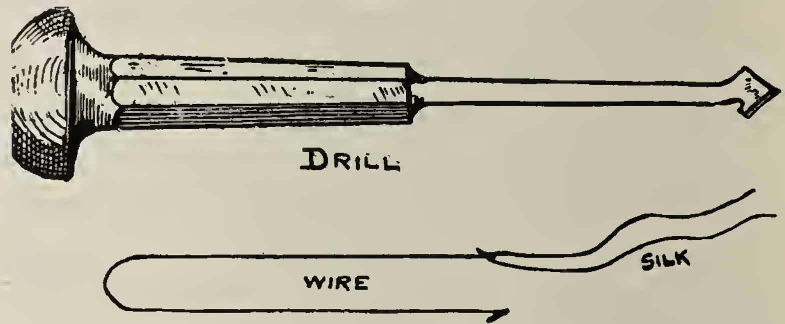

Fig. 3.—Notched drill, wire and silk and method of attaching them.

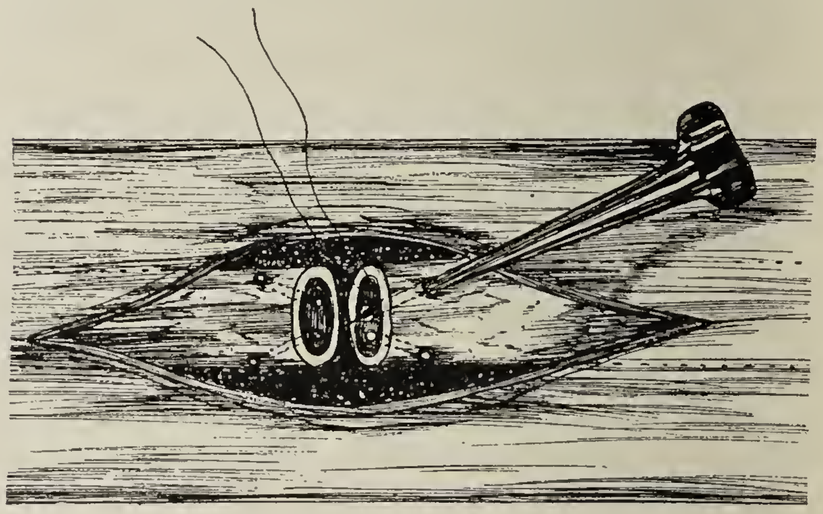
Fig. 4.—Shows diagrammatically the method of loading the drill hole with the wire as the drill is withdrawn, as well as other steps in wiring.

Specimens taken from the tissues and wires in the mouth for weeks, used to wire fracture of the mandible, are removed as bright and smooth as when they were used, showing that oxidation has not occurred.

Another objection to silver wire is that it is not sufficiently strong to permit the twisting necessary to draw the bones together. Even when the bones are properly adjusted, the slightest lateral motion generally breaks the silver wire. Broom wire, properly tempered, can be twisted so that the bones can be drawn together and held there with sufficient firmness to prevent considerable lateral motion. I remember wiring a tibia in the upper third for recent fracture, and the silver wire used was broken three times before a splint could be secured to hold the bones in line.

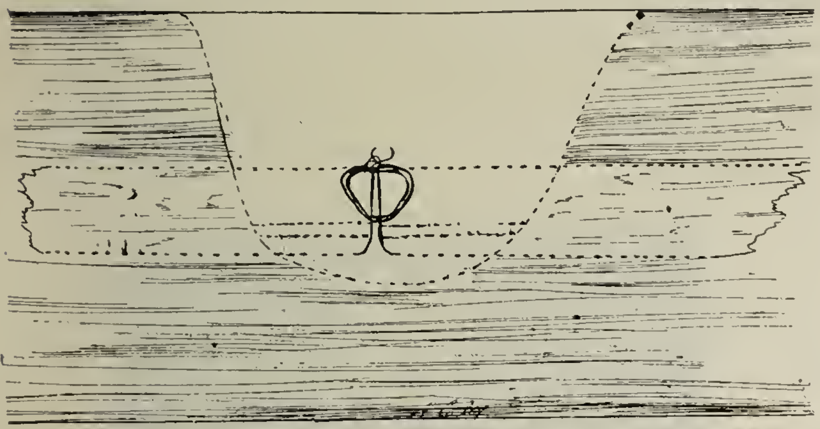

Fig. 5.—Shows bones adjusted after twisting wires.

Herewith is submitted a knee joint, wired after excision, and in four months amputation was performed on account of the extension of the disease up the shaft of the femur. It is shown that the wire is just as bright as when it was introduced.

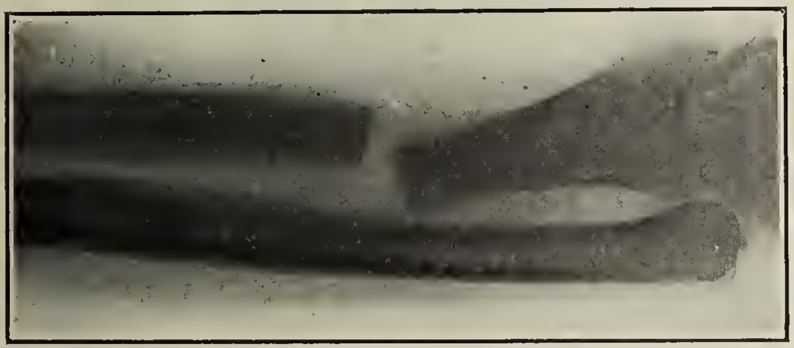

Fig. 6.—Usual deformity in fracture of the shaft of the radius.

The x ray picture (Fig. 1) shows iron wires that had been in the tissues about two years when it was taken. Silver wire was used in the right leg in the case shown in the radiograph, and I removed it after it had ulcerated through the skin. The two legs were not wired at the same time, which accounts for the two materials being used in the same patient. It will also be observed that where a proper bone wiring was done, alignment and union are perfect, while in the fibular fractures, lateral displacement is found. This condition would have been avoided if wiring had been done.

I could report many cases where nothing but iron wire has been used in my practice for six years, except when it could not be obtained. In every instance where silver wire was used it invariably came to the surface and required removal.

I have wired seventeen fractures of the mandible and in all but the first three, iron wire was used, and in no instance did the wire cause the least particle of trouble.

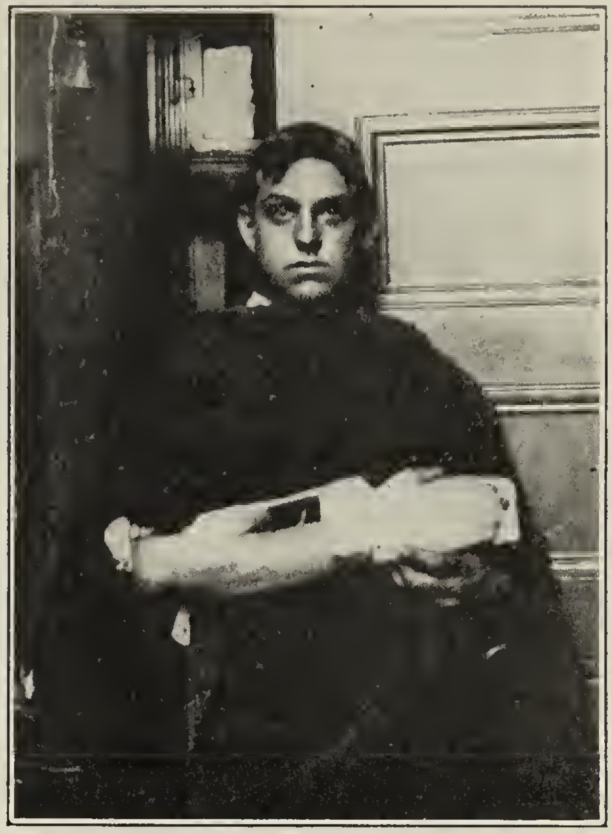

Fig. 7.—Photo of a patient, showing how bone was wired to external bridge.

Fig. 2 shows the method of passing the wires through the bone, at the same time allowing the bones to rest in the depth of the wound.

Fig. 3 shows the notched drill, the wire and the silk, and the method of attaching them.

Fig. 4 shows diagrammatically the method of loading the drill hole with the wire as the drill is withdrawn, as well as other steps in wiring.

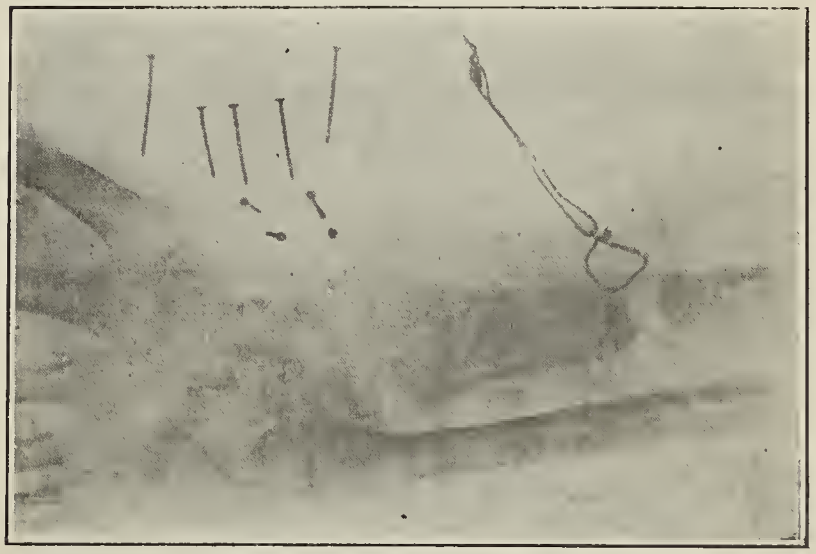

Fig. 8.—Skiagraph of same.

Anchoring bones to external bridge work by means of wire has not, so far as I know, been used; or if used, no report of such a procedure has come to my notice. In many instances where bones have remained ununited for months, the ends are in abnormal positions and the soft tissues are correspondingly distorted and shortened; consequently when a wiring is made there is a tendency to return to the abnormal position, so that when repair does take place, the bone shows an angle. This is especially true of the bones of the forearm. The case in the skiagraphs illustrates this condition beautifully (Fig. 6).

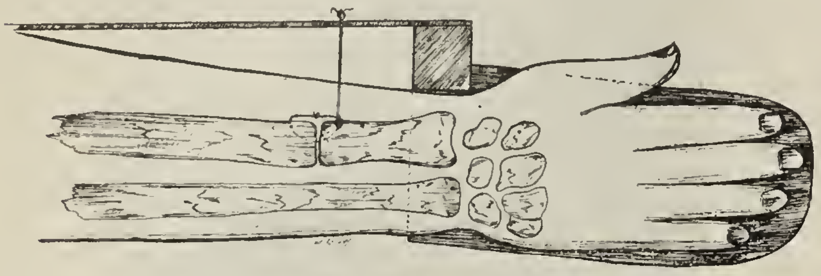

FIG. 9.—Pen drawing of same.

The radius was fractured a year before, and one wiring had been done; but the ends of the bone dropped back against the ulna. The only means that occurred to me by which the bones could be held in line was by securing the wire to the bone that had a tendency to drop back into the wound and allowing the wires to pass through the incision to an external bridge which extended from the wrist to the forearm near the elbow. (Figs. 7 and 8 and 9.) No complications arose and the bones remained in line.

The chisel shown in Fig. 10 is to take the place of the cross-cut or Gigli saw. It is made quite heavy so that it can be used without a mallet. The cutting edge is rounded, so that no great damage is done to the soft tissues beyond the bone. It has been a most satisfatcory instrument to me.

CASE, 42.—D. W., aged thirty-seven years: The contents of a shotgun had passed through the arm internally to the thickest portion of the biceps and made its exit near the insertion of the deltoid. The humerus was entirely torn off. The patient favored amputation at my first visit, but we concluded to adjust the fracture and wait for results. The bones showed no signs of union, and the case was complicated by a severe hæmorrhage three weeks after the injury, and at this time the patient insisted upon amputation. He was assured that amputation was not demanded, but instead excision and wiring were advised, which operation was done at this time. Two inches of the bone were removed, and the bones adjusted with wire. The ends of the bones were ragged and showed no evidence of repair. The patient from the date of wiring did not have an unfavorable symptom, and in six weeks was entirely healed. The man is a farmer and has made a full hand at every kind of work ever since. The two inches of shortening did not interfere with this in the least. (See Fig. 11.)

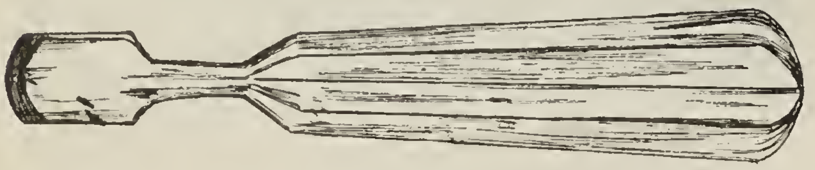

FIG. 10.—Chisel used to cut the ends of bones off, in depth of wound, no saw is required.

CASE 41.—H. B., aged thirty years, brakeman, received an injury of his left thumb while making a coupling. The muscles of the palmar surface of the thumb were practically torn off. Preparation was made to amputate. While my assistant was anæsthetizing the patient, it occurred to me that wiring might save the thumb, and the latter operation was done. In six weeks the wound was entirely healed, and in three months the thumb was as well as the extensive laceration of the muscles would permit.

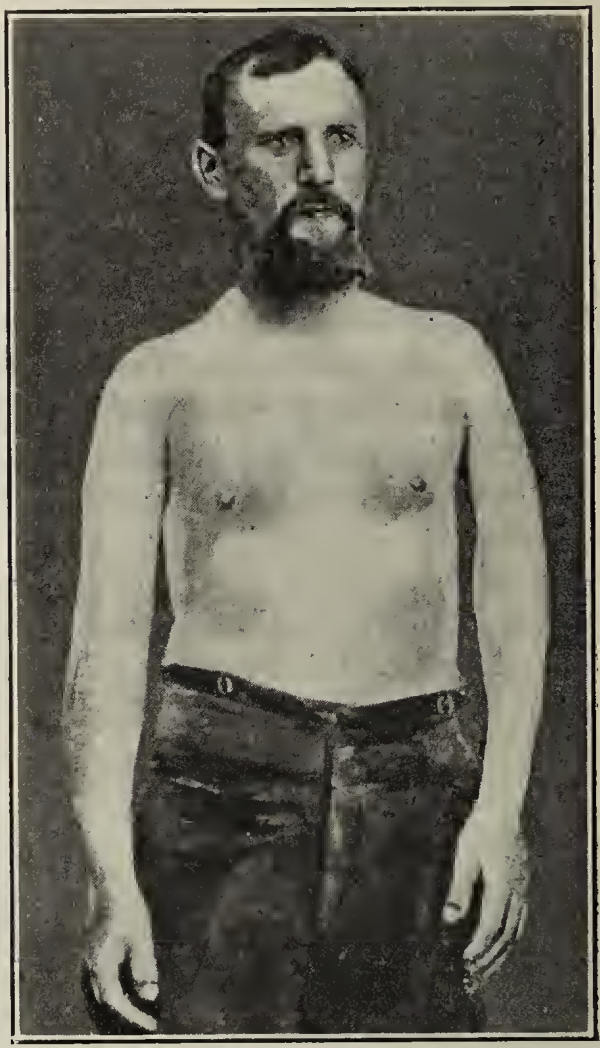

FIG. 11.—A patient, showing results of removal of two inches of humerus, with wiring and union.

CASE 40.—Mr. P. F., aged thirty-five years, was thrown from a carriage and sustained a dislocation of the left shoulder and fracture of the clavicle. After reduction of the dislocation the shoulder recovered promptly. This displacement of the fragments in the fractured clavicle was so great that no effort was made by nature to repair the injury. About six months after the original injury, he was again injured and the shoulder was dislocated. The ununited fracture of the clavicle was more or less disturbed. The fracture was painful at all times when the arm or shoulder was moved. The internal end of the external fragment appeared to be sharp, and the patient, if he had the power in the arm, could not work on account of the pain caused by the motion.

A study of the anatomy of the parts (Fig. 12) shows that the free end of the under fragment was pushed down on the tissues overlying the subclavian artery and brachial plexus, whenever the arm was elevated. Operative interference was advised for two reasons: First, that union of the bones might be secured; and secondly, that the pain caused by the projecting end of the bone might be relieved.

Operation: Free longitudinal incision was made along the clavicle and the ends were dissected out. The ends were sawed off by the use of a chain saw. The bones were drilled and brought together with silver wire.

Result: Union was perfect, and the wound healed without suppuration. The arm is practically as good as before the injury.

The wire was subsequently removed. Silver wire was used.

Case.—A. G., shown in Fig. 1, aged forty-two years, while standing on the track was struck by a locomotive, and sustained four compound and one simple fracture as follows: Simple of left humerus, two inches below the shoulder; compound oblique fracture of left tibia, the highest point of the fracture being on the inside of the bone, one inch below tubercle of tibia, the direction being downward and outward for four inches; the fibula was fractured about four inches from its head; the right tibia sustained a compound comminuted fracture in the middle third. Several pieces of bone were removed, amounting in all to two inches. The right fibula was fractured at the same place.

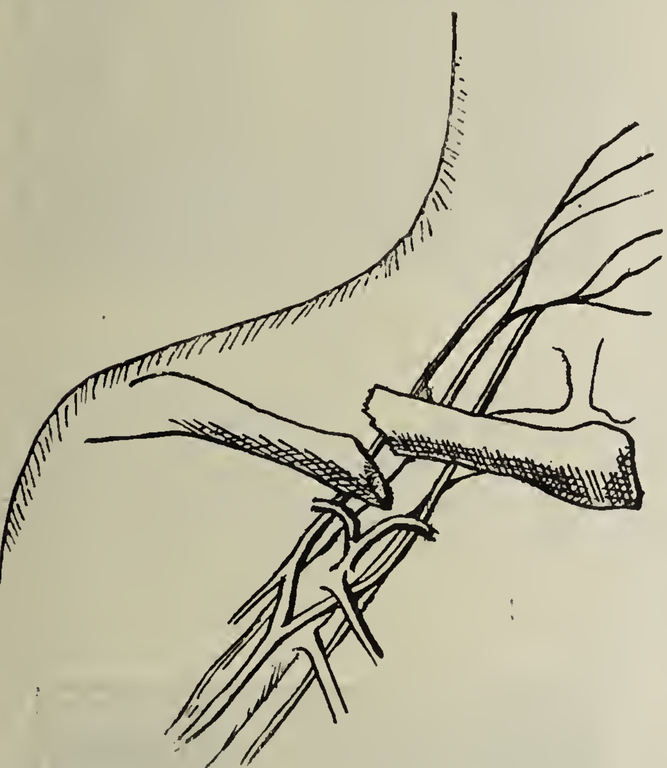

Fig. 12.—Fracture of clavicle, showing usual displacement. Wiring followed by union.

Operation consisted in wiring the left tibia, since the obliquity of the fracture and extensive laceration of the tissues prevented adjustment. The left fibula was not wired since the adjustment appeared satisfactory. Two inches of the right fibula had to be removed, so as to permit the approximation of the ends of the tibia. In two months, union in the left leg had taken place both in tibia and fibula. In right leg, however, no union had occurred in the right tibia. Sufficient time having elapsed for union to have taken place if it was going to, wiring was done and in another two months, union was complete. Silver wire was used in the left leg and it ulcerated through the skin and was removed. Broom wire No. 22 was used to secure the right tibia. This wound promptly closed after the operation and has remained so now six months. The result is shown in photographs. This man walked five miles two months after leaving the hospital and suffers very little inconvenience from his injuries.

Case.—Willshaw Kocherite, aged twenty years, fracture of left femur near hip. There was no effort toward union at the end of the two months, and wiring was advised. It was found that the upper fragment was entirely above the lower and it had passed the other fragment at least one inch. Wiring consisted in the removal of the ends of the bones with a Gigli saw. The cut through the upper fragment was one-half inch from the lesser trochanter. As may be observed, it would be impossible to turn the short upper fragment out through the wound, as is the usual practice, because of the resistance offered by the muscles passing from the pelvis to the posterior side of the bone. Besides, the soft tissues about the orifice of the wound could not be pushed aside sufficiently to permit it. Broom wire was used and it was passed half way through the bone in two places, about one-third of the circumference of the bone apart. Union followed, and in ten weeks the patient left the hospital walking, and refusing to use crutches.

CONCLUSIONS.

The following recommendations are made:

(1) Wiring of bone while the ends remain down in their normal position, thus preserving the nutrition, preventing necrosis, and guaranteeing union.

(2) The use of iron instead of silver wire.

(3) Anchoring of bone fragments to external bridgework to hold them in position during repair.

(4) Presentation is made of an instrument used to cut the ends of the bones.

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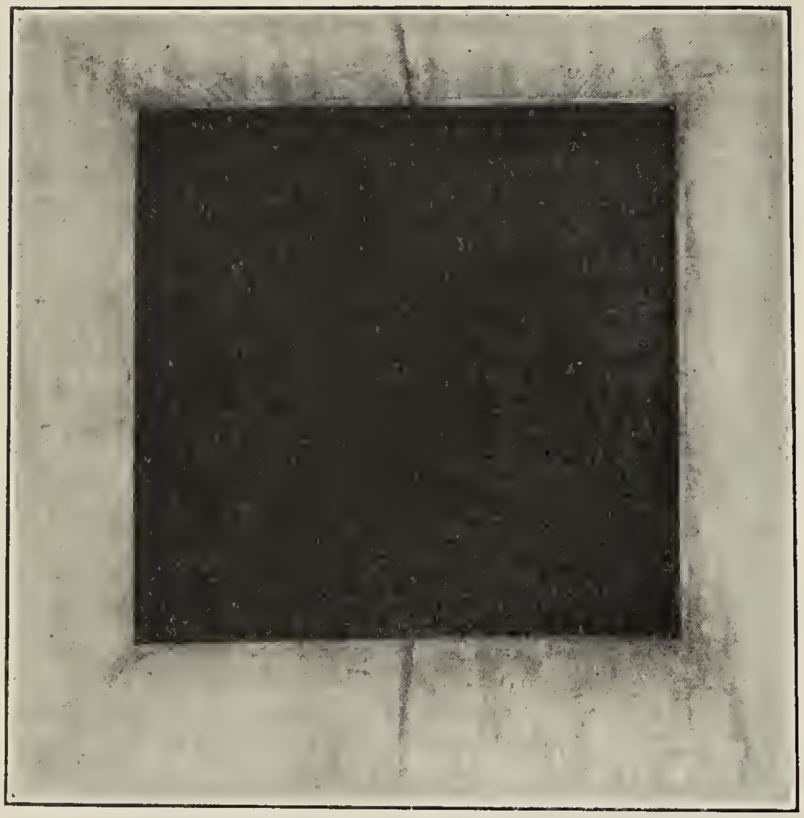
The New Providence Hospital, recently completed at a cost of $1,000,000, was formally opened at Washington, D. C., on March 15th, with speeches delivered by Secretary of War William H. Taft, Cardinal Gibbons, Surgeon General Sternberg, Dr. J. W. Bayne, and others prominent in national and international affairs. In addition to the speeches there was a formal reception held by Cardinal Gibbons, in which he was assisted by Sister Elizabeth and wives of the members of the medical staff and board of visitors. At the conclusion of the exercises a collation was served, and visitors were asked to inspect the hospital. Many Congressmen, and others prominent in official life of the capital, were present and took part in the ceremonies. From the War Department there were present Lieutenant General Adna R. Chaffee, General Wyman, and General Breckenridge. The following comprises the board of resident physicians: Dr. J. W. Bayne, Dr. John C. Diggs, Dr. James Grady, Dr. S. Warren Howard, Dr. Alfred F. Hopkins, Dr. Francis McQuillan, and Dr. Joseph Mundell.

SKIAGRAPHIC ERRORS: THEIR CAUSES, DANGERS, AND PREVENTION.

By LEWIS GREGORY COLE, M. D.,
NEW YORK,
SKIAGRAPHER TO THE ROOSEVELT HOSPITAL.

(*Concluded from page 641.*)

Probably no other errors have caused so much general dissatisfaction with skiagraphy as have those described in Figs. 13, 14, and 15. My attention was called to this particular point by having an oblique fracture of the tibia with slight anterior displacement of the lower fragment, which I could not reduce by manipulation. Mensuration showed no shortening of the bone, so I put it up in a plaster cast. The patient wanted an x ray taken, and the next time I saw him he had a skiagraph showing a distinct overriding of the fragments. I thought, of course, that the fragments had slipped, so I removed the cast and found them in the same position as when I put them up. I made careful measurements of the tibia and found no shortening, so I put it back and the patient made a good recovery, but he still has that x ray showing overriding of the fragments.



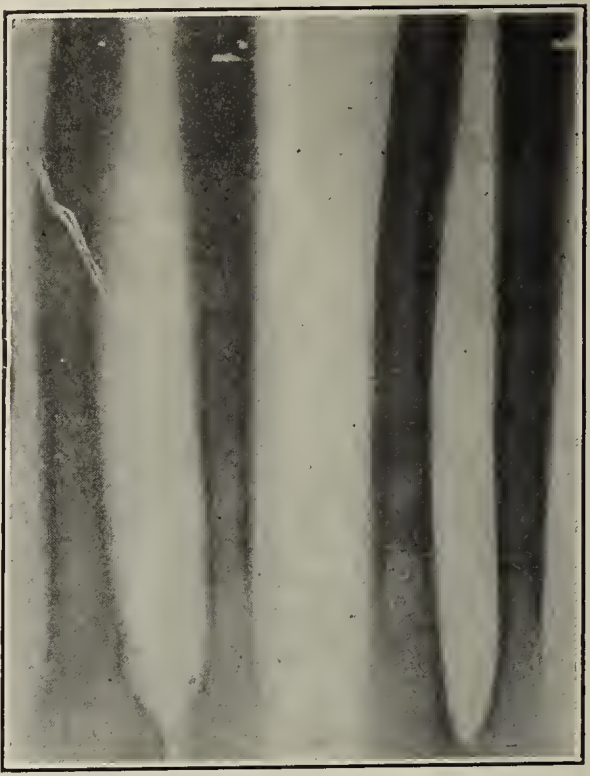
Skiagraph I.

It was not until some time afterwards that while watching the silhouettes of bones with the light and paper in different positions I discovered the cause of the apparent overriding in that case.

The tube had been placed distally to the line of fracture, and the shadow cast by the lower anterior fragment was further up than that cast by the upper posterior fragment.

If I had tried to reduce that overriding and had succeeded, soft parts would have become interposed and delayed union, or nonunion would have resulted. As it was, he made a good recovery with no shortening, but he had a skiagraph that he could present to a jury as positive proof of an overriding there for shortening and deformity.

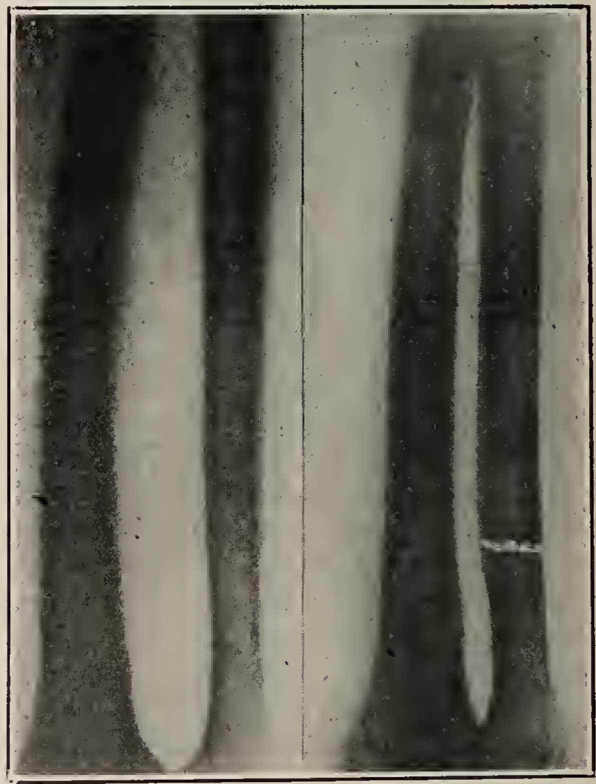
Skiagraph I represents a cubic block of wood, showing the shadows cast by the upper and lower surfaces, as described under Fig. 1, page 635.



Skiagraph II.

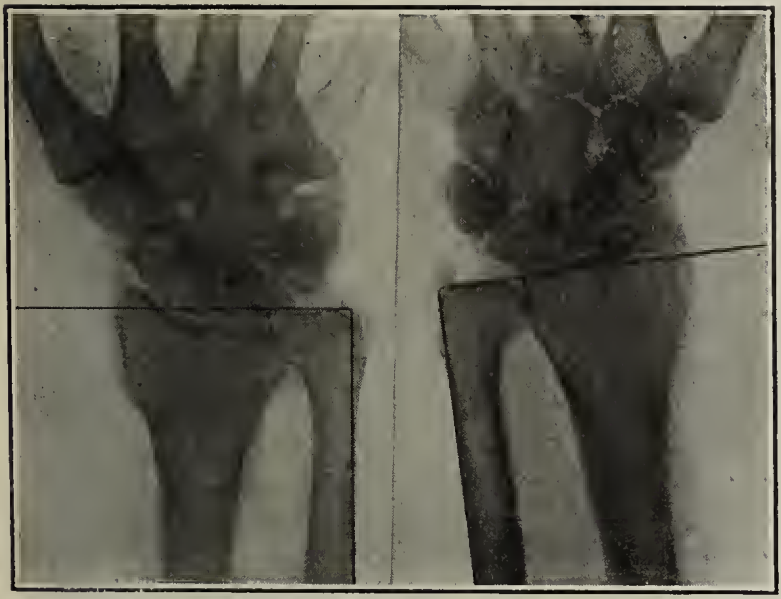
Skiagraph II represents both bones of a forearm, showing a fracture of the radius with a bowing outward, when compared with the normal arm.

Skiagraph III represents both bones of the forearm with a fracture of the ulna, the bones being pushed closer together than in the normal arm.



Skiagraph III.

Skiagraph IV represents a typical Colles's fracture three years after injury, and long after the line of fracture had ossified. I have failed in finding any one who could say whether or not it was normal until he compared it with the skiagraph IV B of the normal wrist, and I have also failed in finding any one who could not detect the deformity when compared with the normal side.

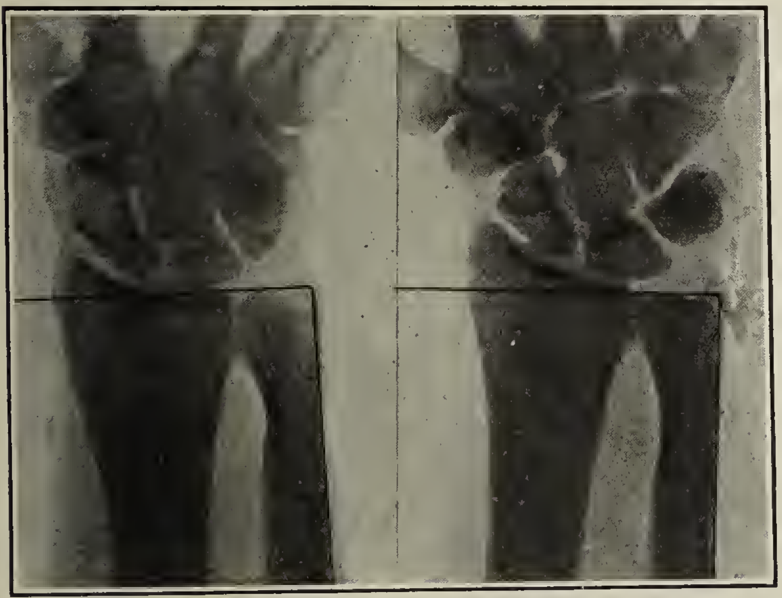


Skiagraph IV. IV B

If the tube, plate, and bones are in the same relative positions the relation of the base of the radius to the head of the ulna must be the same in one as in the other. If not, you have a bony deformity.

To compare the relation of the two bones draw a line parallel to the outer edge of the ulna and another at right angles to this at the articular surface of the head of the ulna. Then notice what relation the base of the radius bears to this line.

In the normal bone the styloid process of the radius extends ½ to ¾ inches below this line, and the centre of the articular surface is ⅛ of inch below it. If we do the same on the skiagraph of the injured side we find that the centre of the articular surface is ⅛ of an inch behind or above, showing ¼ inch shortening in the radius. The deformity here is obvious, even to one unfamiliar with skiagraphs, and it shows the deformity, which is far more important than merely showing a fracture.



Skiagraph V.

Skiagraph V represents another case that shows the same deformity.

If we draw a line parallel to the ulna and another at right angles, as described in Skiagraph IV, we shall find that the radius bears the same relation to the transverse line as it does in Skiagraph IV, showing the same deformity and the same permanent injury. Now, the skiagraphs, V are of my own arm, both made of the same arm and within fifteen minutes, and my arm never was fractured, and yet it shows just as perfect a Colles's fracture with deformity as the other skiagraphs, which were of a typical Colles's fracture. All the skiagraphs of bones, except No. IV A, are of absolutely normal arms, and fractures represented in them are artificial, and the deformity is due to skiagraphic errors.

The photograph shows the best position for the patient when having a skiagraph of the forearm taken, viz., the arm raised to the height of the shoulder, the forearm flexed to a right angle, the plate horizontal and the arm flat on the plate. The ruler shows the distance of the anode from the plate, and the plumb line shows that the anode is over the centre of the forearm.

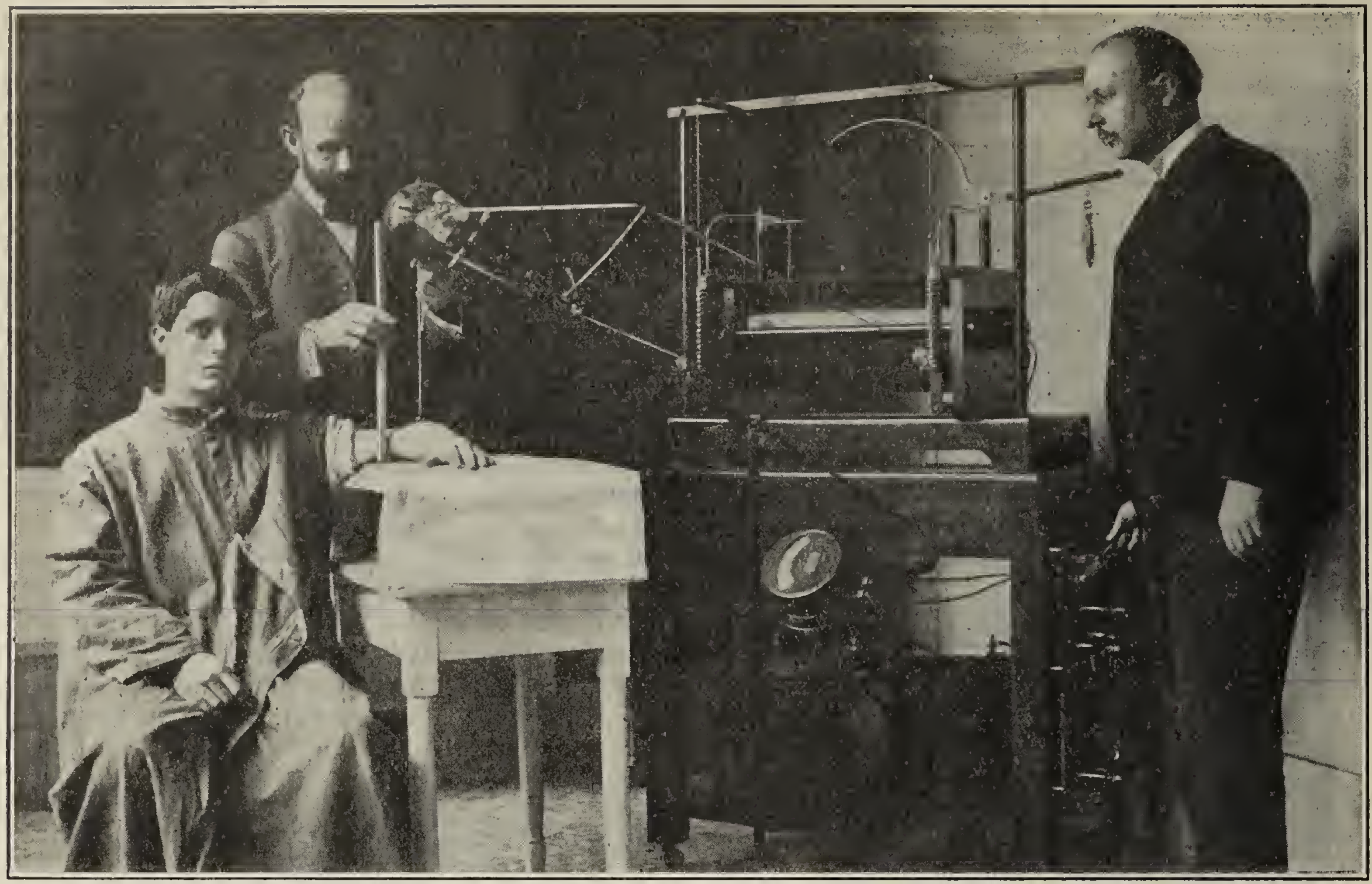
RÉSUMÉ.

After looking through this article and seeing that the predominating features are errors, one may wonder where one stands on the question of x ray, and well he may. It may be well to recapitulate, and in doing so I will state where I stand.

The field of usefulness of the x ray in fractures and bony deformities resulting therefrom is divided into two parts:

First, in cases of injury of doubtful diagnosis, especially when the injury is near a joint, to determine whether or not there is a fracture, and if so what it is. This field has been pretty well covered in the past, but there are many cases of fracture near a joint that pass undetected and untreated unless revealed by a skiagraph. In many cases there are small fragments chipped off the articular surface of the bones, and they are not allowed to unite, because the part is not put at rest. Afterward they set up a synovitis that is hard to treat. If you are sure of a fracture, it is far less necessary to have a single skiagraph made to show that fracture than it would be to have a skiagraph made of a part which we have often diagnosticated simply as contusion or sprain, because many times these contusions or sprains prove to be fractures of small fragments from the articular surface of the bones. To show these fractures it may be necessary to move the tube, plate, and limb, in several different positions before we can detect the fracture, but a skiagraph so taken must not be interpreted as representing the relative positions of the fragments.

We use that skiagraph simply to show the fracture, and when it has done that, its field of usefulness is over.



Photograph showing the best position for skiagraphy of the forearm.

Secondly, a still broader and far more important field is to show whether or not there is any deformity, and if so, what it is.

A skiagraph does not need to be taken at the time of injury to show this. Indeed, for medical-legal purposes a skiagraph taken two, three, or four years after the injury will show the same deformity that eixsted two or three weeks after the injury was received, and a skiagraph taken before that time is absolutely worthless to show permanent injury, because up to that time the fragments are freely movable. A skiagraph may be made and the deformity may afterwards be reduced. The skiagraph made before the reduction, however, may be presented to a jury as representing the permanent bony deformity. To show this deformity best we must resort to what we might call comparative skiagraphy. It is unjust to ask a physician, or even a surgeon, to compare a skiagraph of an injured limb with his recollection of the bones as he studied them in his student days, and to say whether there is deformity or not.

It is equally untrustworthy to compare an individual skiagraph with a description or composite picture in an anatomy book. Nor is it safe to compare a skiagraph of a part of one person with the corresponding part of another.

There is but one thing to compare it with, and that is the corresponding normal part of the subject.

You may say that this has been done, and so it has, with even worse results than with the methods before mentioned, because here we have something to compare and we can detect even the slightest differences in the two skiagraphs, and unless we prevent each and every one of the light errors that may occur, it is impossible to say whether the difference is due to bony deformity or skiagraphic errors.

If the plate is horizontal and the part to be skiagraphed is flat on the plate in such a position that the bones will be as near the plate as possible, and if the tube is vertically over the point of fracture or deformity, we get the best possible picture of the part. But this is not enough. We must have a skiagraph of the corresponding normal part with the tube, plate, part to be skiagraphed, and the relation of the part to the body as a whole, *in exactly the same relative position as in the skiagraph of the injured part.*

If this is done *with mathematical accuracy*, you can show any deformity that may exist, even to a one sixteenth of an inch, and know that this is a real deformity and not a skiagraphic error. The results will then be far more satisfactory to the physician or sugreon. It will also put skiagraphy on a scientific basis and broaden the field of its usefulness.

936 WEST END AVENUE.

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Western Kentucky Asylum for the Insane.—The contract to furnish plans and specifications for the $75,000 addition to this institution has been awarded.

GUIDES TO THE PROGNOSIS IN EPILEPSY, WITH REMARKS ON THE CURABILITY OF THE DISEASE; INCLUDING REPORTS OF THIRTY-FOUR CASES.*

By WILLIAM P. SPRATLING, M. D.,

SONYEA, N. Y.,

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After an experience of fourteen years[1] in the daily care and treatment of 1,800 cases of epilepsy in persons of all ages, types, conditions, and degrees of duration of the disease, I feel justified in reaching these conclusions regarding its prognosis and cure:

First. Epilepsy is curable in from 5 per cent. to 10 per cent. of all cases.

Second. It requires, as a rule, a long continued course of treatment—never less than two to three years—carefully mapped out and executed to the letter, not only along one, but along many lines, to effect a cure.

Third. The failure to secure better results, generally, in the treatment of this disease must frequently be laid to the failure to treat the individual and his disease as a unit, and to treat them both along the very broad, comprehensive, and unyielding lines they both require.

Fourth. The drug treatment of epilepsy alone, while invaluable in many cases and of some use in every case, often fails completely to meet the most important requirements.

Fifth. Guides to the prognosis in epilepsy are always uncertain and unsatisfactory until treatment has been in operation from six to nine months, and in some cases a year or longer.

With these conclusions in view, and in order that I might present the subject it is my pleasure to discuss before you this evening in as lucid a manner as possible, I will confine my remarks largely to the interesting and important facts grouped about a series of thirty-four cases of this widely prevalent and very obstinate disease that have been cured at the Craig Colony up to this time.

The subject of epilepsy is far too vast to bring into this brief discussion anything bearing on its treatment. We must confine ourselves just now solely to results, and to the guides that may help to point them out in advance; and if I here express it as my unqualified belief that the methods in use at the Craig Colony are the best, or that we are striving to make them the best, yet devised for the treatment of the epileptic and his disease; and that our system of records prior to, and after, the patient comes under our care, is as complete as we have been able to this time make it, I do so, not with any degree of pride in such facts, but expressly to show that the gratifying results I am able to report tonight were neither carelessly attained nor haphazardly compiled.

We persistently follow cases for years; we instantly record every seizure that occurs on the colony, writing down its type, its duration, and its severity; we use manifold drugs, foods of designated kinds; forms of occupation suitable for all who are capable of it; demanding rest in some cases and in others healthy fatigue; and we measure the degree of success we attain by our ability to apply well rounded and complete forms of treatment to individuals whose visible malady is only a symptom complex, and who often require the most complex forms of treatment, covering several years' time.

Personally, I am so sure that epilepsy is curable that I am forced to feel that those (if there are any) who doubt or deny this fact, do so without having had opportunity for witnessing the results that follow lines of treatment, broadly conceived, faithfully executed, and kept up as long *as the nature of the malady requires.*

In the condensed report of the thirty-four cases that follow will be found in some detail the essential facts of interest that are dealt with in summarized form further on.

CASE 4 (Colony No.).—Male; age at onset of epilepsy, ten years; type of epilepsy, *petit mal,* occasionally *grand mal;* duration of the disease on admission, sixteen years; attacks occurred at rate of twelve to fourteen a day prior to patient's admission to the colony; total approximate number of attacks before admission, 50,000 to 60,000; mental condition, impaired, improvement noted in it shortly after patient came under treatment; aura, "confused and dizzy feeling," some moments before the fit appeared. Duration of treatment at the colony, two years and three months. Length of time patient had remained free from epilepsy on January 1, 1904, seven years and a half.

This patient had previously been mentioned in colony reports as having had approximately 25,000 seizures before his admission to the colony. A recent and more careful inquiry into his previous history indicates that he had a much larger number than that. He was admitted to the Utica State Hospital on October 2, 1884, and had, according to the records, during that month, an average of thirteen fits daily, and during the November following he had twelve fits daily. He was discharged unimproved on December 7th, the same year. He was next admitted to the St. Lawrence State Hospital on July 7, 1894. A note in the hospital records on July 10, 1894, is as follows: "Patient has had several convulsions each day since admission;" August 10th, "Continues to have convusions frequently;" August 18th, "Has had convulsions in rapid succession, stupid and weak." Discharged unimproved, October 18, 1894.[2]

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* Read before the New York Academy of Medicine on January 7, 1904.

[1] Nine years of this experience was acquired by the writer as chief physician at the Craig Colony for Epileptics, at Sonyea, N. Y.; five years as first assistant physician in the New Jersey State Hospital, at Morris Plains, an institution in which a large number of epileptics were cared for at that time (1887 to 1892); while it was also the writer's privilege to spend some time as a resident of the German Colony for Epileptics, at Bielefeld, for the purpose of studying the methods in vogue in that very successful institution, and their results.

I present this patient's record of seizures while he was at the colony. He had 222 in all, all save one occurring during the first three months of his residence there; an isolated attack, due to a preventable indiscretion, occurring after he had been at the colony four months.

Between the 12th of June, 1896 (the date on which he left Sonyea), and January 1, 1904, he had no attacks. Four years after leaving Sonyea, he wrote me: "No manifestation of the old disease has ever recurred since my leaving Sonyea. Am still employed at the same office, and have not missed a day since last writing you." Again, at the end of five years, he wrote: "I have practically forgotten that I was ever obliged to become a patient at the colony, for my health remains perfect in every way, enabling me to attend to my daily duties in the office regularly, without knowing what sickness means." A month ago—seven years and a half after his last attack—he wrote me: "I am very well. Should much enjoy looking over the 'old stamping ground' at Sonyea, where I received such a blessing."

This man now having gone more than seven years without an attack, I regard him as cured of the epilepsy he suffered from for sixteen years before he entered the colony. Should he fail, however, to live at home as he was taught and made to live at Sonyea, he may possibly suffer a second attack. I see no reason why repeated attacks of epilepsy may not follow the reapplication of causes, any more than why a person may not have two or more attacks of any other disease after exposure to the influences that produce them.

CASE 17 (Colony No.).—Female; age at onset of epilepsy, fifteen years; type of epilepsy, *grand mal;* duration on admission, two years; attacks occurred at the rate of one every two weeks prior to admission; total approximate numbers of attacks before entering the colony, 12; number after entering, 2; duration of treatment, two years and a half; mental condition, impaired; aura, none. Length of time patient was free from epilepsy to January 1, 1904, three years and a half.

CASE 50 (Colony No.).—Female; age at onset of epilepsy, six years; type of epilepsy, *grand mal* and *petit mal;* duration on admission, twenty-seven years; frequency of attacks before admission, daily; approximate total number of attacks before entering the colony, 9,758; number after entering the colony, none; mental condition, fair; aura, none. Duration of treatment, two years and a half; length of time free from attacks to January 1, 1904, five years and two months.

CASE 90 (Colony No.).—Male; age at onset of epilepsy, fourteen years; type, *grand mal;* duration on admission, two years; frequency of attacks before entering the colony—at first, six months apart; later, and at time of admission, several a month; total approximate number of attacks before entering the colony, 50; number after entering the colony, 30; mental condition, good. Patient a reformatory subject, vicious, criminally inclined; aura, epigastric. Duration of treatment, two years and four months; length of time free from attacks to January 1, 1904, five years and three months.

CASE 93 (Colony No.).—Male; age at onset of epilepsy, fifty-seven years; type, *grand mal;* duration on admission, one year; frequency of attacks before entering the colony, 1 a month; approximate total number before entering the colony, 12; number after entering the colony, none; mental condition, somewhat impaired; aura, none. Duration of treatment, two years and four months; length of time free from epilepsy to January 1, 1904, five years and two months.

CASE 138 (Colony No.).—Male; age at onset of epilepsy, sixteen years; type, *grand mal;* duration on admission, twenty-five years; frequency of attacks before entering the colony, once a week; approximate total number before entering the colony, 1,300; number after entering the colony, none; mental condition, not impaired by epilepsy—intelligence naturally of low order; aura, "flashes of light; then darkness." Duration of treatment, a year and a half; length of time free from epilepsy to January 1, 1904, five years and nine months.

CASE 157 (Colony No.).—Female; age at onset of epilepsy, nineteen years; type, *grand mal;* duration on admission, one year; frequency of attacks before entering the colony, only four, all told—the last, five weeks before admission; number after entering the colony, 1; mental condition, good—a little depressed at times; aura, none. Duration of treatment, one year and nine months; length of time free from attacks to January 1, 1904, five years and two months.

CASE 195 (Colony No.).—Male; age at onset of epilepsy, eleven years; type, *grand mal;* duration on admission, four years; frequency of attacks before entering the colony, 2 a week; approximate total number before entering the colony, 200; number after entering the colony, 109; mental condition, fair—no impairment due to epilepsy; aura, epigastric. Duration of treatment, two years and four months; length of time free from epilepsy to January 1, 1904, four years and a half.

CASE 281 (Colony No.).—Male; age at onset of epilepsy, thirty years; type, *grand mal;* duration on admission, ten years; frequency of attacks before admission, 2 a month; approximate total number before entering the colony, 250; number after entering the colony, 11; mental condition, good; aura, none. Duration of treatment, five years; length of time free from attacks to January 1, 1904, four years and a half.

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[2] I am indebted to Dr. Palmer and Dr. Hutchings, superintendents at Utica and Ogdensburg, for notes in this case.

Case 293 (Colony No.).—Male; age at onset, eight years; type, *grand mal* and *petit mal;* duration on admission, thirty-six years; frequency of attacks before entering the colony, 12 a week; approximate total number of attacks before admission, 36,000; number after entering the colony, 14; mental condition, good; aura, none. Length of time free from attacks to January 1, 1904, three years and seven months.

Case 325 (Colony No.).—Female; age at onset of epilepsy, seven years; type, *grand mal;* duration on admission, seven years; frequency of attacks before entering the colony, once a month during year preceding admission, with the exception of the last two months; approximate total number of attacks, 11; number of attacks after entering the colony, none; mental condition, good; aura, none. Duration of treatment, two years; length of time free from attacks on January 1, 1904, five years and nine months.

Case 357 (Colony No.).—Male; age at onset of epilepsy, five years; type, *grand mal;* duration of epilepsy, twenty years; frequency of attacks before entering the colony, every month; approximate total number in that time, 240; number after admission, none; mental condition, good except for some bromide stupor; aura, epigastric. Duration of treatment, one year; length of time free from attacks to January 1, 1904, five years and a half.

Case 364 (Colony No.).—Female; age at onset of epilepsy, thirteen years; type, *grand mal* and *petit mal;* duration of epilepsy on admission, two years; frequency of attacks before entering the colony—at first, 2 to 3 in twenty-four hours; at time of admission, 15 to 23 in twenty-four hours; approximate total number of attacks in that time, 4,300; number after entering the colony, 2,830; mental condition, some temporary impairment; aura, “queer feeling in the arms.” Duration of treatment, three years and a half; length of time free from attacks to January 1, 1904, four years and two months.

Case 370 (Colony No.).—Female; age at onset, twenty-one years; type, *grand mal;* duration on admission, one year; frequency of attacks before entering the colony, three only during ten months prior to admission; number after entering the colony, 4; mental condition, good; aura, none. Duration of treatment, five years and six months; length of time free from attacks to January 1, 1904, two years and seven months.

Case 382 (Colony No.).—Male; age at onset of epilepsy, eight years; type, *grand mal* and *petit mal;* duration on admission, twelve years; frequency of attacks before entering the colony, 1 a week; approximate total number in that time, 600; number after admission, none; mental condition, congenitally weak—no impairment due to epilepsy; aura, none. Duration of treatment, two years and two months; length of time free from epilepsy to January 1, 1904, five years and four months.

Case 446 (Colony No.).—Male; age at onset of epilepsy, seven years; type, *grand mal;* duration on admission, seven years; frequency of attacks during that time—at first, weekly; then once a month; approximate total number of attacks before entering the colony, 375; number after entering the colony, none; mental condition, fair; aura, headache. Duration of treatment, three years and a half; length of time free from epilepsy to January 1, 1904, five years.

Case 452 (Colony No.).—Male; age at onset of epilepsy, eight years; type, *grand mal;* duration on admission, fourteen years; frequency of attacks before entering the colony—at first, one a day; then several in one night; approximate total number in that time, 5,200; number after entering the colony, 204; mental condition, insane, pronounced delusions of persecution that lasted for two months after admission; aura, none. Duration of treatment, three years; length of time free from attacks to January 1, 1904, five months. He left the colony in January, 1902, and was readmitted four months later. From April 30 to August 8, 1903, he had 644 attacks. Has now gone five months without any.

This case typically illustrates the type of epileptic who must live in a certain manner to escape the accentuations of the disease. He may always bear a strong liability to the disease, but he need not have epileptic convulsions, so long as he lives in a way to avoid them. Freedom from epilepsy by right living should be his perpetual aim.

Case 480 (Colony No.).—Male; age at onset of epilepsy, nine years; type, *grand mal;* duration on admission, ten years; frequency of attacks before entering the colony, 1 every six weeks, about; approximate total number before admission, 180; number after admission, 2; mental condition, enfeebled; aura, dizziness, numbness in left (paralyzed) side. Duration of treatment, four years and four months; length of time free from attacks to January 1, 1904, two years and nine months.

Case 489 (Colony No.).—Female; age at onset of epilepsy, eight years; type, *grand mal;* duration of epilepsy on admission, seven years; frequency of attacks before entering the colony—at first, once a year; during the past three years, 3 to 5 a year; approximate total number of attacks before entering the colony, 20; number after admission, 4; mental condition, unimpaired; aura, none. Duration of treatment, three years and eight months; length of time free from attacks on January 1, 1904, three years and four months.

Case 517 (Colony No.).—Female; age at onset of epilepsy, nineteen years; type, hystero-epilepsy, with occasional *grand mal* attacks; duration of epilepsy on admission, one year; frequency of attacks before entering the colony—at first daily; then every two to three days; approximate total number before entering the colony, 200; number atfer entering the colony, 37; mental condition, unimpaired—patient very emotional; aura, none. Duration of treatment, three years; length of time free from attacks on January 1, 1904, three years and five months.

CASE 528 (Colony No.).—Male; age at onset of epilepsy, three years; type, *grand mal* and *petit mal;* duration of epilepsy on admission, six years and a half; frequency of attacks before entering the colony, "several daily;" approximate total number before entering the colony, 2,000; number after entering the colony, 140; mental condition when admitted, somewhat enfeebled; nature of aura, epigastric nausea. Duration of treatment, four years and one month; length of time free from attacks on January 1, 1904, two years and six months.

CASE 534 (Colony No.).—Female; age at onset of epilepsy, twenty-one years; type, *grand mal;* duration of epilepsy on admission, eleven years; frequency of attacks before entering the colony—1 attack in every three to five weeks; approximate total number of attacks before entering the colony, 120; number after entering the colony, 23; mental condition, memory impaired—forgetful; aura, patient exceedingly irritable for some time before attacks. Duration of treatment, four years and eleven months; length of time free from attacks on January 1, 1904, two years and nine months.

THE EPIDEMIC OF SO CALLED TRACHOMA.

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During the past year the people of New York, and to a lesser extent of the whole country, have been the victims of a great scare on the subject of trachoma. It began when the United States Immigration authorities, anxious to find some excuse for getting rid of a very undesirable class of immigrants—some of whom, from the ravages of the disease, were likely to become public charges—made the perfectly proper ruling that as trachoma was contagious and often endangered the sight, immigrants affected with it should not be admitted to the country.

Such a ruling, even though it did not define exactly what the term trachoma should be officially understood to include, was perfectly proper, because the immigrant is to be considered in the light of an applicant for a privilege whom we have a right to exclude, arbitrarily if we wish, because he is red headed or tongue tied. A little later, the inspectors of the board of health discovered that, in our public schools, from ten to twenty-five per cent. of the children were suffering from an eye affection which was officially called trachoma, and which was declared broadcast to be identical with the trachoma of immigrants and very contagious. Without immediate and radical treatment many of these children would, it was declared, undoubtedly become blind.

But the case of the school children is different from that of the immigrant. Attendance at school is not a privilege, but a right, which should not be taken away even temporarily by the loose application of a generic term. The burden of proof was certainly on the health board to show that the trachoma of the school children was identical with that of the immigrant, that it was contagious, and that it was dangerous, all of which have been mere assumptions.

At all events, the scare was very effectual. It was used by the department to get a large appropriation for the apprehension and treatment of the unfortunate sufferers and for the inauguration of a system which may easily lead not only to the official treatment of contagious diseases, but of all diseases.

Almost every hospital that has a subdepartment for treating eyes has made an impassioned appeal to the charitable public for funds for the relief of miserable children, who must otherwise drag out a sightless existence by the sale of shoe laces and lead pencils. The matter even got into politics, for one of the chief claims of the late administration to continuance in power was, that it had reduced the death rate and saved several thousand children from probable blindness.

The medical profession also was impressed with the seriousness of the calamity, and one of the local societies devoted an entire evening to a consideration of the imminent danger. One speaker gave a forcible description of the symptoms of the disease, the discomfort attending its insidious progress, and the dangers of its inevitable sequelæ. Naturally the picture was made as striking as possible, but it was not overdrawn. Then came a paper on the treatment which showed how easily the disease might be cured if the proper means were adopted; in fact, it developed, during the evening, that nearly every one of the participants had devised instruments which in his hands had effected speedy and permanent cures. To a layman the conclusion would have been inevitable, after hearing the last papers, that the eminent men who had seen so many disastrous results in their own experience must have been guilty of some inexplicable malpractice. To the physician, on the other hand, who was at all conversant with the literature on the subject, it was apparent that the writers of the evening were talking of two, and part of the time three, distinct diseases under the same name. It might seem strange that the public should be made the victim of such a scare without more than scattered protests, but the reasons are not far to seek. In the first place, the child victims belong to the lowest classes of society, who have been accustomed for generations to be persecuted in other countries and legislated for in this, till the passive rôle has become a matter of habit. No one would pay any attention to a protest from this quarter. The general practitioner may or may not have believed implicitly in the reality of the danger, but with him the *ipse dixit* of a health board goes a long way. He does not pretend to know anything about eye diseases, and he long ago learned that it did not pay to dispute official statements.

The specialists do not all believe in the crusade by any means, and one or two protested. Some regarded it at worst as a harmless vagary of the department. Most of them are connected with one or another of the public eye hospitals, every one of which had an altruistic, but nevertheless a direct financial, interest in the spread of the scare. The men who read the papers alluded to above were selected, as it was stated on the programme, because each represented a special hospital. The writer, whose experience in the past year has embraced over three thousand different children sent from school, and whose observations have led him to differ widely from the prevailing view as to the present epidemic, has been much interested in going through modern textbooks to see how far these, which are the only unbiased authorities available, regard the question.

Trachoma has been known since the time of Celsus, who left behind a description of the disease, with its sequelæ, which is unmistakable; but in modern times it first attracted attention when the army of Napoleon returned from Egypt, after which it spread all over Europe in epidemic form. Unfortunately, this was long before the day of either bacteriology or exact diagnosis, and the descriptions of the disease read very much more like gonorrhœal ophthalmia than trachoma.

The disease, as it occurs in Egypt to-day, notoriously includes not only trachoma, but gonorrhœal and all the acute affections of the conjunctiva, under the obsolescent term, Egyptian ophthalmia.

Since the discovery of the identity of the gonococcus of Neisser, with a practical method of identification, we have been able to eliminate this disease from those included under the head of trachoma. The bacteriological examination is sometimes the only method of distinguishing, for actual experiments demonstrate that the gonococcus varies greatly in virulence; and that, while the infection of the eye with a virulent culture produces symptoms not to be mistaken, a virus which has lost strength by age or drying may produce a disease of a chronic type that is clinically indistinguishable for the time from trachoma. In cases of apparently true trachoma different observers have identified bacteria very closely resembling the gonococcus, which have been considered by some as almost sufficient to justify the conclusion that trachoma is a form of gonorrhœal ophthalmia that takes a chronic form, owing to an attenuation of the virus. Unfortunately the observers do not agree on the identity of the germ, and so far we are absolutely at a loss as to the bacteriology of trachoma. The very fact that competent observers have isolated, from cases they considered typical, several distinct germs only adds weight to the contention that the term embraces more than one disease entity.

All authorities are agreed that the term trachoma may be rightly applied to those conditions in which a hypertrophy of the conjunctival membrane has gone on to the production of cicatricial tissues on the inner surface of the lids. The dispute is, as to the antecedent conditions which may give rise to this production of scar tissue; and as the evolution of the disease is a matter of months and often years, it is small wonder observers do not agree. Since lymph follicles generally appear in trachoma, it has been very easy to assume that all conditions accompanied by these follicles must be trachomatous, and this is the kind of reasoning that has been applied to our school children, for most of them have absolutely no other manifestations of disease.

But, unfortunately, granulations which are indistinguishable either clinically or microscopically from these, occur in other conditions which can be produced experimentally, and which are certainly not infectious. They are simply enlargements of the lymph follicles of the conjunctiva in response to irritation, which may be either bacterial or chemical or even mechanical. Only a quack would put a patient under treatment for syphilis because he had enlarged lymphatics in his body without any other evidence of disease, but that seems exactly the logic applied to patients with enlarged conjunctival lymphatics.

The conditions under which we find these granulations occurring agree with the theory of their cause. They occur most frequently in children of the so called strumous type, who are pale and anæmic and have glandular enlargements in all parts of the body. They are particularly prone to occur among those who are crowded and dirty. These facts might be construed as indicating contagion, but we might adduce exactly the same arguments in favor of the contagiousness of rickets and adenoids.

Fuchs, whose large experience and moderate expressions, coupled with a happy choice in his translator, have made his the most acceptable work on ophthalmology, insists on the distinction between trachoma and follicular conjunctivitis, in this language:

"It still remains to speak of follicular conjunctivitis with regard to trachoma. The former is found chiefly in children, while trachoma is seldom met with in children, but the two diseases are very similar, in that lymph follicles occur as characteristic formations in both. . . . But these characteristics are so obscured that even experts cannot, in many cases, make the diagnosis with certainty, and the subsequent course of the disease alone affords the desired information. Even in the histological structure no thoroughgoing distinction can be found between the follicles and trachomatous granulations. . . . It is therefore easy to understand that these two diseases have been repeatedly confounded with each other, and a number of authorities explain follicular catarrh as being a kind of trachoma distinguished by its mildness and freedom from danger. But to such a view the following objections must be raised: It is not yet certain whether follicular catarrh among confined bodies of men is propagated by infection like trachoma or is merely the result of the contamination of the air by dust, exhalations, etc. On the other hand, it is quite satisfactorily established that under certain circumstances follicular catarrh can arise without any infection whatever. The prolonged instillation of atropine is followed in many persons by the development of a typical follicular catarrh with numerous follicles. But trachoma can never originate without infection. A further and more important distinction between the two is the course. Follicular catarrh is not associated, or only to an inconsiderable extent, with papillary hypertrophy of the conjunctiva, it never leads to a shrinking of the conjunctiva or pannus, or any of the other sequelæ. It is a disease perfectly devoid of danger, and one which, without any treatment, finally gets well and leaves no trace behind.

"The question with regard to the different forms of blennorrhœa, trachoma, and follicular conjunctivitis to each other will first receive a definitive solution through the medium of bacteriology. Probably we must regard the formation of granulations composed of adenoid tissue not as anything at all specific, but only as a particular form of reaction which the conjunctiva of the eyes, like other mucous membrane, exhibits toward many different sorts of irritants. Such a formation of granulations occurs in the most pronounced form in trachoma and follicular catarrh. Furthermore, in the chronic stage which follows acute blennorrhœa granulations in the retrotarsal folds are frequently found in conjunction with papillary hypertrophy of the conjunctiva, and sometimes in such quantities that a true trachoma is thought to be present. Then there are cases of tuberculosis of the conjunctiva which begin with an abundant development of granulations quite as in trachoma. Again, Goldsieher and Sattler have seen cases in which there was an abundant formation of granulations in a conjunctival affection which they regarded as syphilitic."

Let us consider for a moment from which type of disease our New York school children are suffering. The subjective symptoms of real trachoma are noticeable. The patient complains of gluing of his lids, photophobia, a sensation of sand in the eye, the upper lid is partly dropped, and there is more or less purulent discharge. In a fresh case the whole eye looks red, but in a chronic case the redness may be hardly noticeable and the discharge very slight and watery. In a portion of the cases, injury to the cornea follows—either ulceration or pannus. The cornea becomes hazy and irregular, and gradually a growth of vascular new tissue begins at the margin and spreads toward the centre, especially under the upper lid. This eventually leads to a permanent opacity. When the thickening of the conjunctiva has reached a certain height, a process of cicatrization begins, and continues till the hypertrophic tissue has been replaced by a thin, white scar, and it is from the contraction of these scars that some of the most troublesome sequelæ come. The commonest results which are in direct proportion to the amount of scar tissue are ptosis, entropion, and ectropion. As regards vision, the permanent opacities of the cornea are most to be dreaded.

Our school children have none of these symptoms, subjective or objective, except the soft granulations, and Fuchs's classical description of follicular conjunctivitis describes the majority of them exactly:

"Follicular catarrh is characterized by the presence of follicles. These are small, round granulations of about the size of a pin head, which lie in the region of transition of the conjunctiva. They are of a pale translucent aspect and puff up the conjunctiva in the form of small eminences. Either a few follicles only or many are present; in the latter case they are ordinarily arranged in rows like beads in a rosary. Microscopic examination shows that the follicles, as well as the so called trachoma granules, consist of a circumscribed accumulation of adenoid tissue. . . . The follicles ultimately disappear without leaving a trace behind. The disease, in spite of its long duration, has a good prognosis, in that it is cured without leaving any sequelæ. In this particular, follicular catarrh is essentially distinguished from trachoma which, in its external appearance, bears a great resemblance to it, but which always leads to permanent changes in the conjunctiva. The ætiology has not up to this time been established. . . . The malady is found with especial frequency in schools, boarding establishments, in which many scholars are often attacked with it at the same time. In many of these people the disease exists in an entirely latent way, as in spite of there being a considerable number of follicles the conjunctiva is not reddened and causes no sort of discomfort, so that the affection is first discovered by the physician's examination."

As to the treatment, he says: "Cases in which follicles exist without causing any annoyance are best left without any treatment. Living in pure, fresh air is to be recommended."

There is absolutely no evidence of contagion that would not apply equally well to heat prostration or to enteritis, but even if there were, the disease entails no discomfort, either now or hereafter. It has seemed to me, however, that atmospheric dirt must play a very large part in the ætiology. For instance, in one month in which I personally treated some four hundred different individuals with the disease, the boys were something like twice as numerous as the girls, while the girls in school outnumber the boys greatly. The boys spend a much greater part of the time in the street, and I have often removed from the conjunctival sac foreign bodies varying from an eyelash to a bit of gravel, which would have occasioned acute discomfort to an ordinary individual, but of which these children were absolutely unconscious. In most of them, the glands in the neck are enlarged, and it is notorious that this class of children have a disproportionate number of adenoid growths in the pharynx. The course of the disease is another argument against its being true trachoma. Not only are these children without any subjective symptoms, but when they receive any kind of care at home the granulations frequently disappear completely in a few weeks' time under the simplest kind of treatment. True trachoma, on the other hand, is the *bête noire* of the ophthalmic clinic: the patients come back month after month under all forms of treatment with their unending story of discomfort, which is borne out by their reddened watery eyes and evident suffering, while we sit for all practical purposes helpless and watch the disease run its course, in the hope that it will spend its force on the lids and spare the eye itself.

Assuming that these school children are forcibly operated on because they have an infectious disease, the treatment has not a vestige of logic. The operation simply removes the diseased lymphatics, but nothing short of a complete removal of the conjunctiva could remove all the lymphatics, and if contagious at all, it is just as much so after expression as before. No one would think for a minute of curing an admittedly infectious disease, like blennorrhœa or acute conjunctivitis, by any possible operation, and abundant experiments have shown that it is almost impossible to render the healthy conjunctiva aseptic; but we are told that some three or four thousand children are kept a couple of days each in a municipal hospital, operated on, and sent out in a condition to return to school. If they were before operation the victims of such a terribly infectious disease, the danger of infection is not much lessened by the removal of such glands as are large enough to be visible to the naked eye. If, on the other hand, the disease is not infectious and the operation is intended simply to remove granulations which might mechanically abrade the cornea, and so injure sight, we shall next come to the compulsory removal of tonsils and adenoids. To declare ex cathedra that these are infectious abnormities, subject to compulsory removal, would be just as logical, and decidedly more beneficial, to the children. But, even from the mechanical standpoint, the operation is not a complete success. There are always minute lymphatics which are not large enough to be grasped by the roller forceps; and, given the same unchanging environment of dusty street and smoky rooms, these in time become large. We are even now beginning to see children come back who were operated on last spring, with apparently as many follicles as ever. To be sure, several repetitions of the operation must in time get all the follicles, but it must be remembered that this operation in children requires a complete anæsthesia; that there is a recognized death rate from anæsthesia alone, to say nothing of the after effects on unhealthy organs, and it must also be remembered that it is in just this very class of lymphatic children that anæsthesia is admittedly most dangerous.

31 East Thirtieth Street.

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College of Physicians of Philadelphia.—Section on Ophthalmology. At a stated meeting of the Section, held March 15th, the following papers were read, an abstract of which will be published later: Dr. Charles A. Oliver, Clinical and Histologic Study of the Ophthalmic Conditions in a Case of Cerebral Neoplasm Occurring in a Subject with Renal Disease; Dr. C. A. Veasey, Report of a Case of Spring Conjunctivitis Resembling Malignant Growth of the Limbus; Dr. William Campbell Posey and Dr. Walton C. Swindells (by invitation), A Case of Graves's Disease, exhibiting Unilateral Exophthalmos; Dr. S. D. Risley, One Danger from the Use of Powerful Magnets in the Extraction of Metallic Fragments from the Vitreous Chamber, an illustrated case; Dr. H. F. Hansell, Removal from the Orbit of a Bullet Localized by the X Rays.

THE PHYSIOLOGY AND PATHOLOGY OF BILIARY SECRETION.

By HUBERT RICHARDSON, M. D.,
BALTIMORE, MD.,
DEMONSTRATOR OF PHYSIOLOGICAL CHEMISTRY AT THE UNIVERSITY OF MARYLAND.

The physiology of the biliary secretion in its relation to the proper functioning of the body and the pathological effects of its suppression or perversion have not received the attention they deserve in modern therapeutics. Our predecessors laid very great stress on the importance of the bile in the economy, and, though their conclusions were not always correct, they had a more proper appreciation of its importance then the therapeutists of to-day.

The liver, the largest organ in the body, performs a number of most important functions in which the bile may be considered partly as an eliminant and partly as a digestive secretion. The quantity of bile eliminated by the healthy subject has been variously estimated at from 500 c. c. m. to 1,500 c. c. in the twenty-four hours, the quantity varying with the amount of fluid, rather than with the total solids. The principal constituents are the coloring matters, bilirubin, etc., and the cholesterin which may be regarded as excretions; the bile salts, sodium glycocholate and taurocholate, which are of great physiological importance, some inorganic salts, mucin, and other substances.

Bilirubin is formed from disintegrated erythrocytes in the liver; the exact chemical process has not yet been definitely fixed. Crofton asserts that he has produced both bilirubin and the bile acids by the action of trypsin on hæmoglobin in the presence of glycogen or glucose. Bilirubin and biliverdin have chemically the character of weak acids, as they combine readily with alkalies, forming compounds soluble in water; and with alkaline earths, compounds which are insoluble in water, bilirubinate of calcium being the principal constituent of some forms of gallstones which are, however, readily soluble in the bile acids.

In certain animals bilirubin appears in the blood under normal conditions, but it has not been detected in the blood of man under normal conditions, and, as far as is known, it is only formed in the liver in man. It is taken up by the bile, in which it is held in solution by the bile acids, eliminated into the intestines, there converted into hydrobilirubin by the action of bacteria, and eliminated by the fæces; a small portion is absorbed into the blood stream, to be eliminated by the kidneys, forming urobilin in the urine on standing. It has been suggested that part of the hydrobilirubin in the blood may be utilized in the formation of hæmoglobin. Bilirubin is also formed in blood clots.

In congestion of the liver small quantities of the bile are carried by the lymphatics into the blood stream and deposited in the tissues, producing a pigmentation of the skin; as the quantity of bilirubin in the blood is small, it is converted into hydrobilirubin, causing a hydrobilirubinæmia. In true icterus the amount of bile carried into the general circulation is sufficient to cause a deep yellow pigmentation of the skin and a decided coloration of the urine, but in less severe cases the amount absorbed is not sufficient to appear in the urine as such, or only in traces, as it is deposited in the tissues. In severe icterus, with total or nearly total closure of the ductus choledochus, only bilirubin appears in the urine and no hydrobilirubin (Quinke, Fr. Miller), the fæces containing little or none; after the reopening of the duct, the bilirubin soon disappears from the urine, the hydrobilirubin appearing in large quantities, both in the urine and fæces.

Although the chemical process of the formation of bilirubin has not yet been settled, the evidence is complete that it is a product of the disintegrated erythrocytes and that, in man at least, it is formed in the liver only under normal conditions, from which it is excreted by the bile, to be principally eliminated in the fæces. Under pathological conditions it may be retained in the liver, passing by way of the lymphatics into the blood and producing a pigmentation of the skin; the excess of bilirubin formation in diseases in which there is great destruction of erythrocytes, as in malaria, also produces pigmentation of the skin. Bilirubin is held in solution in the bile by sodium glycocholate, and in reduced formation of bile acids it accumulates in the liver and is absorbed by the lymphatics, producing an icteroid pigmentation of the skin and the so called "liver spots."

Under certain conditions calcium bilirubinate is formed in the gallbladder, and is precipitated, forming concretions. The question as to the source of the calcium of the bile has yet to be answered. Gilbert considers that the calcium of the bile is derived from the mucous membrance of the gallbladder through the mucus excreted, the acid mucin probably being combined with calcium. An increase of calcium in the blood has been shown by Wakeman to increase the calcium in the bile. He injected from one to two grammes of calcium chloride intravenously into a dog, and found that the calcium in the bile was increased to 0.886 per cent., the normal being about 0.077 per cent.

Cholesterin is probably obtained partly from the blood, and in certain diseases, as in some cases of diabetes, when there is an increased amount in the blood, some, no doubt, passes into the bile for elimination; in melancholia, a disease in which cholesterin gallstones are very common, the writer found a marked excess of cholesterin in the blood of a patient suffering from melancholia attonita. The principal part of the cholesterin may be derived from columnar and cuboidal epithelial cells, and is probably a cleavage product of large molecules. When an excess of cholesterin is found in the bile there is invariably an inflammation of the mucous membrane of the gallbladder and Wakeman has shown that, when he produced inflammatory conditions in the gallbladder under aseptic precautions, by means of the injection of mercury bichloride, alcohol, ricin, etc., the percentage of cholesterin in the bile rose from 0.127, normal, to 0.298 with bichloride, and to 0.427 with ricin; at the same time the calcium was increased and the bile acids were diminished in proportion. It has further been shown, by Rettger, that some general protoplasmic poisons increase the cholesterin within the gallbladder, and may be a cause of gallstone.

The origin of the bile acids in the body is at present unknown. Dr. Crofton, of Philadelphia, has produced both bilirubin and bile acids by the action of trypsin on hæmoglobin in the presence of glycogen or glucose, and has further shown that the bile salts exist in the blood in very small quantities. In this relation the presence of cholesterin in atheromatous deposits and the connection of atheroma with decreased biliary secretion and disease of the gallbladder are of interest. Clinical experience of the administration of the inorganic salts of the blood and sodium glycocholate to atheromatous patients goes to show that the disease can be arrested, and even improved.

As far as is known, the function of the bile salts is to act as solvents for the various substances contained in the bile, more especially for the cholesterin, and also to assist in the saponification of the fats in the intestine. The action of bile in the intestines in producing saponification is described in Pflüger's *Archives* for 1902, and is due to the fact that bile in the presence of sodium carbonate dissolves a considerable amount of fatty acids, which solution could not take place if it were not for the presence of the bile salts. These solutions contain soaps and free fatty acids, and only about 45 per cent. of the fatty acids are dissolved through saponification. The fatty acids as bile mixtures are in a loosely combined state. The chemistry of the reactions hangs upon the fact that the carbon dioxide of the sodium carbonate of the bile has a greater affinity for the sodium than have the fatty acids, the neutral salts of which combine more readily with a second molecule of fatty acid, although in acid form, the cholates of the bile dissolve the fatty acids holding them in loose combination, and thus enabling them to react with the sodium carbonate and the formed neutral soaps. As the cholates themselves undergo no decomposition a small portion of them have the power to bring about the transformation of a large quantity of fatty acids into neutral and acid salts. In other words, the action of the bile is to make the fats soluble in water.

The physiological action of the bile salts is as follows:

(1) Injected in small doses into the blood stream, they produce a widespread disintegration of the red corpuscles with a liberation of hæmoglobin; brought into contact with cells of the body, they cause their disintegration.

(2) Blood in which there is a certain amount of bile agglutinates the typhoid bacillus, and to a certain extent *Bacillus coli communis.*

(3) Administered by the mouth they have a cholagogue action, and are, in fact, the only drugs which have the power to produce an increased flow of bile, both solid and liquid constituents being increased.

(4) The presence of the bile salts in the blood acts as a stimulus to the liver cells.

(5) In small doses they aid coagulation.

(6) In large doses they arrest coagulation.

(7) In very small doses they act as vasodilators.

(8) In large doses they act as vasoconstrictors.

(9) They reduce motor and sensory irritability.

(10) They slow the heart beat by direct action on the heart muscle and the cardiac ganglia.

(11) They act on the higher cerebral centres, causing coma and death. Under physiological conditions, numbers 1, 3, 4, 5, and 7 may be considered their normal action, while 6, 8, 9, 10, and 11 are pathological and due to excess in the blood.

It is probable that the bile salts also assist in holding the cholesterin in solution in the blood, especially considering the connection between reduced bile salts in the bile and atheroma. The main function, however, is the holding of the cholesterin in solution in the bile, preventing its precipitation and the consequent formation of gallstones.

As stated above, an inflammation of the gallbladder increases the amount of cholesterin and decreases the amount of bile salts; consequently the former is precipitated, and therefore in all cases of inflammation of the gallbladder the administration of sodium glycocholate is indicated.

The possibility of the solution of gallstones *in situ* is of great importance clinically, considering that about 7.5 per cent. of people in this country have gallstones. Recently, Wakelin Barrett *(Journal of Physiology,* 1903) experimented by inserting large gallstones in the gallbladder of healthy dogs under strict asepsis, and found that, in periods of from six months to one year, they were completely dissolved, proving that the healthy bile had the power of dissolving gallstones. If the gallstones were inserted, and at the same time a cholecystitis was produced, the stones were not dissolved, showing that the bile, in cases of cholecystitis, has no solvent power. As previously stated, Herter has shown that cholecystitis increases the amount of cholesterin and decreases the amount of bile salts, and Austin *(Journal of Medical Research,* 1902) has shown by analysis of the bile from fistulas, the result of operation for gallstone, that the cholalic acid is from one third to one eighth of the cholesterin; while, according to Hammerstein, the normal proportion of cholalic acid to cholesterin is as 12 to 1. It is evident, then, that, by administering sodium glycocholate, it must be possible, not only to prevent the formation of gallstones, but also to dissolve those already formed; as the bile salts are reabsorbed from the intestine. Continuous administration will produce accumulation of bile acids in the bile.

Heppel found that 5 per cent. of olein, 10 per cent. of bile salts and 50 per cent. of soap have the power to keep in solution their own weight of cholesterin; therefore, by administering alkalies and bile salts with a diet rich in fat, the solution of gallstones must take place and their formation be prevented.

Non-elimination of bile and perverted secretion exist as a complication in many diseases, and can be detected from the icteroid hue of the skin, and by the iodine test (?) for bile coloring matters in the urine. The torpid liver so often complained of by patients is relieved as soon as the liver cells are stimulated by sodium glycocholate, and the dirty colored skin seen in malarial disease and many liver cases is cleared up after two or three months' treatment.

There is, perhaps, no disease the treatment of which gives the general practitioner more trouble than chronic constipation, nor one which produces more disagreeable symptoms to the patient, the tired feeling, the want of energy, the headache, the loss of appetite, and the general malaise often producing a condition of chronic invalidism which, if long continued, becomes incurable. The purgative habit is the natural consequence of this condition, and it is by no means uncommon to meet with a patient whose bowels never move without an evacuant of some kind. The causes of chronic constipation are many, hyperchlorhydria being probably the most common, but there is one form which can be relieved by the administration of sodium glycocholate and about two pints of cream or other fat *per diem.* During purgation, the bile salts which are normally reabsorbed, are carried forward with the fæces and evacuated, the quantity available in the liver being decreased, and consequently the elimination of bile decreased. That the bile is directly a purgative, or even a laxative, is not proved; only when a very large amount escapes into the intestine at one time does it produce purgation. It is, however, by its action on the fats that the bile prevents the formation of scybala and enables the fæces to retain their moisture. Many cases of most obstinate constipation can be permanently relieved by the administration of magnesium oxide, and sodium bicarbonate before meals, with sodium glycocholate after meals, and a pint or two of cream daily.

In those conditions where the liver has become congested, as in malarial disease, typhoid, etc., when the skin often takes on an icteroid hue and there is an evident hepatic insufficiency, sodium glycocholate, administered over a period of two or three months, will remove the icteroid pigmentation and relieve the liver. The effect of the sodium glycocholate on the discoloration of the skin is often very marked, so that it is a cosmetic of great utility.

In diabetes, where fats are substituted for carbohydrates, sodium glycocholate is indicated, to assist in their absorption. In Russel's fat treatment for tuberculosis it is also of use for the same purpose.

Sodium glycocholate treatment comes under the heading of organotherapy, as it is the administering of the secretion of the liver for therapeutic purposes, either when there is a deficiency of formation, or when there is an increased demand for it by the body, which the liver is unable to supply.

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Alumni Association of Louisville, Ky., Medical College.—At a meeting of this association on March 24th, at which nearly 200 graduates of the college were present, the following officers were elected: Dr. J. H. McKay, of Bardstown, president; Dr. J. C. B. Foster, of Monterey, first vice-president; Dr. J. McDowell, of Bedford, Ind., second vice-president; Dr. W. Hower, of Cropper, Ky., third vice-president; Dr. Adolph O. Pfingst, of Louisville, secretary and treasurer.

RIGHT PULSATING EXOPHTHALMOS: LIGATION OF BOTH THE RIGHT COMMON CAROTID ARTERY AND THE LEFT INTERNAL CAROTID ARTERY: ACCIDENTAL TRAUMATISM: CURE.*

By CHARLES A. OLIVER, A. M., M. D.,

PHILADELPHIA.

Case.—On the twenty-fifth day of March, 1900, F. C., a fifteen year old schoolboy residing in Trenton, New Jersey, reported to my clinic at Wills's Hospital. He gave a history of having been shot back of the right ear some five months previous to this date. At the time of the accident the patient vomited blood, the shot probably having gone through the right tonsil. The bullet, though carefully searched for, was not found; an external mark in the left occipital region was explored and considered as a possible point of exit.

Since the time of the accident the patient had complained of a "thumping noise" immediately beneath the right ear. A gradual forward protrusion of the corresponding eyeball was also noticed.

At the time of the first examination, the right eye was found to be proptosed some five millimetres in advance of its fellow; with an external deviation of twenty-two degrees and a half. There was not any vertical deviation. Both the ciliary and scleral vessels were engorged. The cornea was clear. The pupil was three millimetres in diameter. The iris reacted well to light, accommodation, and in associated convergence. The action of the exterior ocular muscles was good, except to the nasal side, the inner limbus of the cornea being rotated to about five millimetres away from the temporal side of the internal canthus. Intraocular tension was normal. No pulsation could be heard over the orbit, although a marked thrill (which ceased when pressure was exerted upon the corresponding carotid artery) could be felt when the eye was forced back into the orbital cavity. Both direct and indirect vision for form and color were normal in each eye. Range and power of accommodation were good for age and refractive condition.

Just below the right mastoid region there was a scar showing the point of entrance of the bullet: A pulsatory thrill, more marked than the orbital one, could be felt in this situation.

With the exception that the retinal veins of the right eye were a trifle large and markedly pulsating, the eyegrounds were healthy.

Studies with the x ray, made some three weeks later by Dr. William M. Sweet, of Philadelphia, failed to show the presence of any foreign material in any part of the skull, except in one negative in which there was "a round object," apparently situated in the occipital region.

On the second of April the case was transferred to the care of Dr. Charles H. Frazier, for pressure studies, and operative procedure if it was deemed advisable. Dr. Frazier performed ligation of the right common carotid artery, at the Howard Hospital, fifteen days later.

Five days after the operation, the patient returned to the Wills's Hospital with partial relief of the orbital bruit and a slightly lessened proptosis. The other ocular conditions remained practically the same.

On the thirteenth of June of the same year the external deviation had decreased to but three degrees. The anterior scleral and the conjunctival veins were engorged and tortuous. Intraocular tension remained normal, and the irides responded promptly to light and to efforts at accommodation and convergence.

Four months later these conditions were apparently unchanged, although the double bruit had become more pronounced. At this time the retinal veins and arteries were more tortuous, and the degree of venous engorgement was greater. Fields of vision for both form and color were normal in every respect.

In the following January (1901) it was found that the bruit and thrill and the dilation of the retinal vessels had markedly increased, both objectively and subjectively; the lower series of the retinal vessels of the eye being intensely dilated, tortuous, and pulsating. The retinal circulation of the left eye was undisturbed. The external vessels were enormously dilated.

On the second of February Dr. Frazier successfully ligated the left internal carotid artery at the Hospital of the University of Pennsylvania.

On the sixteenth of the month Dr. Frazier wrote to me as follows:

"You will no doubt be interested in hearing a report regarding Frank Cooper, the boy with the pulsating exophthalmos. Two weeks ago to-day I ligated the internal carotid on the opposite side, at the same time putting him on the Tufnell treatment. This had no apparent effect upon the aneurysm until the tenth day, when, for a period of some ten hours, the bruit disappeared. His pupils were widely dilated, pulsation in the orbit ceased and his vision was very much affected. This improvement, however, was only temporary, for on the following day the bruit and pulsation returned and the other ocular symptoms disappeared. I think, however, that the bruit is not so loud as it was before and that the pulsation is not so marked."

On the twenty-second of the month the patient personally reported to me that ten days after the last operation he had had an attack of obscuration of vision of the right eye, lasting from 10 a. m. on the tenth day to 3 a. m. on the eleventh day, during which time both bruits were absent. The lowered light perception gradually returned, and the bruits were restored, until they became of the same intensity to him as before their disappearance. Since the operation there had been paroxysmal attacks of severe lancinating pains over the eyeball. Examination at this time showed that the right eyeball was still proptosed, but not to the same degree as before the operation. The right pupil was of the same size as its fellow, but the iris was somewhat more sluggish in its reaction. Intraocular tension was normal. The media remained clear. There was marked engorgement of both the retinal arteries and veins in the right eye, particularly the latter. The corresponding vessels in the left eye (especially the veins), were perhaps increased in size and a trifle too tortuous. Both orbital and temporal bruits and thrills were less pronounced than they had been at the last examination.

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* Read before the November, 1903, meeting of the Section on Ophthalmology of the College of Physicians, of Philadelphia.

On the nineteenth of June of this year (1903), Dr. Frazier kindly sent me the following abstract report of the surgical aspect of the case, he having read a paper upon the subject and exhibited the case before the February, 1903, meeting of the College of Physicians of Philadelphia:

"April 17, 1900, ligation of the right common carotid artery. Immediately after the operation the pulsation in the orbit ceased, but this, together with the bruit, soon returned; neither, however, was quite so prominent. The exophthalmos and the pulsation of the retinal vessels were perhaps not quite so marked. In a word, the operation was almost wholly unsuccessful.

"The next observation was made January 24, 1901, fifteen months after the injury, nine months after the ligation of the common carotid; at this time there was an internal strabismus. The bruit was quite as loud as before. The patient was put to bed upon a Tuffnell diet as a preparatory treatment to ligation of the left internal carotid artery, which was performed February 2, 1901. While the ligation was being applied an assistant was delegated to listen to the bruit, and reported that no change in the intensity of the bruit could be detected after the ligature was tied. During the twenty-five days the patient was under observation there was no striking modification in the subjective or objective phenomena, save that on the eleventh night after the operation the bruit and thrill disappeared for a few hours. The patient reports that for a period of two months after his discharge from the hospital no change was noted, but from that time on the exophthalmos gradually became less conspicuous and the bruit less audible.

"October 14, 1902, about three years after the original accident and twenty-one months after the second operation the patient collided with one of his playmates. During the evening of that day he observed a marked diminution of the bruit and exophthalmos and on the following morning the bruit disappeared and has never recurred. Three months later, January, 1903, the patient reported at the hospital for a final examination. There was no pulsation of the orbit, no thrill, and no bruit, the exophthalmos had entirely disappeared, his general condition was perfect and there were no cerebral phenomena. Dr. de Schweinitz reported that his vision and accommodation were normal, that there was no failure of rotation of the eyeballs in any direction; that while there is no exophthalmos, both eyes seem slightly prominent. There is no abnormity of movement of brow or lids—the pulsation of retinal veins is more marked on the left (unaffected) than on the right eye. Beneath the jaw, just above the hyoid bone on the left side, a small hard object, unquestionably the bullet, can be felt situated in the subcutaneous tissue."

My last examination of the boy was made on the fourth of March of the present year (1903). It is so interesting from an ophthalmic point of view that I give the notes verbatim:

"Vision of each eye normal; accommodative power and region of accommodation correct for age and refractive conditions; right and left fields of vision for white, yellow, blue, red, and green, proportionately sized in their relative orders; degrees of color saturation and color choice for both central and eccentric color perception good with each eye; one and a half or two millimetres of right proptosis directly ahead; and one millimetre of left proptosis directly ahead; intraocular tension normal on both sides; proper action of muscles of eyelids; relative powers of exterior ocular muscles good, with the exception of two degrees of esophoria during binocular action at thirty-five centimetres; pupils three millimetres and a half each in diameter; irides equally and freely mobile to light, and freely responsive to accommodative and convergent impulses; fields of iris-reflex good in all meridians; retinal arteries and veins of the right eye still somewhat engorged and tortuous, while those of the left are a trifle larger and slightly more tortuous than they were at the last examination; no orbital bruit; no ocular pulsation; and no perceptible thrill."

ON LABORATORY DIAGNOSIS.*

By M. P. OVERHOLSER, M. D.,

HARRISONVILLE, MO.

(*Continued from page 635.*)

We will commence our work in these demonstrations by first considering some of the physical characteristics of this excretion, the color, odor, transparency, consistency, specific gravity, chemical reaction, and quantity of the urine. At the same time, we will inquire into and explain as clearly as we can, as we pass along, the cause and also the diagnostic significance of these normal and abnormal physical and chemical properties as we may find them in the different specimens we may examine. First the color. Normal urine is a clear yellow or amber-colored fluid. It owes its normal color to urinary pigments, the chief coloring pigment of which is called urobilin. Here we must not confound urinary pigments with bile pigments. Bile pigments are constituents of the biliary excretion, while urobilin is a constituent of the urine and is said to be derived chiefly from the hæmatin of the blood. We can often obtain information of much diagnostic value simply by investigating the cause of an increased or diminished amount of the coloring matter of the urine. In some conditions of the system we find this coloring pigment absent from the urine, and in some abnormal conditions we may find it very largely increased; so much so, that it may exceed the normal amount four or five times, or even more. Any disease which causes a rapid destruction of the red corpuscles of the blood or interferes with the biliary function of the liver will increase the amount of urobilin in the urine, such as typhoid fever, septic fevers, pneumonia, pernicious anæmia, acute malaria, copious internal hæmorrhages, e. g., intracranial, ruptured tubal pregnancy, pelvic hæmatocele, the slipping of a ligature after an abdominal operation; also in cirrhosis and acute atrophy of the liver. Here, for instance, I show you a specimen of urine from a case of hypertrophic cirrhosis of the liver. You will observe that it is a very highly colored specimen of urine, and from its deep color, or excessive amount of urobilin, you would naturally suppose that it contained an excess also of urea and other constituents; but this is not the case, for we find, on taking its specific gravity, that it is barely 1015, and on testing it for urea we find that this normal constituent is markedly diminished in quantity, barely three grains to the ounce, less than one half, only about one third, the normal amount. Let us compare this specimen with another specimen from a case of typhoid fever. Here we have also a very highly colored specimen with an excessive amount of urobilin, and on taking the specific gravity we find it 1031, and on testing it for urea we find it contains 16.6 grains of urea to the ounce. We note the pathological similarities in color and the pathological dissimilarities in specific gravity and the amount of urea each specimen contains. To account for these pathological differences we must search for a disturbance somewhere in the links of the great chain of the nutritive processes of the system, and ascertain, if we can, what pathological conditions could produce such a disturbance of the normal nutritive processes as to account for these peculiarly constructed urines. We find in a cirrhotic liver that the cells are diseased, crippled, unable to perform their functions properly, and as one of the great functions of the liver is to transform the non-eliminable, broken down, refuse nitrogenous material circulating in the blood, into urea, this function is so impaired by reason of the disease that less than one half of the normal amount of urea is formed by the liver, and consequently less than one half of the normal amount excreted by the kidneys, and thus we can clearly see the cause of the low specific gravity and the small amount of urea in our specimen of urine from our case of hepatic cirrhosis. Again, another important function of the liver is to separate from the blood the broken down red blood corpuscles, free blood pigment, and other obnoxious elements of the blood, by retransforming them into the normal bile fluid for excretion into the intestines; but, in this particular case, this function must be also impaired, by reason of our diseased liver cells, hence these worn out blood corpuscles and free blood pigments cannot be transformed into bile and eliminated into the intestinal tract as rapidly as they should be, and thus they accumulate in the blood and are eliminated in abnormally increased amounts in the urine. Hence the increased amounts of urinary pigments and urobilin in this specimen. So here, you see, we have a beautiful example or illustration of how we can ofttimes discover diseased or impaired functions of important organs of the body simply by an examination of the urine. When the increase of the coloring matter in the urine is excessive we call it urobilinuria, thus we have the urobilinuria of hepatic cirrhosis, the urobilinuria of typhoid fever, the urobilinuria of pernicious anæmia, the urobilinuria of internal hæmorrhage, etc. In various diseases of the liver it is found that there exists a constant inverse ratio between the amount of urea and the amount of urobilin excreted. The less the urea, the greater the amount of urobilin, as in the specimen before us; and the greater the amount of urea, the less the amount of urobilin. On the other hand, when the liver is in a healthy condition and the system is overtaken with some acute infectious disease, such as typhoid fever, for instance, we usually find a corresponding increase of the urobilin and the urea in the urine, as in the second specimen shown you. Here, the liver is not crippled. It is simply heavily taxed, and is required to do more work than normally, forming an excessive amount of urea, which the kidney rapidly eliminates, and as the blood is heavily loaded with pigments an excessive amount of urobilin is also eliminated in the urine. In these cases the urine is, therefore, also highly colored and many range from a deep yellow to a reddish-brown. In specimens from these cases the specific gravity is high and the urine is usually sharply acid, and the large percentages of urea and the excessive amount of coloring matter indicate that the destructive processes in the system are abnormally excessive. Highly colored urines may result, in health also, in a diminished secretion of water by the kidneys, while the solids and coloring matter are normal or increased in amount. Light colored urine is often due to polyuria, as in the specimen I now show you, or to diseases in which there is an excessive flow of urine, as in diabetes mellitus, diabetes insipidus, hysteria, or convulsions. Light colored urines are also found in chronic diseases of the kidney where there is an increase in the normal amount of water, and where the solids and coloring matters are reduced, as in chronic nephritis, cirrhotic kidney, or amyloid degeneration of the kidney. We find alkaline urines of a lighter color, also, than acid urines. In biliary jaundice we often find a greenish color of the urine due to the presence of bile pigments. In melanotic cancer the urine is sometimes almost black. Small doses of carbolic acid taken internally sometimes cause a blackish color of the urine. Methylene blue causes a blue color of the urine, and if taken in good sized doses, a very blue color of the urine is produced, as in the specimen I now show you. Here is a light colored specimen with a very high specific gravity, 1045. This specimen contains sugar. As we now leave the consideration of this physical property of the urine we wish to emphasize a few important clinical facts in connection with the color of this important excretion. Remember that a highly colored urine with a low specific gravity and a diminished amount of urea is indicative of urobilinuria due to disease of the liver. A highly colored urine with a high specific gravity and an increased amount of urea indicates increased destructive metabolism. A light colored urine with a low specific gravity points to polyuria from various functional disturbances, as in hysteria, convulsions, diabetes insipidus, or to a cirrhotic kidney. A light colored urine with a high specific gravity points to diabetes mellitus glycosuria. Thus by carefully noting this one physical character of the urine, the color, with a few of its other constituents and properties, we can very often gain important information as to the pathology of our case.

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* The first special lecture of a series delivered at the Kansas City Medical College, October 16, 1903.

Pathologically, the odor of the urine may give us some information of value. If the urine is ammoniacal when voided, this is sufficient evidence of an existing chronic cystitis. A peculiarly offensive odor of the urine may be due to decomposing pus, blood, or other organic elements, and is indicative of a foul, suppurating condition of the urinary tract.

In studying the transparency, or rather the non-transparency, of the urine we have another very interesting property to investigate, and if we seek to determine the various chemical and physical properties of this excretion which may render it non-transparent before and during our tests with heat and chemicals, the information so gained is ofttimes of great practical value. Here we must not confound transparency of the urine with color. Normal, freshly voided urine should be transparent. In speaking of the color of urine we usually have reference to the amount of urinary pigments it contains. Transparency of urine has reference to its clearness or its freedom from deposits. We may have a highly colored urine which is transparent, free from deposits, and on the other hand a light colored urine may be full of deposits and non-transparent. The urine may become non-transparent or cloudy from various causes, such as the precipitation of urates, earthy phosphates, mucus, pus, bacteria, blood, chyle, and, on boiling it, from coagulated albumin. If we have a specimen of urine which is cloudy and the cloudiness disappears on the application of gentle heat, this cloudiness is then due to the precipitated urates. Cold precipitates urates. Normal, clear urine containing urates passed in a cold vessel, on a cold day, may become markedly cloudy at once, due to the precipitation of the amorphous urates, the urates of sodium and potassium. If ammoniacal fermentation takes place in the urine, ammonium urate may be formed. The cloudiness of a specimen of urine due to the presence of the amorphous urates of sodium and potassium always clears up by heat. If the cloudiness should increase on the application of continued heat it may then be due to either the precipitation of the earthy phosphates or to the coagulation of serumalbumin. If the cloudiness is due to the precipitation of the earthy phosphates, the addition of a few drops of acetic acid will clear up the specimen very quickly. If, on the contrary, the cloudiness does not disappear or becomes even more marked, then the cause of the non-transparency of our tested specimen is due to the coagulation of serumalbumin. We should remember here also that the earthy phosphates are soluble only in an acid urine, and that if the urine is alkaline when voided, the earthy phosphates may be precipitated even before the application of heat. Whether the earthy phosphates are precipitated before or after the application of heat, in either case the addition of a few drops of acetic acid will clear up the specimen. On the other hand, we must also remember that, in many of the specimens we examine, the urine will be so highly acid that heat will not precipitate the earthy phosphates, the urine still remaining clear on boiling. Here, mistakes are often made by physicians not familiar with the methods of urinary examination, as one day they may test a specimen of urine and find that it remains perfectly clear on boiling, and the next day when they examine another specimen from same patient they find a marked cloudiness of the urine on heating it, which under circumstances like these is frequently taken for albumin. A failure to obtain the precipitation of the earthy phosphates of the first specimen examined is simply due to a higher acidity of the urine than the other specimen in which they were obtained. In those specimens which are highly acid and in which the earthy phosphates cannot be precipitated on boiling they can be made to appear very readily by rendering the urine alkaline by liquor ammoniæ or liquor potassæ. On the other hand, in some pathological conditions of the system where the blood and urine are abnormally alkaline, we frequently find the precipitation of these earthy phosphates in a freshly voided urine. If we have a patient who passes a cloudy urine, and we find by these chemical tests that the turbidity or cloudiness is due to the presence of the earthy phosphates, we call this condition phosphaturia. These patients are usually nervous patients, and will frequently come to you and tell you that they are passing semen in their urine. Remedies which will give acidity to the blood and urine, such as hydrochloric and nitrohydrochloric acids, will assist in correcting this faulty condition of the system. If our specimen is clear, or transparent before applying heat, practically we have to distinguish only between two causes which produce cloudiness on heating our specimen; one, the precipitation of earthy phosphates, which occurs in normal urine and clears up on the addition of an acid, and the other, the presence of coagulated albumin, which is an abnormal constituent of the urine and does not disappear on the addition of an acid; this is indicative of acute or chronic nephritis. If our specimen is cloudy, however, before we heat it, and the cloudiness is not due to the precipitation of the urates or the earthy phosphates, then our task is more difficult, if we seek to ascertain the cause of the non-transparency of our specimen. We shall then have to differentiate between pus, mucus, blood, bacteria, and serumalbumin. If, after boiling our specimen, it becomes more cloudy on the addition of an acid, the cloudiness is most likely due to either pus, blood, or serumalbumin. If the cloudiness remains unchanged, does not increase or diminish on the addition of an acid, the cloudiness is then most likely due to mucus or the presence of numerous microorganisms. If the cloudiness is due to pus, blood, or bacteria, the pus corpuscles, red blood corpuscles, and bacteria can be readily discovered and recognized on microscopical examination; and if it is due to the presence of serumalbumin, tube casts can usually be found on microscopical examination. There are more complicated chemical tests by which we may differentiate between these different causes of turbidity of the urine which we shall not now have time to demonstrate here. We can thus readily see that we shall be able to ascertain the cause of the non-transparency of the specimens we may be called upon to examine, if we carefully carry out these various chemical and microscopical examinations. We can also see the practical value of these investigations. as they enable us to determine whether this excretion is normal or abnormal; and if abnormal, assist us in ascertaining the pathological conditions which give rise to the abnormal chemical reactions and the various abnormal chemical and anatomical constituents.

Normal urine is of an aqueous consistence and drops and flows like water. When the urine contains a large amount of pus, mucus, or fibrin, it may become thick and viscid. When there is an excessive amount of fibrin in the urine as a result of a fibrinous inflammation somewhere along the urinary tract, the urine, after standing, may become thickened into a jelly-like consistence.

The average specific gravity of urine may be said to range normally from 1015 to 1025. Pathologically, we find a low specific gravity in nearly all forms of organic albuminuria (Bright's disease), and a high specific gravity in glycosuria (diabetes mellitus). Prognostically, in a case where we find the normal amount of urine passed by the patient in twenty-four hours with an abnormally low specific gravity day after day, it is of serious import, as it shows that the kidneys are not able to eliminate the amount of solids they should, and this fact is a warning of an approaching uræmia.

The chemical reaction of the urine is normally acid. The normal acidity of the urine is due to the acid sodium phosphate. This acid sodium phosphate in the urine is derived from the basic sodium phosphate of the blood. The uric, hippuric, sulphuric, and carbonic acids circulating in the blood attack the alkaline sodium phosphate of the blood, uniting with part of the sodium and reducing the base of the salt to the extent that it becomes an acid salt, and as acid salts diffuse more readily through an animal membrane than the alkaline salts, the secretion of an acid urine from an alkaline blood is, in part, explained. An alkaline urine will result under conditions of the system, however, whenever the alkaline salts of the blood are sufficient to neutralize all the acids formed. If urine is alkaline when voided, its alkalinity is due either to a fixed alkali or to a volatile alkali. If due to a fixed alkali the cause is potassium or sodium phosphate, but if due to a volatile alkali, it is ammonia. It is important to distinguish between these two conditions, for, if it is due to fixed alkali, it reflects upon the condition of the blood, but if due to a volatile alkali (ammonia), it is nearly always associated with a chronic inflammatory condition of the bladder and points strongly to a chronic or acute vesical cystitis. Red litmus paper is turned blue by both the fixed alkali and the volatile alkali; but if the alkalinity is due to the fixed alkali, sodium or potassium, the litmus paper retains its color on drying, while if due to a volatile alkali, the blue color gradually fades and the red color gradually reappears as the alkali volatilizes, and when the paper becomes dry the blue color has disappeared entirely and the red color is restored. On a microscopical examination of a freshly voided specimen of alkaline urine, the alkalinity of which is due to ammonia, we can most always find pus corpuscles, triple phosphates, an excessive amount of epithelial cells, and microorganisms in the urine.

The quantity of urine passed in twenty-four hours should be about 1,500 cubic centimetres, or about fifty fluid ounces. This amount varies in health quite markedly under different circumstances. When large quantities of water are taken, it will be greater in amount than when small quantities are taken; or, if the patient has copious perspirations or large watery discharges from the bowels, the urinary excretion will be diminished. Pathologically, the urine is increased in amount in diabetes, cirrhosis of the kidneys, amyloid degeneration of the kidney, cardiac hypertrophy, hysteria, convulsions, etc.

(*To be concluded.*)

Therapeutical Notes.

Chronic Rheumatism.—*Medical Press and Circular*, for March 2, 1904, publishes several prescriptions received from its Paris correspondent, among which we note the following ointment:

℞	Salicylic acid Oil of turpentine Lanolin	of each.............10 drachms.

M. Ointment.

In cases of painful chronic rheumatism, Dieulafoy recommends a poultice of breadcrumbs, moistened with spirits of camphor and coated with the following mixture:

℞	Camphor	..............................2 drachms;
	Extract of opium	........................1 drachm;
	Alcohol	....enough.

M. As directed.

The preparation of the poultices is a little intricate. Four pounds of breadcrumbs are steeped in water for about five minutes; they are then pressed in linen and placed in a sand bath for three hours. At this point the bread forms dry paste, and is softened gradually by the addition of spirits of camphor. The paste is then kneaded and spread upon a piece of linen, while the above mixture is spread over the whole surface. Thus prepared, the poultice is placed on the articulation and covered with a sheet of guttapercha, and held in place by a flannel bandage; the application remains in place from eight to ten days.

Huchard recommends massage with the following:

℞	Tincture of nux vomica	..................1 drachm;
	Spirit of lavender	........................1 drachm;
	Vaseline Lanolin	of each.....................6 drachms.

M. To be well rubbed in.

Warm baths are given every two days for ten or twenty minutes, and the temperature of the water is gradually raised while the patient is in the bath to the highest degree possible. Different substances might be added to the bath, but more especially oil of turpentine (black soap emulsion, oil of turpentine, of each 4 ounces). The hot sand bath gives much relief. The sand, heated in an oven, is poured into a tub and allowed to cool to 110°, the limb, bandaged, is plunged into the tub for twenty to twenty-five minutes. Bergeret recommended enveloping the joint in carded wool and placing on it three or four pounds of hot sand. He alleged that this treatment applied to hydarthrosis of the knee caused the effusion to disappear in a very few days.

Turpentine vapor baths are frequently employed. M. A. Robin uses them freely at the Hôpital de la Pitié. The baths are administered every two days, and last from ten minutes to a quarter of an hour; the vapor jet is received in a sort of tent in which the body of the patient is imprisoned up to the neck.

In conclusion, M. Huchard says that chronic rheumatism is much more amenable to treatment than the arthritic form. This latter is not as yet very well understood as to its real cause, its nature being very complex, but the treatment already indicated—large doses, internally, of tincture of iodine, massage, and the hot sand bath—gave the least unfavorable results.

Diarrhœa in Nurslings.—Wiel, Pehu, and Lumière, according to *Journal de médecine interne* for February 1, 1904, give gelatin in all forms of infantile diarrhœa, except cholera infantum. It is prepared as follows:

℞	Gelatin	....................................50 parts;
	Boiled water	..................................300 parts.

M. Filter and digest at 120°, or boil three quarters of an hour; pour into tubes holding $^1/_3$ ounce.

When required, a tube is warmed and the contents are added to the nursing bottle.

The Prophylaxis of Malarial Fevers.—Constantine Sabba ('Ιατρική πρόοδος, December 15, 1903) finds the burning of the following powder the best preventive against mosquitoes, on which it has a strongly narcotic effect:

℞	Powdered chrysanthemum Powdered nard root	of each........4 parts;
	Powdered potassium nitrate	................1 part.

M. A tablespoonful of this powder suffices for a space of from 30 to 40 cubic metres.

Cancer of Stomach.—*Journal de médecine interne*, for February 1, 1904, gives Robin's prescription as analgetic in this disease:

℞	Cocaine hydrochloride Codeine	of each.....5 centigrammes (¾ grain);
	Lime water	..............150 grammes (5 ounces).

M. Teaspoonful every hour.

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THE "LEICESTER METHOD" OF FIGHTING SMALLPOX.

A man of courage certainly is Dr. C. Killick Millard, the health officer of the town of Leicester, in England, for at a recent meeting of the Incorporated Society of Medical Officers of Health, held in London, he read a paper in which he pointed out what he considered to be certain good features of the " Leicester method " of dealing with smallpox. For years the town has been a hotbed of the antivaccinationists, and it has become notorious as a town where " vaccination is a dead letter," as is remarked by the *Sanitary Record and Journal*, in whose issue for March 17th there appears an abstract of his paper and of the discussion that followed its reading. We cannot say that those who took part in this discussion were overgenerous to their guest, for they virtually branded him as an antivaccinationist, whereas the drift of his paper does not give us that idea at all. Indeed, says the account, " in order to place his own personal belief in vaccination beyond the possibility of question, he had not only had his own two children vaccinated, but had publicly taken them to the Leicester smallpox hospital and had them photographed by the bedside of a smallpox patient. This had been of far more use in making converts to vaccination than pages of literature and statistics."

The " Leicester method " does not seem to have anything very distinctive about it. It is that of dealing promptly with subjects of the disease and with " contacts "—in short, that of doing as well as can be done to prevent the spread of smallpox without recourse to general vaccination. Vaccination is not wholly dispensed with, for it is practised on as many of the hospital attendants as will consent to submit to it. Dr. Millard contends that no such retribution has visited Leicester as was freely prophesied when, some years ago, vaccination began to be systematically neglected by its people; but it was pointed out in the discussion that the town, not being a seaport and being surrounded by protected communities, was exceptionally situated as regarded immunity to smallpox epidemics.

Though we may all admit that there is " more than one way to kill a cat," but few will be found in the medical profession, we are confident, to approve of or even tolerate a plan of dealing with smallpox that ignores the simple and innocent practice of vaccination, and we may well fear that Leicester will yet meet with its " retribution." But it is to be hoped that its people will recover from their objection to the Jennerian preventive in time to avoid such a calamity.

THE KEEPING QUALITY OF BUTTER.

Whatever concerns the keeping quality of an article of such universal consumption as butter is of interest to the whole civilized world, and the Bureau of Animal Industry has done well to start an investigation of the conditions that affect the preservation and impairment of the flavor of this staple article of food. An exposition of the early stages of the inquiry is furnished in a pamphlet on canned butter, by Mr. Lore A. Rogers, of the bureau's staff.

The so called hermetical sealing of fresh butter, as is well known, does not realize the dealers' contention that the production cannot change. It does change most emphatically, becoming " off " in flavor, " fishy " to the taste, or even rancid. All these changes render it disagreeable and unfit for use. As to the causes of these changes, according to Mr. Rogers, the only rational conclusion is that those that most commonly occur in canned butter, or at least those that take place first, are due to the liberation of a fatty acid from its combination as a glyceride, and that this is caused mainly if not altogether by the action of an enzyme which, produced in the milk or secreted with the milk in the udder of the cow, is carried over into the butter. However, it is admitted that, in some cases at least, the changes are produced in the butter itself by the activity of certain microorganisms.

In preparing butter to be kept for a long period, especially for consumption in a warm climate, says Mr. Rogers, it is not enough to seal it hermetically. Such treatment will prevent the development of the aerobic microorganisms that cause a rapid increase of acidity, but will neither exclude certain anaerobic yeasts that may, under certain circumstances, produce a slow development of acidity, nor do away with the action of the fat-splitting enzyme that is carried into the butter from the milk.

Much may be expected from the bureau's further prosecution of the inquiry in the way of indicating procedures that may be fairly trustworthy in the preservation of butter with all the palatability of its fresh state retained. It is not alone the distant station in a warm climate that will profit by the adoption of such measures; the home markets, let us hope, will be correspondingly benefited.

THE MUSICAL EQUIVALENT OF EPILEPTIC SEIZURES.

The phenomena of epilepsy present one of the most fascinating fields of clinical study on account of their variety, complexity, and often unexpected deviations from the typical, "classic" epileptic attack.

A number of authors have commented upon the unusual types of epileptic seizures, including phenomena so completely dissociated from the ordinary manifestations of epilepsy that they have been styled "the equivalents of an epileptic seizure." In a recent article Montagnini (*Gazzetta degli ospedali e delle cliniche*, December 27, 1903) discusses the "musical equivalent of the epileptic fit," taking as illustration a case which he observed in the Insane Asylum for Women in Venice.

The musical equivalent was first observed, in 1897, by De Sanctis (*Riv. quindic. di psichiatria*, 1897), who found that an "attack of singing" could completely take the place of the typical seizure or could accompany the usual motor phenomena of the typical fit. In the same year Cristiani, of Lucca (*ibid.*, 1897), reported an observation which tallied with those of De Sanctis. In the case recently reported by Montagnini, a married woman aged forty-eight years, who was bedridden with epileptic insanity, would suddenly begin to sing. Her song was a succession of musical tones succeeding one another slowly and forming always the same melody, with occasional slight variations. The song ended suddenly, sometimes by a low murmuring or a series of low soft notes, and usually lasted about five or ten minutes. During the "attack" sensibility to pain was considerably diminished, and painful stimuli did not arrest the singing, unless they were very intense, when the song was taken up as soon as the stimulus was removed. No convulsive movements were noted during the attacks, but at times the patient was observed to grow pale and once a general tremor accompanied the singing. Neither the temperature nor the pulse was affected.

The attacks came on suddenly, were not induced by external stimuli or by excitement, and occurred almost always at the same hours of the day (usually in the mornings, occasionally in the evening), and almost always when the typical attacks from which the patient had been suffering before were due. After the attacks, the woman did not show any excitement, but relapsed into her customary taciturn and apathetic state. The administration of bromides controlled the severity and frequency of these attacks.

Montagnini considers this case as analogous to those reported by Dr. Sanctis and by Cristiani, i. e., he regards the singing as the musical equivalent of the epileptic fit, and the case as one in which epilepsy took the shape of attacks of singing. In support of this view he adduces the constant periodic recurrence, the unaltered form, the sudden beginning and ending of the song, the partial loss of consciousness of the patient during the singing, the altered sensibility to pain, the general tremor sometimes accompanying the singing, and above all, the fact that these accesses were controlled by means of bromides.

This case certainly presents unusual and interesting features, but it will take more than a few cases to decide whether singing occurring in attacks as described is an equivalent of epilepsy, or is merely the caprice of an insane person. There is no doubt, however, that our knowledge of the phenomena of epilepsy is constantly extending, and that the Italian School (Lombroso, Jonnini, etc.) to whom belongs the credit of establishing the principle as to the psychical or substituted motor equivalents of epilepsy, is gradually strengthening its position.

AN ORGANIZED PROFESSION.

II.

I would not be understood as being a pessimist. I believe that the evils through which the profession is now passing are necessary consequences of the pressure of the present conditions. The profession is passing through a crisis in its ethics and its relations to the public as momentous in its way as the dawn of the era of asepsis and antisepsis. Out of the errors and unethical conduct inspired by ill advised efforts toward adaptation to the modern spirit of commercialism the golden grains of a modified, modernized, yet distinctly pure ethical spirit will in the near future be evolved. And so I am not essentially pessimistic. Seeing things as they are, facing actual conditions, and appreciating them at their true value—all this is not pessimism, unless one sees these things in the gloom of despondency and with eyes hopeless for the future.

Despite the tendency in some quarters to gloss over certain disagreeable things that confront the medical profession, the fair-minded physician must confess that a radical change in professional ethics and *esprit de corps* has occurred within the last decade. We are in the throes of convulsions and internal disturbances which, although they will undoubtedly be of ultimate benefit to the profession, we must frankly admit are not conducive to tranquility of the professional mind. Gloss the conditions over as we may, the fact remains that the social, financial, and political position of the profession is not a strong one. Individual instances of social, financial, and political prestige on the part of medical men can be mentioned. They are, however, the exceptions which prove the rule, and in every instance it is because of certain individual attributes that such men are successes in the fields mentioned. They succeed in spite of their medical connections, and not because they are men who represent a great, powerful, and respected profession. It is a noteworthy fact that in public affairs, in social circles, and in financial enterprises the medical man as such is practically ignored. No matter what his professional attainments may be, no matter how much influence for the good of humanity the medical profession has exercised, the medical man who becomes a social, political, and financial success does so despite his professional connection.

When we make war upon quackery, the public sizes up the situation thus: A certain group of doctors, who are bigoted, prejudiced, and behind the times, is endeavoring, through fear of a loss of practice, to prevent competition on the part of men more advanced and intelligent than themselves. This, indeed, is the view entertained by the legislators, to whom we go, humbly, hat in hand, craving favors which we are too poor to buy, too weak to compel, and too obscure to request. The quack and the patent medicine man own the law-makers. The medical man, in the eyes of the latter, is a nonentity. Perchance the maker of laws has listened to expert testimony in court, and learned that reputable physicians and surgeons disagree as much with each other as they could possibly do with the quacks. He has learned, perhaps, by sad experience in sickness in himself or his family that one reputable doctor's opinion holds good only until the next man is heard from. He may, perhaps, entertain the mistaken opinion, formed from observation of expert testimony, that doctors are venal and their opinions swayed by financial conditions. He knows nothing of the merits of medical controversies, and with studious care the medical profession, from time immemorial, has endeavored to keep the public in the dark, allowing it to be educated by quacks and pretenders. The principal obstacle in the pathway of the medical profession in its endeavor to improve professional standards at the present time is the accumulated ignorance, bigotry, and prejudice which the illiberality and shortsightedness of the profession itself have fostered from time immemorial.

How can we expect intelligent legislation in matters medical by ignorant legislators, representing a still more ignorant constituency, if such a thing is possible? Add to this the coercive influence of quack money and the ballots, or prospective ballots, of the constituents of the quacks, and the lamentable failure of the medical profession in many matters of legislation is not to be wondered at.

The remedy for the present condition is simple enough in the abstract. It is not so easy of accomplishment. It may not be brought about, perhaps, within the present generation. It must come by evolution and not by revolution. Organization, and organization alone, can save the profession from absolute degeneracy, and elevate it to a plane where it will receive the meed of respect due it from the laity. This organization of the profession must demonstrate to the public several things:

First, that the profession, collectively and individually, sets a proper estimate upon the commercial value of the knowledge, skill, and labor of the profession.

Second, it must encourage medical men to take an active part in public affairs. It must no longer sneer at the physician who takes an active interest in politics. Once the public and its legislators become convinced that the medical profession is a potent factor in politics, the way will be easy.

Third, and most important of all, the professional body must endeavor to educate the people at large to an appreciation of the interests and aims of scientific medicine. We may not gather figs of thistles. How can we hope for intelligent appreciation from a laity which knows no more of medicine and surgery than has been imparted to it from selfish motives by quacks and medical pretenders? Medical legislation will never down quackery. It is a waste of powder. Every man and woman arrogates unto himself or herself the divine right to dose and be dosed whenever and however it may seem fitting. The profession should organize in an effort to impart to the public sufficient knowledge to enable it to make an intelligent discrimination between schools and between men.

G. FRANK LYDSTON.

A FAKIR'S POWER OVER INERT MATTER.

We learn from the Boston *Record* that a committee of more or less prominent practitioners of that city have professed their inability to comprehend the feats of a young woman well known to the vaudeville stage, whose specialty is the apparent nullification of the physical strength of her spectators. As is naïvely said of the performer, "she can exert her power only upon living subjects, and has no influence over inert matter." This observation is not quite accurate, for the brains of supposedly scientific students who can publicly stultify themselves as reported must be quite inert. Is it not a pity and a reproach to our profession that its members can put themselves on record as ignorant of the first principles of mechanics and become a laughing stock to every variety performer and sideshow fakir in the country?

THE VISIT OF PROFESSOR EHRLICH.

The increasing frequency with which in these days eminent medical scientists, at the request of their foreign *confrères,* visit foreign lands to expound their principles is one of the most gratifying features of modern progress. Professor Paul Ehrlich is a true medical philosopher, and needs no introduction. There can be no doubt that the Herter Lectures, which he is to deliver at the Johns Hopkins University, on April 12th, 13th, and 14th, will amply justify the wisdom of the university authorities' selection. Professor Ehrlich should receive a cordial welcome.

POPULAR INSTRUCTION IN MEDICINE.

We are of the opinion—and the opinion is getting to be more and more common—that the scientific man who expounds the subjects of his study in simple language that the general public can understand renders a service both to the people and to science. An excellent example of such exposition is an article, entitled Protozoa and Disease, by Gary N. Calkins, Ph. D., adjunct professor of zoology in Columbia University, published in the April number of the *Century Magazine.*

THE BRITISH JOURNAL OF CHILDREN'S DISEASES.

We acknowledge receipt of the first number of this handsome journal, which is to be published monthly in London by Messrs. Adlard and Son. The introduction pays a high compliment to the development of Pædiatrics in America. There is apparently a field for such a publication in England, and the list of contributors contains some distinguished names. George Carpenter, M. D., is the editor.

News Items.

Society Meetings for the Coming Week:

MONDAY, *April 11th.*—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-Historical Society (private); New York Ophthalmological Society (private); Gynæcological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence.

TUESDAY, *April 12th.*—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, *April 13th.*—New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox Medical and Surgical Society (private); Medical Society of the Borough of the Bronx, New York.

THURSDAY, *April 14th.*—New York Academy of Medicine (Section in Pædiatrics); New York Academy of Medicine (Section in Otology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, *April 15th.*—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-Graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynæcological Society; Manhattan Medical and Surgical Society (private).

Change of Address.—Dr. R. W. Taylor will remove about April 20th to 142 West Forty-eighth Street.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending April 2, 1904:

	Week end'g Mar. 26.		Week end'g April 2.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	1,554	29	1,265	28
Diphtheria and croup	359	44	343	39
Scarlet fever	494	25	393	30
Smallpox	1	..	..	..
Chickenpox	87	..	56	..
Tuberculosis	454	199	289	185
Typhoid fever	21	9	19	12
Cerebrospinal meningitis	..	13	..	31
Totals	1,970	319	2,365	325

The Eastern Medical Society.—The house committee begs to announce that an informal dance for the members and their friends will be held on Saturday evening, April 16, 1904, at Clinton Hall, 151-153 Clinton Street. A sociable and enjoyable evening is anticipated and a full attendance is earnestly solicited. E. K. Browd, M. D., chairman house committee.

New York State Hospital for the Care of Crippled and Deformed Children.—On March 29th Governor Odell sent to the Senate for confirmation the appointment of the Right Reverend Henry Codman Potter as manager of this institution.

Flushing Hospital.—The trustees of this institution have taken action on the recommendation of Major Thomas K. Boggs, chairman of the house committee, that a nurses' home be established adjoining the hospital building. The need of such an institution is apparent. Harry B. Pearce, treasurer, has reported on the financial standing of the hospital, stating that when all moneys due for February are received the institution will have a deficit of only $81.00.

St. John's Guild Floating Hospital.—Appeals to the public are being sent out for funds to support the work done by this hospital in its floating and seaside establishments. This institution has given, since its establishment, 1,381,409 days of hospital treatment. Twenty-five cents, says the appeal, will give one baby one trip on the floating hospital, and $5.00 will pay for one week's treatment at the seaside hospital for one baby. The dues for membership are $10.00 a year.

New York Academy of Medicine.—The Section on Otology will meet on Thursday evening, April 14th, at 8.15. Order: Presentation of Cases; Exhibition of Specimens and New Instruments. Paper: A Contribution to the Surgical Pathology of Mastoiditis, by Dr. Frederick Whiting. Discussion. Dr. Herman Knapp, chairman; Dr. Thomas J. Harris, 117 East Fortieth Street, secretary.

For the benefit of many inquirers, the president of the academy authorizes the following statement: Messrs. Barclay Brothers, of London, by an arrangement which is unofficial as regards the academy, have undertaken to produce a large photogravure, on copper, of Hosack Hall, in which are to be grouped the portraits of as many Fellows as give sittings for the purpose. It is the understanding that no expense is incurred by complying with the request for a sitting, as the purchase of the engraving is entirely optional.

The Medical Association of the Greater City of New York.—A stated meeting of this association will be held at the New York Academy of Medicine, 17 West Forty-third Street, Manhattan, on Monday, April 11, 1904, at 8.30 p. m. Order of exercises: Report of the Committee on the Death of Dr. Edward A. Walter, by Clarence H. Smith, M. D., chairman; Counter Opening in the Vagina for Artificial Bladder Drainage, by Nathan G. Bozeman, M. D. Discussion. The Treatment of Tuberculosis of the Larynx and Prostate by the X Ray, High Frequency Currents, and the Cooper Hewitt Light, with Demonstration of Special Apparatus and of a Rapid Method of Skiagraphy, by Sinclair Tousey, M. D. Discussion by Dr. H. Holbrook Curtis, Dr. W. Freudenthal, Dr. Carl Beck, Dr. Albert C. Geyser, Dr. Henry G. Spooner, and others. Collation. J. Lee Morrill, M. D., treasurer. P. Brynberg Porter, M. D., recording secretary, address, 150 West Eighty-fourth Street, Manhattan.

The College of Physicians and Surgeons.—According to the annual announcements of this institution two new names appear among the officers of instruction: Dr. Harry McMahon Painter, professor of clinical obstetrics, and Dr. Gorham Bacon, clinical professor of otology. The following new appointments have been made: Dr. William K. Simpson, clinical professor of laryngology; Dr. Philip H. Hiss, adjunct professor of bacteriology; Dr. Eugene Hodenpyl, adjunct professor of pathological anatomy; Dr. Francis Carter Wood, adjunct professor of clinical pathology, and Dr. Frederick R. Bailey, adjunct professor of normal histology. The tuition fees will be raised from $200 to $250, and fourteen scholarships, open to all students, have been established, of the value of $250 per annum each.

The Late Dr. Aimée Raymond Schroeder.—Dr. Schroeder died in New York on December 25, 1903, eight days after an operation for appendicitis. She was the youngest daughter of the late Henry J. Raymond, founder of the New York *Times*, who was a strong supporter of Dr. Elizabeth and Dr. Emily Blackwell in their early struggles for the medical education of women. Dr. Raymond Schroeder was born in Montreux, Switzerland, August 21, 1857. Many years of her youth were spent in Europe. After graduating from the Woman's Medical College of the New York Infirmary in the class of 1889, she served in the out-practice and dispensary, but retired from active practice upon her marriage in 1893, and thereafter devoted herself to literary medicine. She translated and revised various medical works, and at the time of her death was a valued member of the editorial staff of the *Medical Record*. Dr. Raymond Schroeder showed a constant interest in the medical education of women, and was secretary of the Association for the Advancement of the Medical Education of Women. The grace and charm of a woman of broad culture and rare accomplishments brought her the admiration of many friends, while her generosity, her kindness, her perfect truth and loyalty, the attributes of her noble personality, endeared her to an even wider circle. It has been, therefore,

Resolved, That in the death of Dr. Aimée Raymond Schroeder the Association for the Advancement of the Medical Education of Women and the medical profession have lost a beloved and honored member, and

Resolved, That this be spread upon the minutes, sent to the family, and published in the city medical journals.

Committee { Martha Wollstein,
Mary Putnam Jacobi,
Elizabeth Stow Brown.

Settlement of the Controversy Between New York University and Its Former Medical Faculty.

By a recent decision of the Court of Appeals the final step has been taken toward the settlement of the controversy between the New York University and its former medical faculty, the members of which resigned in 1898 and founded the Cornell University Medical College. The Court of Appeals confirms the decision of the lower courts ordering the return of the building and property to the former owners.

The University Medical College, like all others of its time, was originally and for many years a proprietary institution holding its charter through the New York University, but wholly independent of it in management. In the effort to improve standards of teaching, it became evident that this proprietary quality should be eliminated, and the faculty accomplished this by the aid of a gift of money from Colonel Payne by which the ownership of the faculty was canceled and the property was placed in the hands of a corporation fund for this purpose, the faculty agreeing to accept fixed salaries in lieu of a division of the profits. After a few years, with the intention of establishing a closer connection with the New York University, it was agreed that the corporation which held the property and managed the affairs of the college, composed largely of members of the faculty, should transfer their property and function to the New York University, and that the latter should manage the college through a "medical committee" of the council, composed of three members, who should be satisfactory to the faculty. On nomination of the faculty two new members were elected to the council, and, with Colonel Payne, the donor of the money, constituted this committee.

Within a few months disagreements arose over a proposed consolidation with Bellevue Hospital Medical College: the recommendations of the medical committee were overridden by the council, and the faculty held that the agreement had been broken. Reestablishment of the original status was refused by the council of the university, and a year later the faculty acceded and established the Cornell University Medical College, and the corporation which had transferred the property sued for its return. The New York University then took over the Bellevue Hospital Medical College as its medical school, with most of the faculty, and made it its medical department. The property is valued at $150,000.

The results of this final decision are that the large buildings formerly occupied by the New York University adjoining the Loomis Laboratory are now the undisputed property of the corporation, many of whom are members of the faculty of the Cornell University Medical College.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g April. 2.		Week end'g Mar. 26.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	32	7	35	8
Diphtheria	67	9	88	12
Scarlet fever	92	7	116	5
Typhoid fever	321	24	148	17
Consumption	..	74	..	60
Cerebrospinal fever	..	..	..	..

A Bill to Make Vaccination Compulsory will be presented to the next Pennsylvania legislature, and an attempt will be made to place its enforcement under the jurisdiction of the boards of health.

Lectures on Tropical Medicine.—A course of ten lectures on tropical medicine will be given under the auspices of the Medical Department of the University of Pennsylvania, on Wednesdays and Fridays, at the Laboratory of Hygiene, Thirty-fourth and Locust Streets, Philadelphia, by Major Guy L. Edie, U. S. A. A cordial invitation to the medical profession of Philadelphia has been extended.

University of Pennsylvania.—Biological Hall, one of the buildings of the University of Pennsylvania, will be subjected to immediate repairs, as a recent sagging of the structure has made this imperative. The building, which was constructed about three years ago, originally had two stories, but the increased growth of the department required an additional one. It is the third floor which is most affected by the weakening of the building.

Atrocious Revelations of Infanticide in Philadelphia.—Extensive investigations by the Coroner of Philadelphia have disclosed a state of affairs which must be, and undoubtedly will be, subjected to the strictest inquiry and radical treatment. It has been ascertained that numerous children of illegitimate birth have been murdered. These investigations have naturally also caused the detection of several abortionists. Efforts will be made to have laws enacted that will govern the conduct of lying-in establishments and the more careful reports of births.

Frankford Hospital Physicians Chosen.—The trustees of Frankford Hospital, on April 2nd, elected the following physicians to the general staff: Dr. William H. Morrison, of Holmesburg; Dr. M. Nassau, of Seventeenth and Chestnut Streets, and Dr. S. K. Bolton, of Frankford, to the major surgical ward; Dr. E. E. Kieser, of Tacony, to the major medical ward, and Dr. George C. Hanna, of Frankford, nervous diseases. Property adjoining the hospital has been purchased, and the house thereon will be utilized as a home for nurses. Plans are being made for the enlargement of the hospital.

Extensive Increase in Typhoid Fever.—An extensive outbreak of typhoid fever in Philadelphia during the week ending April 2nd has resulted in the report of more new cases during that week than in any one week for many years in the history of the city. The 321 new cases reported practically embrace the whole territory of the city, and assist in raising the grand total of cases for the current year to 2,036 cases. The advisability of making a house to house inspection of the sanitary conditions is contemplated. Notwithstanding that a portion of the city is supplied with filtered water, the epidemic appears to be increasing in virulence. Although statistical investigation of the cases occurring in the districts supplied with filtered water, as compared with those occurring in districts not supplied with filtered water, shows a decided percentage in favor of the former, the general situation is becoming considerably worse.

Philadelphia Academy of Surgery.—At a stated meeting of the academy, held in the hall of the College of Physicians, of Philadelphia, on April 4th, the programme consisted of the following papers: Dr. George Erety Shoemaker, Some Cases of Fracture in the Neighborhood of Joints; Dr. W. W. Keen (1) A Case of Galactocele, (2) A Case of Gastroplication for Dilatation of the Stomach, (3) Exhibition of a New Metal Anastomosis Button by Jaboulay of Lyons, and Moynihan's Stomach Clamps and Spring-eyed Needles; Dr. H. R. Wharton, A Case of Separation of the Quadriceps Extensor Femoris Tendon from the Patella, Operative Treatment with Good Functional Result, with exhibition of a patient; Dr. Alfred C. Wood exhibited a Specimen Showing a Healed Gastroenterostomy; Dr. Addinell Hewson, A Case of Posterior Gastroenterostomy. William J. Taylor, M. D., 1825 Pine Street, secretary.

Dr. Martin's Report.—In the first annual message submitted by Mayor Weaver of Philadelphia to the councils of that city, there is also contained a report by Dr. Edward Martin, the Director of Public Health and Charities of Philadelphia, in which certain changes are reported that are proving salutary to the city. The report is as follows:

"Among the changes proposed and accomplished in the last year, those which seem most worthy of note, are the following:

"The securing of the active cooperation of the best element of the medical profession in the sanitary work of the department; by the appointment of an advisory board in which it has confidence; and the extending of an invitation to the representative societies to suggest for adoption by the health bureau such sanitary measures and legislation as may meet with their approval. The appointment of thirty-seven additional medical inspectors, and of two diagnosticians of more than local fame (Dr. Welch and Dr. Schamberg), for the more thorough suppression of contagious diseases and, in the case of the medical inspectors, for the systematic inspection of the public school children. The inauguration of courses of instruction, including lectures, demonstrations, textbook lessons, and examinations, designed to make those whose efficiency depends upon technical knowledge, such as medical inspectors, meat and cattle inspectors, milk inspectors, modern, expert, and so well versed in their special vocations as to command the respect of the community and insure efficient work. The appointment and organization of a numerically adequate corps of meat and cattle inspectors and of milk inspectors. The building of two portable steam chambers for the simple and more thorough cleansing of infected houses and their contents; the appointment of a chief resident physician at the Municipal Hospital. The completion of the tuberculosis pavilions at the Philadelphia Hospital, and the building and successful management of a roof garden. The installation of a complete modern record system. The appointment of a salaried director of the clinical laboratory. The appointment of two eminent surgeons, Dr. John Brinton and Dr. J. William White, as consultants to the Philadelphia Hospital.

"Our most pressing needs, as yet unprovided for, are: 1. A hospital for the insane established on a farm so that the inmates may be placed in the environment that gives best promise of cure, when this is possible, of amelioration in nearly all cases. The location, equipment, and overcrowded condition of the present hospital are not creditable to the city of Philadelphia. 2. The remodeling of the Philadelphia Hospital on modern lines, thus furnishing to the sick and injured of the city comforts, conveniences, and prospects for restoration to health at least equal to those afforded by other large cities. 3. The establishment of a modern plant for the manufacture of antitoxine and vaccine virus, thus insuring the purity and potency of the products, and supplying them at an expense much less than that incident to their purchase from private manufacturers."

GENERAL

Statement of Mortality in Chicago, Ill., for the Week Ending April 2, 1904, compared with the preceding week, and with the corresponding week of 1903. Death rates computed on estimated midyear populations of 1,950,000 for 1904, and of 1,885,000 for 1903:

	April 2, 1904.	Mar. 26, 1904	April 3, 1903
Total deaths, all causes	576	626	549
Annual death rate per 1,000	15.40	16.32	15.18
Important causes of death—			
Acute intestinal diseases	25	31	22
Apoplexy	23	17	15
Bright's disease	36	42	33
Bronchitis	21	18	18
Consumption	80	76	68
Cancer	22	25	12
Convulsions	11	10	16
Diphtheria	4	9	8
Heart disease	36	50	50
Influenza	5	4	7
Measles	0	1	5
Nervous diseases	30	22	39
Pneumonia	124	156	105
Scarlet fever	5	1	8
Smallpox	0	0	1
Suicide	11	11	5
Typhoid fever	4	8	5
Violence (other than suicide)	22	25	26
Whooping cough	0	0	7

Compared with the other large cities of the country Chicago has come out remarkably well through the trying ordeal of a memorable winter. The 7,675 deaths reported during the first three months of the year represent an annual death rate of 15.77 per thousand of population. For the corresponding quarter of 1903 the total deaths were 7,856 and the annual death rate was 17.10 per thousand, or nearly 8 per cent. (7.7) higher.

There are some interesting features in the figures of the statement of mortality. Women were kept indoors more than usual by the frequent storms, and so 144 fewer females died than last year. Thirty per cent. fewer children between one and five years of age died—571 this year, 814 last. The almost continuous snow blanket reduced the prevalence of the air-borne diseases of childhood, so that there were 21 per cent. fewer deaths from diphtheria and 42 per cent. fewer from scarlet fever, while there were but 3 deaths from measles and 4 from whooping cough this year, as against 69 and 116, respectively, last year.

On the other hand, deaths of those beyond the "middle arch of life" and from such diseases as apoplexy, Bright's disease, consumption, cancer, and pneumonia, all show marked increases due to the reduced vitality caused by the protracted severe weather. The ice cap on the lake and the snow blanket on land materially protected the water supply from the usual contamination, hence there were less than half last year's typhoid fever deaths—97 and 200, respectively.

Of the five other cities having populations of more than half a million each, viz., New York, Philadelphia, Boston, St. Louis, and Baltimore, the health authorities of four have kindly furnished data from which the following table of estimated midyear populations (1904), total deaths during the first quarter and annual death rates, is compiled:

City.	Population.	Deaths.	Rate.
New York	3,437,202	21,538	25.22
Philadelphia	1,408,154	8,205	23.39
Boston	617,950	2,924	18.05
Baltimore	541,000	3,058	22.73
Chicago	1,950,000	7,675	15.77

Bequest to Yale Medical School.—By the will of the late Mrs. Henry Farnam, of New Haven, about $20,000 will be added to the endowment fund of this institution.

Medical Association of Georgia.—This association will hold its fifty-fifth annual session at Macon, April 20th, 21st, and 22nd. An effort will be made to induce the association to hold its next annual meeting in Savannah.

Asbury Park, N. J., Hospital.—On March 24th Dr. F. A. Dunsmoor, medical director of this institution, handed his resignation to the board of trustees, and Dr. J. Warren Little was appointed to succeed him.

Albany, N. Y., Hospital for Incurables.—Miss Mary P. McHugh, president of the woman's board of the Albany Hospital for Incurables at Kenwood Heights, has written a strong appeal to the public for this worthy charity.

The Doctor in General Literature.—Dr. Axel V. Grafstrom, whose work, A Worm's Revenge, we commented upon a few weeks ago, has contributed to *Wayside Tales* for April a short but tragic story, At the Ferry.

Clarke-Wayne County, Miss., Medical Society.—This society was organized, March 28th, with the following officers: President, Dr. A. H. Boykin, of Stateline; vice-president, Dr. W. J. McNair, of Quitman; secretary and treasurer, Dr. J. M. Guthrie, of Quitman.

Bequests to Baltimore Institutions.—St. Joseph's Hospital, the Little Sisters of the Poor, St. Anthony's Orphan Asylum, and the Colored Oblate Sisters, have been bequeathed twenty-five dollars each by the late Mary Jaceksh, of Baltimore, Md.

Infants' Hospital, Boston, Mass.—The fair recently held for the benefit of this institution at the Hotel Vendome realized a cash return of between $4,500 and $5,000.

Medical Examiners in Massachusetts.—Governor Bates has sent in the following nominations for medical examiners: Dr. Harrison G. Blake, of Woburn, for Middlesex county, and Dr. Charles S. Holden, of Attleboro, for Bristol county.

Municipal Hospital.—The contract for the construction of two bath houses for the Municipal Hospital of Philadelphia has been awarded. Bids have also been advertised for, for the construction of a light, heat, and power plant for the new Municipal Hospital.

Winn Parish, La., Medical Society.—The physicians of this parish met at Winnfield on March 22nd and organized a medical society. The following officers were elected: President, Dr. I. E. Siess, of Winnfield; vice-president, Dr. H. A. Smith, of Dodson; secretary and treasurer, Dr. A. M. Peters, of Winnfield.

Cohoes, N. Y., Hospital.—It is proposed to establish a nose and throat clinic in connection with this institution, and Dr. Salzman, of Troy, is to have charge of the department. A meeting of the directors of the hospital was called for March 30th for the purpose of arranging for a board of women managers.

A Parish Medical Society met at Bunkie, La., on March 24th, and elected the following officers: President, Dr. C. T. Ducote, of Cottonport; vice-president, Dr. W. G. Branch, of Bunkie; secretary, Dr. E. Stanley Matthew, of Bunkie, and treasurer, Dr. E. Regard, of Mansura. Meetings will be held quarterly at places appointed by the society.

Silver Bow County, Mont., Medical Association.—The regular annual meeting of the Silver Bow County Medical Association was held on March 9th in the rooms of the association and officers were elected for the ensuing year. Dr. T. J. Murray was chosen to succeed Dr. T. B. Sullivan as president, the latter being elected vice-president. Dr. T. A. Grigg was chosen treasurer and Dr. Grace W. Cahoon, secretary. A committee of three, consisting of Dr. Sullivan, Dr. J. D. Freund, and Dr. Donald Campbell, was appointed to investigate some alleged illegal practices in the county.

The Herter Lectures.—We are informed that the first course of lectures on the Herter foundation will be delivered by Professor Paul Ehrlich, M. D., LL. D., Director of the Royal Prussian Institute of Experimental Therapeutics, Frankfort-on-the-Main, on Tuesday, Wednesday, and Thursday, April 12, 13, and 14, 1904, at 4.30 p. m., in McCoy Hall, Johns Hopkins University Medical Department, Baltimore. The lectures will be in the German language upon subjects relating to Immunity. The special topics will be (1) The Mutual Relations Between Toxine and Antitoxine; (2) Physical Chemistry Versus Biology in the Doctrines of Immunity; (3) Cytotoxines and Cytotoxic Immunity.

The Late Sir Edward Sieveking, M. D.—Sir Edward Sieveking, who recently died at the age of eighty-eight years, was a prominent London physician in his day. He was formerly physician to St. Mary's Hospital, and in 1901 was appointed Physician Extraordinary to the King. His best known works were a *Manual of Pathological Anatomy,* in conjunction with the late Dr. Handfield Jones, F. R. S., and the *Medical Examiner in Life Assurance.* He was knighted in 1886.

Dr. H. C. Fairbrother, of East St. Louis, Ill., was appointed a member of the Illinois State Board of Commissioners of Public Charities on March 28th, by Governor Yates. Dr. Fairbrother is one of the prominent physicians of Illinois. He is a member of the Grand Army, and has practised medicine in Illinois since 1872. He is prominently connected with the Illinois State Medical Society and several other medical societies, and is a member of the faculty of the Marion-Sims-Beaumont college of medicine of St. Louis. The Board of Commissioners of Public Charities, which has charge of all the charitable institutions of the State, is now composed of five members, two of whom are physicians. The other medical member, who is chairman of the board, is Dr. William Jayne, of Springfield, a son of Dr. Gershom Jayne, one of the founders of the Illinois State Medical Society.

Pathological Exhibit at the St. Louis World's Fair.—There will be a pathological exhibit at the World's Fair in St. Louis under the auspices of the American Medical Association. The exhibit, which will be held in the Palace of Education in a gallery over the east main entrance, will be of wide scope, covering the field of general pathology and bacteriology. The president of the association has appointed the following Exhibit Committee to take charge of the work:

Executive members: Dr. Ludwig Hektoen, Dr. A. J. Ochsner, Dr. W. A. Evans, Dr. W. T. Eckley, Dr. L. F. Barker, all of Chicago.

District members: Dr. J. N. Hurty, of the World's Fair; Dr. Frank P. Wynn, of Indianapolis; Dr. Max Herzog, of Philippine Islands; Dr. V. C. Vaughan, of Ann Arbor; Dr. W. W. Keen, of Philadelphia; Dr. J. S. Billings, Jr., of New York; Dr. Philip King Brown, of San Francisco; Dr. Ellsworth Smith, Jr., of St. Louis; Dr. Allan J. Smith, of Philadelphia; Dr. F. W. Farham, of New Orleans; Dr. R. M. O'Reilly, U. S. Surgeon-General.

Dr. Ellsworth Smith, Jr., who has charge of the St. Louis district, has appointed the following advisory committee to assist him in the organization of an exhibit for his district:

Dr. Y. H. Bond, Dr. H. W. Bond, Dr. John Young Brown, Dr. B. Meade Bolton, Dr. Willard Bartlett, Dr. N. B. Carson, Dr. O. H. Elbrecht, Dr. W. E. Fischel, Dr. B. M. Hypes, Dr. Bransford Lewis, Dr. H. W. Loeb, Dr. Robert Leudeking, Dr. H. G. Mudd, Dr. Henry Schwarz, Dr. Charles Shattinger, Dr. J. H. Simon, Dr. C. A. Snodgrass, Dr. Justin Steer, Dr. Hugo Summa, Dr. Robert Terry, Dr. E. F. Tiedemann, and Dr. H. Tuholske.

Pith of Current Literature.

ZENTRALBLATT FUER GYNAEKOLOGIE.

March 5, 1904.

1. Eserine in the Treatment of Postoperative Intestinal Paresis, By G. Arndt.
2. Technics of Wertheim's Operation, By M. Walthard.
3. Lateral Section of the Pelvis, By L. Gigli.
4. Gonorrhœa of the Paraurethral Ducts in the Female, By E. Pollak.

1. **Eserine for Intestinal Paresis.**—Arndt narrates five cases of postoperative intestinal paresis, in all of which the patients recovered after the use of eserine. The preparation which the author uses is the salicylate of physostigmine, hypodermically administered in the dose of one-sixty-fifth of a grain. Usually within an hour abdominal cramps were felt and soon after flatus was passed with a total disappearance of the serious symptoms,—meteorism, shallow and rapid respirations, rapid and flickering pulse, and the appearance of collapse.

4. **Gonorrhœa of Skene's Ducts.**—Pollak has made an exhaustive study of eighty-five cases of gonorrhœa in the female. In the greater number of cases, the ducts of Skene were found to be involved, more often unilaterally than bilaterally. The diagnosis was always confirmed by the finding of gonococci. The importance of the involvement of the ducts lies in the danger of constantly recurring infection in case the ducts are not cleared of their gonorrhœal contents, even though the remainder of the genital tract shows an entire absence of gonococci. It is probable that the traumatism of coitus is responsible for the infection of the paraurethral and periurethral passages and for their reinfection as well. The wife, if not cured, infects the husband, who in turn, reinfects his wife. Destruction of the ducts by the Paquelin cautery is the safest and wisest procedure.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT.

March 1, 1904.

1. Lævulose in the Amniotic Fluid, By A. Guerber, and D. Gruenbaum.
2. Bacteriological Researches on Measles Conjunctivitis, By Ernst Schottelius.
3. Mucous Membrane Eruption in Measles, By O. Ruedel.
4. Subcutaneous Proteid Feeding, By Credé.
5. Congenital Unilateral Gigantism, By H. Bruening.
6. Cephalhæmatoma of Older Children, By H. Friedmann.
7. Atropine in Mechanical Ileus, By Boseckin.
8. Ovariotomy in Pregnancy, By H. Fehling.
9. Remarkable Central Disturbance of the Sense of Taste (*Concluded*), By G. Koester.

1. **Lævulose in the Amniotic Fluid.**—Guerber and Gruenbaum have examined the amniotic fluid of domestic animals and find that it almost always contains lævulose in varying percentage. The amount present in the amniotic fluid gradually increases toward the end of pregnancy, while that of the allantoic fluid remains constant through the period of gestation. It has been

known that under some pathological conditions, lævulose has been found in the fluid of both man and the lower animals; the experiments of the authors show that it can occur physiologically as well.

2. **Bacteriology of Measles Conjunctivitis.**—Schottelius made bacteriological examinations of the conjunctiva in eighty cases of measles, forty in the living subject and forty in children who died of the disease or its complications. The *Staphylococcus pyogenes aureus* was most frequently found in the milder cases, while in the fatal or very severe cases the streptococcus was discovered in fifty per cent. of the cases. Possibly the latter was more frequently present than the findings show, as it was regularly seen in the lungs and spleen of the dead children.

3. **The Koplik Spots.**—Ruedel confirms the diagnostic value of the Koplik spots as an early sign of measles. He had occasion to observe an epidemic; in the majority of the cases, the exanthem appeared upon the inside of the cheek and upon the soft palate for some days before the appearance of the cutaneous eruption. In cases of rubeola no mucous eruption was observed, while in scarlet fever patients such an eruption was noticed without the characteristic whitish spots, and consisting of many minute red dots, the edges of which were scarcely distinguishable from the surrounding mucosa.

ZENTRALBLATT FUER CHIRURGIE.

March 5, 1904.

1. Trephining with Local Anæsthesia and Section of the Occipitofrontalis Fascia Without Hæmorrhage, By L. HEIDENHAIN.
2. Operative Treatment of Habitual Luxation of the Patella, By A. KROGIUS.

1. **Trephining with Local Anæsthesia.**—Heidenhain has operated upon two patients, removing in one instance a sequestrum, in the other trephining for a sarcoma of the motor region—under local anæsthesia, using Braun's solution, a one half or one per cent. solution of cocaine with the addition of one or two drops of a one tenth per cent. solution of adrenalin. One cubic centimetre is sufficient to produce anæsthesia of the skin, the subcutaneous tissues and the fascia. The longer one waits—that is, in from one half to three quarters of an hour—the more profound is the absence of sensation. The bleeding from the occipitofrontal fascia is prevented by passing a pursestring suture through it at the point where the incision is to be made. The suture is left in, and is removed eight or ten days after the operation. Horizontal posture of the patient is absolutely necessary for the avoidance of cerebral anæmia with subsequent signs of poisoning from the cocaine. The formation of a skin and bone flap is very easily made by this method, and hæmorrhage is practically entirely avoided. Heidenhain believes the method especially valuable for mastoid operations, but has had, as yet, no opportunity to try it.

2. **Habitual Luxation of the Patella.**—Krogius makes a crescentic incision on the outer side of the patella, and the entire aspect of the knee joint is exposed to view. At the outer edge of the patella an incision is made, extending above it and ends at the insertion of the patellar ligament. This incision extends through the iliotibial region next to the tendinous expansion of the vastus lateralis muscle, and its true fibrous capsule from which the synovial membrane is pushed away. Perpendicularly along the inner edge of the patella, an incision is next made from the insertion of the ligamentum patellæ to the median vastus muscle following the direction of the fibres of this muscle as far as possible. An incision parallel to this is made about one half inch further inward. Between these incisions, the tissues are dissected away, leaving a bridge-like flap, consisting above of muscle and fascia, below of fascia lata and the tendinous expansion of the median vastus muscle. This gap is closed with catgut, and the flap is brought to the outside of the patella just fitting into the gap. Catgut sutures are then used to bring all the edges into apposition. The author reports some successful cases operated upon in this manner.

PRESSE MEDICALE.

February 24, 1904.

This number is devoted to a testimonial to Professor Bouchard, of the *Académie des Sciences,* and a description of the gold medal presented to him by his colleagues on February 21st, with the addresses made.

February 27, 1904.

1. Respiratory Insufficiency; Treatment by Respiratory Gymnastics and Reeducation, By GEORGES ROSENTHAL.
2. Milk from the Zootechnical Viewpoint, By P. DIFFLOTH.
3. The Sitzbath, By A. ZIMMERN.

1. **Respiratory Insufficiency.**—Rosenthal believes that the value of respiratory gymnastics is not known to the general practitioner and gives a short history of the subject. The first point of importance is to insist on nasal respiration; a mixed nasal and buccal respiration is not uncommon. Both nostrils should be tested. Respiration should be complete, affecting the laryngodiaphragmatic diameter of the thorax as well as the others, and to this end the diaphragm must be educated. The teacher of correct respiration should be the physician himself.

2. **Milk.**—Diffloth points out that cows " educated " to give 25 quarts of milk daily, by massage of the udder and the giving of fat foods, when their natural output is only 8 quarts, do not give so good a quality of milk under the circumstances.

3. **The Sitzbath.**—Zimmern thinks highly of this therapeutic measure, and states that its effects depend on its temperature and its duration. As the patient sits in the bath, the water should reach the level of the navel. Body and feet should be protected. The cold bath is useful in anæmia,

neurasthenia, constipation, enteroptosis gastric dilatation, incontinence of urine, spermatorrhœa. It is contraindicated in tabes. It helps chronic, but not acute, inflammations of the female organs, and is particularly valuable in insomnia. Prolonged, the cold sitzbath is beneficial in leucorrhœa, chronic diarrhœa, sexual irritability, and hæmorrhoids. The tepid bath, prolonged, is an admirable general sedative. The hot bath is emmenagogue and powerfully analgetic, relieving chordee, nephritic colic, vesical or rectal tenesmus, and dysmenorrhœa.

SEMAINE MEDICALE.

February 17, 1904.

1. Nerve Stretching in Raynaud's Disease, By De Bovis.

1. Nerve Stretching in Raynaud's Disease.—De Bovis details two cases of his own where nerve stretching arrested the gangrenous process. A slight paralysis in one case testified to overstretching of the radial nerve. Amputation of the parts already affected was necessary. Strict cleanliness of the hands, friction with alcohol, warm baths with tannic acid or alum, should precede the operation. The pain characteristic of the disease is very likely to persist, as well as the sensation of cold and the subcyanotic hue.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

February 21, 1904.

1. Concerning a Phosphorus Substance in the Vitreous and Aqueous Humors of the Eye, By Emilio Cavazzani.
2. Typhoid Fever, By Nicolo Muglia.
3. A Case of Stone in the Bladder, Partly Hidden Within a Pocket in the Vesical Walls, By Gaspare Messina.
4. A Case of Œdema of the Glottis, By Emilio Benedetti.
5. A Case of Hysteroepileptic Chorea, By Giovanni Morelli.
6. A Case of Traumatic Peritonitis, By C. Ferraris, and C. Garampazzi.

1. Substance Containing Phosphorus in the Humors of the Eye.—Cavazzani reports the result of an interesting research which proved that the vitreous body of a dog contained nucleoalbumin in combination with iron. He further investigated the humors of the eye in dogs, oxen, and calves, and found that the nuclein-iron which could be isolated from the vitreous of these animals was markedly inferior in quantity as compared to the nuclein-iron which could be extracted from other tissues and fluids. He found, further, that both the aqueous and the vitreous humors of these animals contained phosphorus, but the amount of phosphorus in the nuclein isolated from these humors was considerably lower than that obtained from the nuclein from the other organs. He thinks that these humors also contain a substance which possesses some of the properties of nuclein, but is of less complex chemical composition. The aqueous humor contains larger amounts of this body than the vitreous. The mucin found by Moerner in the vitreous is distinguished from another mucin found in the cornea by a smaller percentage of sulphur.

2. Treatment of Typhoid Fever.—Muglia outlines the following principles in treatment of typhoid fever: (1) Hygiene of the room and of the patient. (2) Liquid diet; pure water, up to several litres, during the day; light broths, devoid of fat, and yolks of eggs. If there is diarrhœa, only milk, coffee, and eggs. (3) If the temperature is over 39° C. (103° F.), give fractional doses of antiseptics, especially salol and calomel. If the temperature is over 103° F., baths according to Brand's method. As an antipyretic, he uses only quinine bichloride subcutaneously, which acts also as a tonic. (4) In the adynamic state, when collapse is threatened, in cases in which the patients complain of intense pain in the abdomen and pass a little blood in their stools, the baths are discontinued and an ice bag is placed upon the abdomen, while at intervals alternating injections of quinine and of sodium benzoate and caffeine are given. If there is collapse, subcutaneous injections of camphor, ether, etc.; when there are cerebral symptoms, an ice bag is kept on the head. In the most severe cases, ice bags are kept both on the head and on the abdomen, and alternating injections of quinine, caffeine, and camphor are given. This treatment has been used with success by Ewald, and the present author has employed it with very good results in a number of cases.

3. Sheathed Stone in the Bladder.—Messina reports a case of stone in the bladder in a boy aged seven years who had been complaining for some time of pain, and frequency of urination. Suprapubic cystotomy was performed, and the stone, about the size of a small nut, was found at the base of the bladder. Attempts to remove it with the forceps were fruitless, and it was found that it consisted of two portions, one of which was free, and the other was sheathed within a diverticulum. It was extracted by enlarging the opening of this diverticulum with the fingers. The boy made a good recovery. The stone had a constriction in the middle, and consisted of two parts, each of which was round, smooth, and white, and the two were united by a narrow isthmus.

February 28, 1904.

1. Hæmostasis in the Surgery of the Liver with Special Reference to the Use of Adrenalin Chloride, By G. Gualdrini.
2. Pain in the Appendix in the Pneumonia of Children, By Pietro Cavatorti.
3. Contribution to the Pathological Histology of the Umbilical Cord in Syphilis, By G. Franceschini.

2. Appendicular Pain in the Pneumonia of Children.—Cavatorti reports the case of a girl aged ten years, who was seized with all the symptoms of appendicitis, and two days later developed pneumonia. During the pneumonia the pain did not disappear entirely, and some of it remained even after the pneumonic process had resolved. Prandi thought that, in a similar case recently reported by him, the abdominal symptoms were due to ordinary intestinal disturbances which are so common in children. Cavatorti, on the other hand, thinks that in the present case the pain and other signs were too clearly localized and persisted too long to be considered due to mere temporary disturbances of the intestines. He considers them due to the specific germ of pneumonia, the bacillus of Fraenkel. In other words, there was an appendicitis due to the same germs that produced the inflammation of the lungs. There were two distinct diseases caused by the same microorganism.

3. **The Umbilical Cord in Syphilis.**—Franceschini urges that the umbilical cord of a newly born child be examined histologically when syphilis is suspected in its heredity. This examination is especially useful in newly born infants of unknown origin; in children of parents who have had syphilis many years before; in determining the cause of death in a stillborn child, etc. It is also of value in determining whether an infant with syphilitic heredity should be treated with specific remedies, or whether the mother who has aborted should be so treated. The author thinks that the study of the anatomical changes in the umbilical cord in syphilitics will show positive proofs of the laws of Colles and of Profeta, and believes that, even in children who are apparently perfectly healthy, the cord may reveal a latent hereditary syphilis. The cord is the only part of the living child which can be examined histologically. The principal alterations in such syphilitic cords consist in exudative and proliferative changes, in both the artery and vein, including all the coats thereof, together with a certain degree of infiltration, and nodular thickening. In the more advanced cases there are serious lesions in the intima, consisting of endarteritis and endophlebitis, sometimes with obliteration of the vessels. Less frequently periphlebitis and periarteritis are found, and sometimes Wharton's jelly is also affected by an infiltration with multinuclear leucocytes.

BOSTON MEDICAL AND SURGICAL JOURNAL.

March 17, 1904.

1. Forcible Correction in Lateral Curvature of the Spine, Fourth Paper, By ROBERT W. LOVETT.
2. Hydrotherapeutic Prescriptions, By JOSEPH H. PRATT.
3. An Account of the Work, Including Obstetrical Technics, at the Lying-in Hospital of the City of New York, By CHARLES H. BRADLEY.

1. **Curvature of the Spine.**—Lovett asserts that all the standard methods for the correction of lateral curvature of the spine, with the possible exception of the operative method, which is still *sub judice,* are of no avail. He has devised a treatment which has given satisfactory results. The patient is placed on a special frame and the spinal deformity is reduced as much as possible. A plaster jacket is then applied. Such corrective jackets are worn for two or three weeks and renewed as seems desirable. At the end of this period the patient is furnished with a retentive jacket made of leather or celluloid. This last jacket may be dispensed with at the end of one or two years. The special features of the author's method are two: (1) The patient lies on the frame in the prone position with the thighs flexed at right angles to the body. (2) The deformity of the spine is overcome by lateral pressure. Absolutely no tension is placed upon the spinal column.

2. **Hydrotherapeutic Prescriptions.** — Pratt reviews briefly the advantages of hydrotherapeutics. He then enumerates a number of diseases in which this method of treatment is of advantage. Following each disease are the numbers of the suitable prescriptions. The article ends with thirty-five prescriptions. To illustrate: Under diseases we find: "*Sciatica and other forms of neuralgia.* Vapor bath followed by hot pack (Prescription 16). Scotch or alternate douche to painful areas (Prescription 14)." Under prescriptions we find: "(14) General hot-air bath to point of perspiration. Circular douche 105°-110°-90°, two minutes. Scotch or alternate jet douche to affected part or painful areas. Repeat daily. (16) Vapor bath, 120°, ten minutes. Scotch or alternating douche to painful parts. Hot pack thirty minutes. Rest in bed one hour. Repeat thrice weekly." In Boston a number of well known physicians have opened an establishment where patients may be sent to have their prescriptions filled "while they wait."

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

April 2, 1904.

1. The Use of Ethyl Chloride as a General Anæsthetic in Gynæcology, By E. E. MONTGOMERY, and P. BROOK BLAND.
2. The Ætiology of Tabes Dorsalis, By ARTHUR CONKLIN BRUSH.
3. A Study of the Anatomy, Pathology, and Ætiology of Scoliosis, also Presenting the Scoliotone, an Apparatus for Elongating and Lessening the Rotation of the Spine in Lateral Curvature, By COMPTON RIELEY.
4. A Study of Gonococcus Metastasis: with Report of a Case, By JAMES MCCOLGAN, and JAMES M. COOPER.
5. Treatment of Typhoid Perforations, By LOUIS FRANK.
6. A Simple, Accurate, and Rapid Method of Localizing Foreign Bodies in the Orbit, By VARD H. HULEN.
7. Stricture of the Female Urethra, By H. L. E. JOHNSON.
8. Tahiti from a Medical Standpoint, By N. SENN.
9. The Influence of Dental Disease on the Ætiology of Certain Ocular Disturbances, By WILLIS O. NANCE.

1. **Ethyl Chloride.**—Montgomery and Bland favor the use of ethyl chloride as an anæsthetic in nearly all cases in which narcosis is to be desired for very short periods. They review the chemistry, physiological action, safety, and mode of administration of the drug. Personally they believe that, as a general anæsthetic, ethyl chloride is one of the safest drugs at our disposal. Yet their statement of various statistics is not wholly reassuring. McCardie is quoted to the effect that the death rate from the drug is probably one in many hundred thousand cases. Seitz and Konstanz have collected 16,000 cases with one death. Ware 11,207 cases with one death. Lotheissen places the mortality as high as one death in every 2,500 cases of narcosis. In the judgment of the authors, ethyl chloride is safer than chloroform and probably as safe as ether. The disadvantages of ethyl chloride are two: (1) The patient passes under and out of its influence so quickly that the administrator must be unusually expert

to avoid, on the one hand, profound anæsthesia, and on the other, the emergence from its effects at an important stage of the operative procedure. (2) The expense of the drug excludes its use in a general clinic, but the increased employment of this agent which must necessarily follow the general recognition of its advantages will doubtless result in a reduction of its cost.

2. **Tabes Dorsalis.**—Brush reviews the most common beliefs regarding the ætiology of tabes dorsalis. He concludes that at the present time we have a perfect right to attribute the disease to other causes besides syphilis. He reports nine cases to support this assertion.

3. **Scoliosis.**—Riely is not satisfied with the current theories of the origin of scoliosis. He presents in his paper the results of some personal investigations of the subject as a plan of treatment based on his deductions. According to the author distortion of the pelvis is the starting point of the trouble for all cases, except those due to some gross lesion, such as empyema, paralysis or Potts's disease. The pelvis deformity is followed by unequal contraction of the abdominal muscles which, in turn, produce the rotation of the spine and its dorsal concavity. The treatment recommended requires, among other things, a special machine which has been named a scoliotone by the author.

4. **Gonococcus Metastasis.**—McColgan and Cooper assert that, since a gonorrhœal infection of the urethra is capable of giving rise to metastatic abscesses, and since these abscesses contain virulent gonococci and are therefore capable of spreading infection when opened, it is imperative to examine routinely with the microscope the pus from all abscesses, but especially the pus from abscesses connected with tendon sheaths.

5. **Typhoid Perforations.**—Frank summarizes his paper thus: (1) Perforations are to be expected in about 2.5 per cent. of all cases of typhoid fever. (2) Prompt surgical intervention is the best and only logical treatment. (3) Early diagnosis is most desirable, and will be the means of greatly reducing the mortality, as 55 to 60 per cent. would recover. (4) Diagnosis, sufficiently early to achieve these results, can only be made by careful watching, treating all cases as serious ones and a proper interpretation of the early, even the preperforative, symptoms, the suggestions of Cushing as to this stage being of value. At the first indication of this stage have the surgeon in consultation and be prepared to operate. (5) The sphygmomanometer should come into general use as an important aid to diagnosis. (6) More cases die from delay than from errors in surgical technics. Therefore, in doubtful cases, though a mistake may be made and no perforation found, operate. (7) No case, unless dying, is so desperate as to be beyond some hope of saving. So in operating, lose no time and be sure to drain. (8) Get into the abdomen quickly and get out more quickly.

7. **Stricture of the Female Urethra.**—Johnson does not believe that stricture of the female urethra is so rare as is generally supposed. He reports six personal cases and reviews the ætiology and treatment of the condition.

MEDICAL RECORD.

April 2, 1904.

1. Hip and Thigh Amputations for Sarcoma of the Femur, By George F. Shrady.
2. The Diagnosis of Thoracic Aneurysm, By Charles E. Nammack.
3. The Modern Treatment of Dacryocystitis, By Alfred Wiener.
4. Thymic Tracheostenosis, with Report of a Fatal Case, By William Wesley Carter.
5. The Kollmann Five-Glass Test, By George Theodore Mundorff.
6. Antistreptococcic Serum in the Treatment of Small-pox, By Alfred C. Smith.
7. Importance of Treatment in the Early Stages of Arterial Degeneration, By Louis Faugères Bishop.
8. Five Laparotomies on One Patient, By Howard Crutcher.
9. Our Rural Water Supplies, By Harvey B. Bashore.
10. A Radiographic Surprise, By W. I. LeFevre.

1. **Sarcoma of the Femur.**—Shrady reports the case of a man operated on for sarcoma of the femur twenty-one years ago, and still alive and well. The remarkable point is that the man was subjected to a simple thigh amputation. The author attempts to explain why simple thigh operations give as good results, at times, as hip-joint operations. He believes that the likelihood of recurrence is dependent more on involvement of the soft parts by the malignant process than on extension of the disease by way of the bone or its marrow. The author disclaims any intention of advocating the thigh operation in place of the hip joint operation. His only desire is to attempt to explain certain observed facts.

2. **Thoracic Aneurysm.**—Nammack writes a formal paper on thoracic aneurysm. In discussing the treatment he asserts his belief that 15 grain or 20 grain doses of potassium iodide, given three times a day, are as efficacious as larger doses.

3. **Dacryocystitis.**—Wiener divides cases of dacryocystitis into three groups: (1) Those that can be cured by massage and syringing. (2) Those in which there is an organic stricture, but which may be cured by removing the anterior end of the inferior turbinate and laying bare the membranous canal of the nasal duct. (3) The cases that will not yield to either of the treatments just described. These last cases call for extirpation. The indications for this operation are: (1) In fistula of the lacrymal sac after long-continued suppuration (acute cases excepted). (2) In chronic blennorrhœa of the sac, with or without ectasia. (3) In chronic catarrh of the sac with an organic stricture. (4) In chronic blennorrhœa when disease of the bone with caries is present. (5) In relatively fresh cases of blennorrhæa, under the following conditions: *(a)* In ulcus serpens when the healing is very much favored by an immediate extirpation of the sac; *(b)* when an operation for cataract or glaucoma is contemplated; *(c)* in fresh injuries of the cornea. (6)

Tuberculosis of the sac. A typical method for performing extirpation is described in detail.

4. **Thymic Hypertrophy.**—Carter reports one case of stenosis of the trachea, due to pressure exerted by an enlarged thymus gland. He performed tracheotomy and his patient died. He offers the following suggestions: (1) In all cases of laryngeal stridor it should be determined whether or not the thymus is enlarged. (2) On account of surgical shock being badly borne by infants, and especially those in this condition, if the symptoms are *not* urgent, postural treatment should be tried, and if, in any position of the head and neck, relief is afforded, that position should be maintained by suitable apparatus until Nature has effected a cure by enlargement of the thorax, strengthening the tracheal rings, and diminution in the size of the gland. (3) Intubation, tracheotomy, and artificial respiration do no good. (4) The surgical procedure of opening the mediastinum, bringing forward the gland and stitching it to the tissue over the sternum, should be performed immediately if there is danger from asphyxia.

6. **Smallpox.**—Smith has had good results in treating smallpox with antistreptococcus serum. He uses doses of 20 c. c., repeated if necessary. Six cases are reported in some detail. The following claims are made for the serum treatment. Shortening of the duration of the disease, absence of the secondary fever, lack of absorption of septic products by prevention of pus formation, no pitting, no marked debility, less suffering, and much less danger of lung and kidney involvement, with a much more rapid convalescence.

MEDICAL NEWS.

April 2, 1904.

1. Specific Therapy of Tuberculosis and Vaccination Against the Disease, By Professor EDOARDO MARAGLIANO.
2. The Treatment of Neurasthenia, By HOWELL T. PERSHING.
3. Abdominal Ascites with 150 Tappings, By E. K. BROWD.
4. Gastroenterostomy Without a "Loop," By JOHN ROGERS, JR.
5. Home Treatment of the Tuberculous "Is Just as Good"—But It Is Not, By HENRY LEVIEN.

1. **Tuberculosis.**—Maragliano's paper was read before the Henry Phipps Institute in Philadelphia. It presents an extended view of the author's present theories. These two assertions are made: (1) That it is possible to produce a specific therapy for tuberculosis; (2) that it is possible to immunize the animal organism against tuberculosis as is done in other infectious diseases, and that there is good reason to hope for an antituberculous vaccination for man. The paper is devoted to showing what basis the author has for the assertions he makes. While it is possible to give to man a certain amount of immunity against tuberculosis, it is not yet known how great this immunity is, or how long it will last. These are questions that cannot be solved in the laboratory, but must be solved clinically. As the method of vaccination proposed by the author is asserted to be harmless, the hope is expressed that it will come into general use and, if it does, it will not be long before its exact value can be stated.

3. **Ascites.**—Browd reports the case of a woman, now sixty-nine years old and in fair health, who has been tapped 150 times in the past ten years. A total of 2,883 pints of fluid have been removed from her to date. The cause of the ascites has not been determined, and the woman has always refused an operation. The patient now gets tapped twice a week and is fairly active between tappings.

4. **Gastroenterostomy.**—Rogers devotes himself to the discussion of the method, advocated by Czerny, of performing gastroenterostomy. Five personal cases are reported. The author gives in detail his reasons for preferring this method of operating.

5. **Tuberculosis.**—Levien goes to considerable length to show that the home treatment of tuberculosis is not so good as the sanitarium treatment. He gives a number of reasons why it cannot be so. He advocates the establishment of sanitariums by the public authorities.

AMERICAN MEDICINE.

April 2, 1904.

1. Fifteen Years' Experience with Uterine Fibroids, By WILLIS E. FORD.
2. Electricity in Medicine, By JAMES J. WALSH.
3. The Preliminary Report of a Series of Metabolism Observations Made in Atrophic Arthritis, Hypertrophic Arthritis, Osteitis Deformans and the Normal (*To be concluded*), By JOEL E. GOLDTHWAIT, and CHARLES F. PAINTER, and ROBERT B. OSGOOD.
4. Sarcoma of the Nasal Passages. An Inductive Study Based on the Records of 150 Cases, By J. A. WATSON.
5. Toxæmia Associated with Tuberculosis of the Cervical Lymphatic Glands, with Report of a Case, By ARTHUR W. ELTING.
6. Acquired Hydrophthalmus, By EDWARD STIEREN.
7. The Use and Abuse of the Imagination in the Experiments and Observations in Medicine, By JOHN C. HEMMETER.

1. **Uterine Fibroids.**—Ford bases his study on those of his cases of uterine fibroids that he has been able to trace; 162 in all. He quotes with approval Hirst's saying that "a conscientious surgeon will not operate on more than 20 per cent. of his cases." The author's rule for operating is stated thus: ". . . remove by operation any fibroid that is threatening life by hæmorrhage, any soft myoma that is rapidly growing, any very large tumor that causes pressure upon the adjacent organs so as to make an invalid of the woman, or any tumor that seems to be undergoing a degenerative change, as is evidenced by general sickness, and especially by rise of temperature and soreness across the abdomen." No treatment other than surgical is of much service; but if a patient declines for any reason, such as heart lesion or kidney disease, to have surgery done, then galvanism will do more than any other remedy in intramural growths. In those that are most likely to require emergency treat-

ment in hæmorrhage, etc., galvanism, if intelligently and persistently used, relieves a large number of women of their symptoms, and cures a few patients.

2. **Electricity in Medicine.**—Walsh is pessimistic as to the efficacy of electricity as a therapeutic measure. The " cures " it brings about are due to suggestion. It is only in its application to such forms of treatment as the Röntgen treatment that electricity gives promise of great usefulness.

4. **Sarcoma of the Nasal Passages.**—Watson reports four new cases of sarcoma of the nasal passages. His series of 150 cases includes nearly all of the 111 cases reported by Gibbs and Bosworth. It would seem from these cases that sarcoma of the nasal chambers has a less malignant tendency than when occurring elsewhere. Treatment is surgical or by Coley's toxine. Intranasal operations, according to the author, give better results than the extremely radical extranasal ones.

5. **Toxæmia in a Case of Tuberculosis.**—Elting reports a case of non-suppurating tuberculous adenitis, in which for a time the patient had a temperature of from 101.4° to 104.4° F., and came near to death. The author believes that the patient's temperature and the extreme prostration noted were due to the absorption of tuberculous toxines.

BRITISH MEDICAL JOURNAL.

March 19, 1904.

1. The Treatment of Serous Effusions, By J. Barr.
2. Some Points on the Treatment of Hæmoptysis at a Sanatorium, By J. P. Milton.
3. Two Cases of Lung Disease Treated with the Emanations of Thorium Nitrate, By G. Sharp.
4. The Therapeutics of Sea Voyages, By M. Westcott.
5. Some General Results of Affections of the Nose and Nasopharynx, By W. S. Syme.
6. Note on Hæmosozic Sera, By M. A. Ruffer, and M. Crendiropoulo.
7. Capsule Formation by *Diplococcus Pneumoniæ* in Culture, By M. H. Gordon.
8. The Pathology and Surgery of Certain Diseases of the Pancreas. (Abstract of Hunterian Lectures: I), By A. W. M. Robson.

2. **Hæmoptysis.** — Milton classifies hæmoptysis as follows: 1. Occurring early in the disease, as the first initial sign of pulmonary tuberculosis. It is probably due to congestion and diapedesis: even a large hæmoptysis does not seriously endanger life. Carefully graduated exercise is probably not amiss in these cases, certain contraindications being always borne in mind. It dilates the blood vessels and takes away a certain quantity of blood from the lungs. The contraindications for exercise are: *(a)* The presence of fever previous to or after the attack; *(b)* the loss of a large quantity of blood and the consequent weakening of the patient; and *(c)* a highly nervous condition of the patient. The author's experience, contrary to the usual belief, has been that cases of phthisis commencing with hæmorrhage do not run an acute course, but invariably do well under proper treatment. 2. Occurring later in the disease when a considerable extent of consolidation is present. Here the patient is in failing health and has a bronchial cough. The bleeding is usually slight, and is most probably due to tuberculous ulceration of the bronchial mucous membrane. The treatment should be to strengthen the lowered vitality in every possible way—forced feeding, and exercise short of fatigue. 3. Occurring late in the disease when cavitation is present. Hæmoptysis here is of serious import. The bleeding is due either to a ruptured pulmonary artery or to softening of the coats of an artery by ulceration. Slight blood spitting often occurs a few days previous to the attack. Where the onset is sudden the amount lost may be great. The object to be attained in treatment is to favor the formation of a thrombus; this is gained by (1) lessening the frequency of the heart beats; (2) resting the lungs as much as possible; (3) lowering the blood pressure. The first two are effected by absolute rest, seclusion, and the use of morphine. The third object can be obtained by means of saline purgatives. Cold applications to the chest are of doubtful utility. Alcohol should not be given. 4. Occurring in any stage in plethoric subjects. It is common in patients with arrested disease in whom a liberal diet has induced plethora. The treatment indicated is to lower the blood pressure, by means of saline purgatives; to take a full amount of exercise; to modify the diet, minimizing the amount of meat, and stopping alcohol. The salicylates are often of great service in these cases. Wind exposure is always liable to bring on an attack of hæmoptysis.

3. **Thorium Nitrate in Phthisis.**—Sharp reports two cases of pulmonary tuberculosis treated by inhalations from thorium nitrate solution. In both cases there was marked improvement, the patients being enabled to return to work. The apparatus employed consisted of an ordinary gas washing bottle, holding 500 cubic centimetres of water, in which was dissolved 100 grains of thorium nitrate. When dissolved, any excess of nitric acid was neutralized with ammonia. Two patients may inhale the emanations continuously for an hour a day each at an interval of eleven hours, it taking about that long for the gas to collect.

4. **Sea Voyages.**—Westcott states that as a tonic, a restorative, and a sedative for brain-fagged people a sea voyage may do wonders. For consumptives in whom the lesion is slight or latent, a voyage to South Africa is often excellent, but not for those in whom the disease is active. Cases of nervous disease, angina pectoris, exophthalmic goître, or chronic bronchitis, should never be sent to sea. For sea sickness he advises that the patient be brought under treatment several days before sailing, attending to the action of the bowels, remedying any dyspeptic conditions, and administering sedatives, such as ammonium bromide. Hypnotic suggestion is often of great value.

5. **Results of Nasal Disease.**—Syme states that those affections of the nose and nasopharynx which give rise to a purulent or mucopurulent

discharge should be included among the possible causes of chronic ill health. The patient may make no complaint of the nasal trouble—may, indeed, be ignorant that there is anything wrong. In most cases the nasal affection is of the nature of a contributory cause, and some digestive weakness has previously existed, which makes the patient more liable to the evil effects of the entrance of purulent material into the stomach.

6. **Hæmosozic Sera.**—Ruffer and Crendiropoulo have succeeded in producing a hæmosozic (antihæmolytic) serum, but immunizing animals against an alcoholic extract of dried ox bile. Such a serum mixed with a hæmolytic substance (*e. g.*, bile) will prevent any hæmolysis or destruction of red corpuscles. The aqueous extract of bile was less powerful, and the ethereal not at all.

7. **Identification of D. Pneumoniæ.**—Gordon states that when the diplococcus of pneumonia is grown in gelatin at a temperature of 37° C., capsule formation takes place in twenty-four hours, and can be readily demonstrated by staining with carbol fuchsin and rapid washing. Such capsule formation furnishes a ready and rapid method of differentiation between the pneumococcus and other virulent streptococci.

LANCET.

March 19, 1904.

1. The Pathology and Surgery of Certain Diseases of the Pancreas. (Hunterian Lectures: I), By A. W. M. Robson.
2. The Chemistry of the Urine in Diseases of the Pancreas. (Orris and Gale Lecture), By P. J. Cammidge.
3. Acute Appendicitis: Its Diagnosis and the Indications for Operation, By W. Russell.
4. The Early Diagnosis of Acute Intestinal Obstruction, By W. H. White.
5. A Case of Eclampsia Treated by the Administration of Chloroform, By J. F. Jennings.

1. **Disease of the Pancreas.**—Robson, after describing the minute anatomy of the pancreas and paying special attention to the ampulla of Vater and the ducts of the pancreas, goes on to consider the symptomatology of disease of this organ. He classifies the symptoms as follows:

I. *Digestive Symptoms.*—1. Steatorrhœa, or fatty stools. Fat occurs in the stools as fat droplets, as fatty acid crystals, and as soap crystals. If it be taken in large quantities it is always found in the stools. It is found in the stools in some cases of jaundice, of enteritis, and of some affections of the pancreas, but in none of these constantly. When jaundice and interstitial pancreatitis coexist there is a great excess of fat in the stools. Further, such an excess, in the absence of jaundice or intestinal disease, is suggestive of disease of the pancreas. If the urinary pancreatic reaction, diabetes and azotorrhœa accompany the steatorrhœa, and an epigastric tumor is present, the diagnosis of disease of the pancreas is certain. The white stools seen so often in pancreatic disease are due to solidification of the fat, and not to any absence of bile. 2. Azotorrhœa, or faulty digestion of albuminous foods. The presence of undigested muscle fibres in the stools is, by itself, no proof of disease of the pancreas. But if found along with liporrhœa the presence of pancreatic disease should be suspected, and if the pancreatic reaction in the urine be also present, the diagnosis is certain. 3. Sialorrhœa pancreatica, or excessive pancreatic secretion. 4. Pancreatic diarrhœa and alteration in the stools. A characteristic sign of pancreatic disease is the presence of exceedingly bulky, soft, greasy, pale motions, due to want of digestive power. 5. Dyspepsia and alteration of appetite are constantly associated with pancreatic disease. 6. Emaciation is a well known symptom, and is probably due to interference with the metabolic function of the pancreas. 7. Nausea and vomiting are frequently associated with acute pancreatitis, but are not common in the other forms of pancreatic disease. The vomitus contains altered blood ("black vomit") at an earlier stage than any other peritoneal condition.

II. *Physical Signs.*—1. Tumor. The author thinks, notwithstanding the position of the pancreas, that a perceptible enlargement of the pancreas can often be felt in cases of acute and chronic inflammation and abscess of that organ. In cancer of the head of the pancreas only the enlarged gallbladder can be felt. In tumor of the body, palpation readily reveals the swelling. In cystic disease tumor is frequently the only symptom. 2. Fever. This is usually associated with acute and subacute pancreatitis. In hæmorrhagic pancreatitis the temperature is usually subnormal. 3. Pain and tenderness. These are such variable symptoms that their absence means little. They are as a rule absent in cancer of the head of the pancreas. Large growths of the body often cause intense agony. Calculus may exist for years without causing pain. 4. Pressure symptoms. Ascites may be present, due to involvement of the portal vein. Pressure on the solar plexus may cause severe pain. 5. Hæmorrhage. There is a tendency to general hæmorrhage in many pancreatic affections. In several operative cases, bleeding has been the immediate cause of death. The author now always administers calcium chloride, in 30 to 60 grain doses thrice daily, for forty-eight hours before operation. 6. Jaundice. This is always present if cholelithiasis is the cause of the pancreatitis. Deep jaundice with a distended gallbladder points to cancer of the head of the pancreas.

III. *Metabolic Symptoms.*—1. Glycosuria. This is not common and cannot be relied on as a diagnostic symptom, but when it exists along with other signs, it is extremely serious and indicates an incurable condition. 2. Other urinary symptoms. Indicanuria, maltosuria, pentosuria, and lipuria have all been advanced as of diagnostic importance in pancreatic disease, but none of them can be relied on as an important symptom. What is called the pancreatic reaction is, however, of great value in diagnosis, and points almost infallibly to pancreatic trouble. (See Cammidge's article, immediately following this.)

IV. *Special Symptoms Obtained by Artificial Means.*—1. Alimentary glycosuria is readily produced in cases where the pancreas is diseased. 2. Sahli's symptom. (The failure to decompose iodoform when given by the mouth, with consequent appearance of iodine in the urine.)

According to the author, fat necrosis, even if extensive, is not always a fatal sign. Severe pancreatic hæmorrhage forms a disease in itself. It may be due to vascular disease, such as atheroma or syphilitic arteritis, injury, fatty degeneration of the gland cells, fatty necrosis, disintegration of neoplasms, embolism of a pancreatic artery, disease of the heart or lungs, or finally, pancreatitis itself. The symptoms may vary from those of mere colic to violent and persistent pain, followed by collapse and death.

2. **Urine in Pancreatic Disease.**—Cammidge describes what he calls the pancreatic reactions, which occur in the urine of cases of pancreatic disease. They are based on the theory that the fat necrosis causes the production of glycerin, it is absorbed into the blood, and excreted in the urine. The suspected urine, having been first rendered free of sugar and albumin, is treated with hydrochloric acid, sodium acetate, and phenylhydrazin hydrochloride. If disease of the pancreas exists, a deposit of golden yellow crystals will take place. If the pancreatic disease is due to inflammation, the reaction is inhibited by a preliminary treatment of the urine with mercury perchloride. In this way cancer of the pancreas may be differentiated from pancreatitis. Information as to the nature of the lesion can also be obtained by noting the solution time of the crystals in 33 per cent. sulphuric acid.

3. **Acute Appendicitis.**—Russell's conclusions are as follows: 1. Certain appendices are so formed anatomically that they of necessity give rise to trouble. 2. Interference with the drainage of the appendix is an important factor in determining inflammation. 3. The occurrence of appendicular colic may be taken as a warning that dangerous anatomical conditions exist in connection with the appendix. 4. In all abdominal cases detailed palpation should be carefully and patiently carried out. 5. Too much emphasis must not be put on the site of pain or on superficial tenderness. Palpation should be directed towards ascertaining the actual condition of the diseased part. 6. Statistics show that in 90 to 95 per cent. of cases recovery ensues without operation and the chances against recurrence are as three to one or thereby. Therefore routine removal cannot be accepted as necessary. 7. Operate at once in any case with a history of previous attacks, also in all cases commencing with a rigor. 8. The chief difficulty lies in the early recognition of the cases in which the appendix will necrose or perforate rapidly. In this connection suspect cases which show constitutional disturbance with little inflammatory reaction around the cæcum, but with marked tenderness on deep palpation and an ordinary degree of leucocytosis. 9. In cases which do not call for immediate operation pain may be relieved by hot or cold local applications and by a cautious and sparing use of opium or morphine or of belladonna. Lavage may give good results. 10. Medical treatment should not be relied on for more than from twenty-four to forty-eight hours if severe pain continues or an acute tenderness on deep palpation still remains. 11. Later in the disease a continuance of the local and general symptoms, along with a high leucocyte count, indicates the presence of pus and the necessity for operative intervention.

Letters to the Editor.

THE "OSTEOTHERAPY" BILL.

60 East Seventy-seventh Street,
New York, *March* 26, 1904.

To the Editor,

Sir: A bill has been introduced into the legislature of the State of New York, by Senator Fitzgerald, entitled "an act to define and regulate the practice of osteotherapy." It is Senate bill No. 983, introductory No. 761, and has been referred to the Committee on Judiciary, of which the Honorable Edgar T. Brackett is chairman.

This bill defines "osteotherapy" as follows: "The practice of osteotherapy is defined to be a system, method, or science of healing disease without the use of drugs or medicine of any kind. It is based upon the proven laws of anatomy and physiology, and comprises scientific and thorough knowledge of the structure and functions of the human mechanism, to apply certain organic laws and natural remedial resources, within the human organism itself, and by means of scientific manipulations and adjustment, assist nature, in harmonious accord with its own mechanical principles, activities, and processes, to recover from displacements, derangements, obstructions, and pressures, and to regain normal equilibrium of form, action, and function, thus restoring to the patient normal health and strength. The word 'osteotherapy' is derived from the Greek ('*osteon,*' bone, and '*therapeia,*' nature healing). The word 'osteotherapy' is a correction of the word 'osteopathy,' which latter means, translated from the Greek ('*osteon,*' bone, and '*pathy,*' suffering), bone suffering. The word 'osteotherapy' embraces the science of so called osteopathy, the practice of massage and Swedish movements to its fullest extent, and any one practicing the latter sciences, under those or different names, shall come under the jurisdiction of this act."

It is difficult to imagine this as a serious effort to secure legislative enactment, for to read the definition is "to laugh;" but we must assume that the gentleman who introduced the bill was not actuated by the desire to amuse his colleagues. The measure goes on to provide for a board of examiners, appointed by the Regents of the University of the State of New York, for examination and registration fees, and so on. If physicians will write to the members of the Senate Judiciary Committee opposing this bill, its fate will not be long in doubt.

If you will publish this letter together with the inclosed reasons why "osteopathy" and allied "pathies" should not receive special recognition, it will bring the matter before the profession, and, I believe, aid those who are endeavoring to protect our professional standards.[1] One of the arguments used at the public hearings before our legislature is that other States have enacted laws recognizing the practices of "osteopathy," "optometry," and other peculiar methods of treating disease. I cannot believe that New York will ever enact similar laws unless some better reason than this is advanced. I do not believe that New York will enact any laws affecting the practice of the healing art unless the medical profession will endorse them. This opinion is the result of about eight years of more or less intimate acquaintance with our legislators, and, if it is correct, then, to use the language of the day, it is up to the medical profession to be alive to its responsibilities.

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[1] We regret that we have not space for the reasons.—Editor.

FRANK VAN FLEET,
Chairman, Committee on Legislation of the Medical Society of the State of New York.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE, SECTION ON ORTHOPÆDIC SURGERY.

Meeting of January 15, 1904.

Dr. HOMER GIBNEY in the chair.

Osteitis.—Dr. W. R. TOWNSEND presented a case of osteitis of the left hip and of left fourth metacarpal bone in a boy who was first seen on December 19, 1902, at the Hospital for Ruptured and Crippled. The hip had been under treatment ever since, and was getting along well. A year ago a swelling had appeared on the hand, disappearing after rest. No syphilitic history could be obtained. Within the last few weeks the swelling had returned. An x ray picture had been taken three weeks ago, showing that the entire fourth metacarpal bone was involved, and that the disease was confined to that bone. In such a case the entire bone should be removed, to prevent spreading of the disease, rather than to wait and let it progress and extend to the other bones of the hand.

Typhoid Spine.—Dr. TOWNSEND presented also a case of typhoid spine. A boy, aged fourteen years, was seen at the Ruptured and Crippled Hospital November 23, 1903. Eight weeks prior to that time he had had typhoid fever, which had lasted four weeks. At the end of the typhoid fever he was in fair physical condition. One week after the typhoid he developed pain and stiffness in the back, which increased until on coming to the hospital he was bent over very much, suggesting a case of Pott's disease. The pain was not localized, but extended up and down the spine. He had no pains in any other region. The patient's physical condition had materially improved, since he began wearing a plaster jacket, and he now feels so well he was anxious for its removal. Dr. Townsend then said he would like to present very briefly the history of two other cases of typhoid spine which he had treated within the last year. The first case was that of a girl, aged eleven years, who, after typhoid, began to complain of pain in the spine, especially about the lumbar region. No kyphosis, no deformity whatever, but the entire spine was very stiff. The girl was markedly neurotic. The question was whether it was a typhoid spine or a neurosis. The previous history of typhoid inclined the speaker to that diagnosis—of the type to which Osler referred a neurosis. Dr. V. P. Gibney, who also saw the case, agreed in the diagnosis. Under a brace she made a good recovery. Another case had been seen with Dr. F. P. Jackson. A man, thirty-nine years of age, seen November 2, 1903. Typhoid attack began July 13th, ended August 9th. Ten days after the typhoid he was in the Adirondacks, recuperating, when he was seized with severe pains in the spine. His pain was so severe, he was moved with the greatest difficulty. Even the attempt to move him from side to side caused the most excruciating pain. He was not neurotic. His face indicated that he suffered intensely. No one vertebra was more prominent than the others; no one spot more painful than another. He complained of pains over the entire lumbar region. A brace was applied, but was kept on only a few moments, as it seemed to increase the discomfort produced by lying on his back. Codeine was given in the hope of quieting the pain, and finally hypodermics of morphine were resorted to, and after a week the brace was reapplied and kept on. There was a persistent pain over the pelvis on both sides, between the hip joint and the anterior superior spines. Nothing was ever found to account for it. These pains continued for three weeks or more, and persisted after pain in the spine had ceased. No disease of the hip joint was ever made out, no abscess, neuritis, or anything, except that he insisted on the fact that he had intense pain there. Under the use of the brace and rest in bed for six weeks, he entirely recovered and was going to Palm Beach to-morrow. The man now walked about the house, but was very thin and feeble. He did not require a cane or any assistance in walking, and had some beginning spinal mobility.

Dr. T. HALSTED MYERS said he thought the typhoid spine case showed two characteristic points: 1. The extreme pain in these cases. He had, this fall, been obliged to chloroform a patient in order to put on a plaster jacket, and chloroform him again to take it off and replace the plaster. 2. The prompt recovery, often in one or two months.

Dr. HOMER GIBNEY said he had seen a recent case of typhoid spine in which all the symptoms were referable to the cervical spine. Dr. Whitman had applied a short jacket with jury mast or chin support, which elevated the chin, and this patient had made an uninterrupted recovery. He had seen a number of cases, in which the pain had been intense, respond rapidly to cautery and fixation.

Dr. R. SAYRE said he had not seen many cases of typhoid spine, but had seen a certain number of them, and had at present a case of scarlatinal spine under observation. The patient, a boy, had been well until he had a severe attack of scarlet fever some three or four years ago. Following that, he had nephritis, which lasted for a number of months. Then he had what was supposed to be rheumatism in various parts of the body, finally located in the back. When seen by Dr. Sayre, it was discovered that he had large intra-abdominal abscesses and a slight kyphosis. All these apparently dated from his scarlet fever. Abscesses subsequently opened in one iliac fossa and in the opposite thigh.

Congenital Deformity of the Neck Resembling Torticollis.—Dr. R. Sayre presented a girl with a certain amount of pain in her neck, which ran down toward her arm. The mother thought deformity had increased somewhat. Examination of the case was extremely difficult by x ray, as the ear was drawn so close to the shoulder as to make it hard to insert the plate. The plates made were not very satisfactory. When the child's head was well bent to one side, one felt some very hard, solid substance down in the neck, which was either a very long transverse process or possibly some supernumerary ribs. The distance was very much shorter than it should be, between the ears and neck, and the x ray showed that the upper vertebræ had coalesced.

Dr. J. R. Hunt asked how Dr. Sayre excluded an extreme degree of congenital torticollis. The right sternocleidomastoid muscle was practically atrophied, being represented only by a tendinous cord. The other muscles of the right cervical region were also tense. There was an extreme asymmetry of the face, so often an accompaniment of this condition. Curvature of the spine and rotation of the cervical vertebra would be a natural and inevitable result. Furthermore, the skiagrams demonstrated the absence of cervical ribs. The long prominences palpable in the side of the neck would be sufficiently accounted for by subluxation and rotation of the vertebræ allowing an abnormal projection of the transverse processes.

Dr. R. Whitman said that he had seen a case recently very similar to that shown by Dr. Sayre, particularly the same short thick neck with the growth of hair in the median line; the torticollis was less marked. He would suggest as an explanation that the malformation was an incomplete cervical spina bifida, the vertebra being expanded laterally as well as otherwise destroyed. The torticollis was, of course, an incidental effect of the underlying malformation.

Dr. Sayre said that when he first glanced at the patient, he thought it was an ordinary case of torticollis. As soon as he felt the neck, he saw it was not the usual kind of torticollis. There was atrophy of the muscles on one side of the neck and a unilateral lack of development of the face, it was true; but in addition to these features, there were bony growths not found in ordinary torticollis. There was great distortion of the upper ribs not found in such cases, and there was more rigidity in the neck than that due to shortened muscles—rigidity due to improper movement of the cervical vertebræ. Apparently some of the upper vertebræ had coalesced. They did not present the ordinary picture of cervical vertebræ. It was an extremely difficult case to examine, on account of the short distance between the ear and shoulder. The child's condition had improved during the past month. It was not practicable to do anything more at present than to give a suspension apparatus and have the child placed in a chair with the head stretched out a reasonable time each day. The child could not be suspended long at a time. It had been suspended to a moderate extent, with the neck stretched out, to see if a better skiagraph could not be had after the yielding of the muscles. On a closer view of the anteroposterior skiagraph, it looked as if the spinous processes possibly had not coalesced, simply had that appearance from the hunching up of the angle of the ribs on the posterior side. The spinous processes might have been twisted, and that might be one of the hard things felt on the side. As to mane on back, that was often seen in spina bifida occulta, as was mentioned by the German and French authors. He had seen it but seldom. A boy with lateral curvature, under observation at present, had an extremely heavy mane.

Syphilitic Joint Disease.—Dr. Myers presented the case of H. S., fourteen years of age. No family history of tuberculosis or syphilis obtainable. The child had had an ozæna for four years, with the fistulæ leading to carious bone, in the nose for two years, and in the left elbow one year and a half. Later, an abscess appeared in the parotid region, and seven months ago, without injury, the left knee became swollen. There was some heat, a little pain at night only, no redness. On admission to St. Luke's, December 4, 1903, the circumference of the left knee was two inches larger than the right; fluid in the joint and induration about it, with noticeable enlargement of tibial shaft, though it was ⅛ inch short. Marked muscular atrophy of thigh. Flexion from 175 to 80 degrees. No spasm. No pain. A skiagraph showed marked enlargement of tibia and radius and lower end of the humerus, all on the left side. A marked keratitis was present and was thought by Dr. Cutler to be of specific origin. Specific treatment had been instituted at once, and the change in the child's condition was remarkable. The swelling of the knee had almost entirely subsided, and the motion increased proportionately. The sinuses in nose and elbow were closing fast and the corneal opacities were less. A tuberculin test January 13th gave a slight transitory reaction, which was not considered of diagnostic value.

Dr. Sayre asked how vigorously the syphilitic treatment had been pushed in that case.

Dr. Myers replied that the child came to the hospital on December 4th. She had had bone lesions for two years. Was given iodide, 13 grains three times a day, and bichloride four. There had been great improvement as to discharge from nose and corneal opacity. She could read with that eye now. Could not do so before.

Pott's Disease.—Dr. H. L. Taylor presented the case in which the principal interest consisted in comparing the man's present condition with his condition about five years ago, when shown to this section. The man had suffered at that time for several months from excruciating pain in the lower part of the spine and flanks; the pain was so severe he could scarcely move; there was stiffness and very marked cachexia, but no kyphosis. A jacket was applied once or twice, but he would not keep it on, saying he could not stand it. It was thought at the time the man was shown to the section that he had carcinoma of the spine. He had been admitted to the hospital, but had remained only a short time, and had not returned for treatment. After an absence of five years, the patient appeared with a well developed kyphosis, much bowed over, but in fair health and able to get about. He was satisfied with his state, and would wear no brace or jacket, but the disease, which was undoubtedly tuberculosis of the spine, was no doubt still progressing. He had a rupture, and also had a small sinus connected with the sternum, which came soon after the spinal symptoms. It was a case of tuberculosis of the lower dorsal and lumbar spine, with unusually severe and long continued pains, and was shown as being of interest in connection with the early diagnosis.

Dr. HOMER GIBNEY said that comparatively few cases of such late development of Pott's disease was seen. He thought the man needed support around the abdominal and upper thoracic region. Cases he had seen recently were made comfortable by means of a spinal support made of flexible steel, with pelvic and abdominal belt and counter shoulder straps. It would be very difficult to put an apparatus on the man, on account of the disease, which was active, as evidenced by the sinuses leading up to the ribs and sternum on the left side.

Dr. SAYRE said that when a patient objected to various kinds of support, he had found satisfactory an appliance of which Dr. Schapps had spoken some years ago—a pelvic belt with two uprights up in front, attached to a small plate which rested against the sternum—a prop for the front of the body. A man on crutches leaned against such a brace, much as our great grandmothers leaned against what they called a busk put in front of the corset.

Dr. MYERS had seen at the hospital last year a man who would not wear any support to straighten him up; he rapidly failed and died. At autopsy old adhesions were found binding his intestines tightly together, and the conclusion reached was that when the body was straightened, the adhesions were pulled upon and great pain resulted.

Cervicodorsal Pott's Disease with the Application of a Gas Pipe Frame.—Dr. HOMER GIBNEY presented this case. Dr. Downs had examined the patient at the New York Hospital Dispensary. The child was thought to have some bulbar symptoms. Soon after birth it could not use left arm and hand (probably slight birth paralysis), which rapidly improved under massage and manipulation. Kyphosis not present at this time. Upon examination of the case he found all of the neurological symptoms due to the development of the disease at the cervicodorsal junction. He thought the method of treatment would be of interest, and he should apply the apparatus, which was simply a rectangular gas pipe frame, to which the child was fastened by an abdominal apron. The angle was then adjusted to suit the conditions. The clothing was made to button in the back over the frame. The child and frame might be placed in a convenient chair in the sunlight by the window and was soon transformed from an irritable, suffering child to at least a most comfortable position, in which the deformity in many cases diminished noticeably.

Snapping Knee.—Dr. HOMER GIBNEY presented this case. The patient had first applied for relief for a weak ankle, resulting from an old fracture on the left side. He had also complained of some pain in the right knee. On examination he found the left foot in slight valgus and the evidences of an old fracture—a very good result. The knee on right side when extended forcibly made a sharp noise, or snapped. The patient seemed rather proud of this accomplishment, and said that after sitting long in one position it gave him relief to snap his knee. This slipping of the quadriceps extensor tendon was rather infrequent in adults.

Dr. TAYLOR said a word or two in commendation of the frame shown, which was not used so much as it should be, though far superior for certain cases to jackets, braces, and plaster beds. Dr. Whitman had narrowed the frame, making it very light, so that it could be modeled over the edge of a table to the form required, and with the addition of the pads on either side of the spinous processes, it was an exceedingly efficient and useful appliance, worthy of more extended use than it had received, especially for children of two years or under, who had no hips to support a jacket or brace, and who were much better off lying down than walking about.

Dr. SAYRE asked Dr. Gibney if he had been able to keep the snapping knee joints he had seen, from snapping—if he had been able to arrange any means for keeping the tendons from slipping out of their pulley wheels.

Dr. GIBNEY replied that he had not. Pressure on the muscles temporarily stopped the snapping. The method of treating this was simply by bandage. He had never tried to stop it. An apparatus with limited joint at the knee might overcome the trouble. The cases he had seen were not at all painful.

Book Notices.

The Nature of Man. Studies in Optimistic Philosophy. By ELIE METCHNIKOFF, Professor at the Pasteur Institute. The English Translation, Edited by P. CHALMERS MITCHELL, M. A., D. Sc. Oxon., Secretary of the Zoological Society of London. New York and London: G. P. Putnam's Sons, 1903. Pp. vii-309. (Price, $2.00.)

This work has been pronounced by an English critic to be the greatest literary production since Darwin's *Origin of Species.* We fear that this critic was desirous of enforcing upon his readers that he was one of the disciplined minds, to which only, according to the author, is the book addressed. As an exact and a careful *a posteriori* reasoner Elie Metchnikoff requires no introduction to our readers; his physiological investigations speak for themselves. When, however, he ventures into the speculative and *a priori* field we cannot follow him with the same confidence. The burden of *The Nature of Man* is that man is out of harmony with his environment; he has a large intestine that, as a carnivore, he does not need; he has lost the valuable os penis and his mate has acquired a hymen; he has lost indifference to death. Religions of all kinds have failed to compensate man for these deprivations: philosophy has usually been pessimistic, optimism being a mental state permissible only to the lower animals. There remains only science to provide the panacea for unhappy humanity.

"Science," says Metchnikoff, "is the youngest daughter of Knowledge." We had supposed that she was systematized Knowledge herself, and as such, indeed, the author always considers her. The duty of science is to induce in man a longing for death, or, rather, to reproduce what was once an instinct in normal man when he reached the age of some seven score years. That such an instinct existed M. Metchnikoff seems to base upon certain passages in Genesis. "So Job died, being old, and *full of years.*" Metchnikoff says that the words in italics, sounding strange in our ears, refer to the instinct of death developed in well preserved men who had reached an age between one hundred and forty and one hundred and eighty years. If we are not mistaken, the words in italics are merely an antiphonal duplication of the previous phrase, "being old," according to a well recognized Hebrew construction frequently encountered in the Psalms and quite characteristic of Hebrew poetry in general. Instances of a genuine desire for death, which must be familiar to many a practitioner, have rarely reached our author's ears as he has bent over his microscope, but the few of which he is cognizant he dismisses with the comment that the desire for death vanished when hope of recovery was held out.

The author finds fault with Herbert Spencer for considering the development of homogeneity into heterogeneity an evidence of progress; particularly does he object to the modern *cuisine* and advocates a return to simpler dishes. Our readers, we fancy, will take exception to this advice, rcognizing that the culinary art of the twentieth century in developing appetizing masterpieces has also rendered them more digestible. Metchnikoff blames syphilis and alcohol for much of our misfortune; it is as easy as it is useless to proscribe both.

The Nature of Man is an interesting work by a profound scholar and will well repay careful reading; but we imagine that few physicians will agree to the solitary conclusion drawn from the admirably marshalled array of facts. We remain still in the abyss of doubt and refuse to be consoled with the illogical deduction that in the far future posterity, after some eight score years of vegetative existence, unillumined by wine, decent cookery, or love, will sink delighted into a welcome euthanasia.

The After-Treatment of Operations. A Manual for Practitioners and House Surgeons. By P. Lockhart Mummery, F. R. C. S., Eng., B. A., M. B., B. C. Cantab., Demonstrator of Operative Surgery, St. George's Hospital, etc. New York: William Wood & Company, 1903. Pp. vi-221. (Price, $2.00 net.)

We have often emphasized the importance of books dealing with the subsidiary phases of surgical work, such as, for instance, the methods of preparation of patients for operation and their care after the operation, subjects much neglected until lately in surgical textbooks.

The present little work takes up the latter of these themes, and does it in a most satisfactory manner. Following chapters on general subjects, such as treatment of the wound, hæmorrhage, shock and collapse, and post-anæsthetic complications, the various regional operations are discussed. Under each operation the special complications which may follow are detailed and their treatment is outlined. The appendix contains descriptions of methods of massage, of feeding and of making and using artificial limbs.

The book is an exceedingly practical one, and should appeal especially to the practitioner who is not constantly engaged in surgical work. For him it is full of useful and practical hints. The illustrations are, for the most part, horrible examples; surely the wood engraver's art has not drifted into that decadence which the engravings in this book would lead one to infer.

Die Errichtung geburtshilflicher Polikliniken an Hebammenschulen. Ihre Bedeutung für die Ausbildung der Hebammen und für die allgemeine Hygiene. Von Dr. Fritz Frank, Direktor der pro. Hebammenlehranstalt in Köln. Berlin: S. Karger, 1904. Pp. 46.

While this monograph has a more important bearing on the education of the midwife in Germany, the plea that Frank puts forward for the out-patient instruction of midwives will bear repetition here. For in our large cities fully fifty per cent. of confinements are attended by midwives, we believe, and a good many of these—not the majority, however—are little better than uneducated washerwomen.

Frank's arguments are that out-patient services in connection with schools for midwives are entirely practicable under proper supervision. They assist in rounding out the instruction and in throwing the women upon their own resources, and stimulate them to high endeavor. As for the patients, it offers them immediate assistance when it is necessary, it is an aid in instilling the principles of cleanliness into them, and in this way improves their homes and gives the people a conception of the necessity of suitable quarters for the puerperal woman.

The time will undoubtedly come in this country when we shall have the advantages of suitable training for those women who attend the poor in their hour of travail, instead of trusting to luck as we do now. Then books of this character will have as wide a circulation here as they deserve.

A Textbook of Practical Gynæcology for Practitioners and Students. By D. Tod Gilliam, M. D., Professor of Gynæcology in Starling Medical College, Columbus, Ohio, etc. With 357 Illustrations and Colored Frontispiece. Philadelphia: F. A. Davis Company, 1903. Pp. xvi-634.

For the student we think this book is sufficient, for the practitioner's wants it may at times be satisfactory, but for the perusal of the advanced student or the specialist it is of far less value.

There is nothing about the work at which one can cavil, there is certainly not too much of it, and what there is is corect and scientific. Most modern ideas as to technics and asepsis and inflammation are presented; but, with the exception of the statements of the author's original views and methods, there is nothing in the book to command especial attention. The illustrations are numerous and well chosen, and some of the original drawings are excellent. The book making is above reproach.

Oppenheim's Diseases of the Nervous System. By H. OPPENHEIM, M. D., Professor at the University of Berlin. Translated and Edited by EDWARD E. MAYER, A. M., M. D., Pittsburgh, Pa. Second American Edition, Revised and Enlarged. With 343 Illustrations. Philadelphia and London: J. B. Lippincott Company, 1904. Pp. 953. (Price, $5.00 net, cloth.)

Mayer has edited and translated the third German edition of Oppenheim's excellent textbook, which holds the same position in Germany that Gowers's does in England and America. Each is without a rival in its own language. The third edition has been increased in size by the addition of new illustrations and by new subject matter which the author has evolved from his enormous clinical experience during the past few years. Every one familiar with the German original cannot but feel that a good deed has been accomplished in placing the book at the disposal of the greater part of our fellow practitioners. The translation and general make up of the book are deserving of favorable comment.

BOOKS, PAMPHLETS, ETC., RECEIVED.

Sehproben-Tafeln. Mit besonderer Berucksichtigung des militararztlichen Gebrauchs. Von Dr. BERTHOLD KERN und Dr. REINHOLD SCHOLZ. Berlni. 1904. Verlag von August Hirschwald, NW. Unter der Linden 68.

Bollettino Della Reale Accademia Medica Di Roma. Compilato Dai Consiglieri Accademici Delegati per la Stampa. Professor G. SERGI e Professor L. CONCETTI. Anno XXIX—Fascicoli VI, VII, e VIII (Con due tavole a tredici figure). Tipografia Fratelli Centenari, Via degli Avignonesi, 30-31, Roma. 1903.

Proceedings of the Pathological Society of Philadelphia. New Series, Vol. vii, January, 1904. No. 1. Table of Contents, Fourth Annual Exhibition Meeting,—Rosenberger, The Actual and Comparative Resistance of Acidfact Bacilli, —Behrend, Report of a Case of Brain Tumor and of a Case of Ruptured Tubal Pregnancy. Published by the Society, 1624 Spruce Street. 1904.

A System of Practical Surgery. By Professor E. VON BERGMANN, M. D., of Berlin; Professor P. VON BRUNS, M. D., of Tübingen, and Professor J. VON MIKULICZ, M. D., of Breslau. Volume I. Translated and Edited by WILLIAM T. BULL, M. D., and WALTER MARTIN, M. D. Surgery of the Head. Lea Brothers & Company, New York, and Philadelphia. 1904. Pp. 936.

Immune Sera, Hæmolysins, Cytotoxins, and Precipitins. By Professor A. WASSERMANN, M. D., University of Berlin. Authorized Translation by CHARLES BOLDUAN, M. D., First Edition. First Thousand. New York: John Wiley & Sons. London: Chapman & Hall, Limited. 1904. Pp. 77.

Miscellany.

An Error in Diagnosis.—The editor of the *West London Medical Journal*, in Notes and News in the April number, says that the following was recently reported to him as a fact:

Scene. West London Hospital. Porter engaged in an altercation with a Female Out-Patient. "But which doctor do you want to see?"

Female Out-Patient. "I don't know. I haven't seen anything for three months."

Porter. "What! Haven't seen anything for three months? Go to the Eye Department on the left."

Scheme for an Ambulance Service for London.—The committee of the Metropolitan Street Ambulance Association has made the following suggestions as the basis of a plan for providing London with an efficient street ambulance service:

1. That there should be one controlling authority responsible for a uniform and well organized ambulance service, and that the London County Council, as the representative body for the metropolis, is the one best fitted to undertake the work.

2. That London should be divided into districts or "accident areas," and a properly organized ambulance service arranged in each. This would necessitate the establishment of horse or motor as well as hand ambulances.

3. That the fire brigade and the ambulance services could be most advantageously carried out conjointly.

4. That it is desirable that some of the ambulances under the control of the London County Council Fire Brigade should be stationed at or in immediate connection with the principal London hospitals.

5. That the police should be kept efficient in first aid training, and should be available, as at present, for rendering first aid to the injured, for summoning an ambulance, and for taking charge of the patient until the ambulance and attendant arrive, but should not necessarily be expected to accompany a patient to home or hospital.

6. That the 800 fire alarm telephone posts now existing and all other telephones should, if possible, be made available for calling the ambulances, and the police should be instructed in their use.

7. That the experience gained in working such services for many years in New York, New Orleans, Chicago, Sydney, Copenhagen, Vienna, Paris, Liverpool, Bootle, Birkenhead, Manchester, Newcastle, Huddersfield, Bolton, Burnley, Hull, Sheffield, Leeds, and Wolverhampton is more than sufficient to justify the London County Council in undertaking the work in the metropolis on a scale large enough to provide adequately for the 13,000 to 15,000 street casualties requiring removal each year.

8. That there should be no charge for the use of the ambulance.

This plan would involve no new organization, but merely an extension of the existing highly efficient fire brigade service, and would not entail, as at present, the withdrawal of the policeman from his beat. The secretary of the association is Dr. Arthur James, 65 Gloucester Terrace, Hyde Park, W.

Official News.

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending March 31, 1904:

AMESSE, J. W., Assistant Surgeon. Granted leave of absence for two months and fifteen days from May 1st.

BILLINGS, W. C., Passed Assistant Surgeon. Granted leave of absence for two months and three days from April 30, 1904, with permission to go beyond the sea.

BOGGESS, J. S., Assistant Surgeon. Granted leave of absence for two days from March 30th.

Cumming, H. S., Passed Assistant Surgeon. Granted leave of absence for ten days from April 5th.

Grubbs, S. B., Passed Assistant Surgeon. Granted ten days' extension of leave of absence from March 31st.

Lavinder, C. H., Passed Assistant Surgeon. Granted leave of absence for two days from March 29th. Granted three days' extension of leave of absence from March 31st.

Richardson, T. F., Assistant Surgeon. Detailed to attend conference of State Health Officer and County Health Officers of Texas, at Austin, Texas, March 31st.

Rosenau, M. J., Passed Assistant Surgeon. Detailed to represent Service at meeting of Tuberculosis Committee, College of Physicians, Philadelphia, Pa., March 28th.

Wasdin, Eugene, Surgeon. Granted leave of absence for one month from April 1, 1904, on account of sickness.

Boards Convened.

Board convened to meet at Washington, D. C., to consider the construction or purchase of boarding steamers for the quarantine stations at San Francisco, Cal.; Port Townsend, Wash.; also to consider type of launch for boarding or inspection of vessels at the Key West Quarantine and at Havana, Cuba; also to consider the feasibility of repairing the hull of the launch *Spray* at the Delaware Breakwater Quarantine, and placing new motive power therein. Detail for the board—Assistant Surgeon General A. H. Glennan, chairman; Assistant Surgeon General W. J. Pettus. Assistant Surgeon General H. D. Geddings, recorder.

Board convened to meet at Baltimore, Md., April 4, 1904, for the physical examination of officers of the Revenue Cutter Service for promotion. Detail for the board—Surgeon H. R. Carter, chairman. Assistant Surgeon C. W. Wille, recorder.

Board convened to meet at San Francisco, Cal., April 4, 1904, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Passed Assistant Surgeon W. G. Stimpson, chairman. Assistant Surgoen Carl Ramus, recorder.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending April 2, 1904:

Edgar, J. M., Surgeon. Detached from the *Wisconsin* and ordered to the *Monadnock.*

High, W. E. G., Assistant Surgeon. Detached from the *Constellation* and ordered to the Midway Islands for duty with the marine detachment at that place, sailing from San Francisco, Cal., April 8th, via the *Supply.*

Marcour, R. O., Assistant Surgeon. Detached from the *Dixie* and ordered to duty with the marine battalion at Guantanamo, Cuba.

Oman, C. M., Assistant Surgeon. Detached from the *Monadnock,* and ordered to the *Frolic.*

Traynor, J. P., Assistant Surgeon. Detached from the *Frolic,* and ordered to the *Albany.*

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending April 2, 1904:

Banister, William B., Major and Surgeon. Left Washington on April 1, 1904, *en route* to take station at Jefferson Barracks, Mo.

Devereux, Thomas, First Lieutenant and Assistant Surgeon. Relieved from duty on the *Sumner* and ordered to Manila, P. I., for duty.

Gilchrist, Harry L., First Lieutenant and Assistant Surgeon. Upon being relieved from duty at Fort Screven, Ga., will proceed to U. S. Army General Hospital, Washington Barracks, Washington, D. C., for duty.

Harvey, Philip F., Colonel and Assistant Surgeon-General. Granted extension of thirty days to present leave of absence.

Hoff, John Van R., Lieutenant-Colonel and Deputy Surgeon-General. Left Fort Leavenworth, Kan., on seven days' leave, and applied for twenty-three days' extension.

Hutton, Paul C., First Lieutenant and Assistant Surgeon. Granted sick leave for five months.

Morse, Arthur W., First Lieutenant and Assistant Surgeon. Left Vancouver Barracks, Washington, on thirty days' leave.

Newgarden, George J., Captain and Assistant Surgeon. Upon being relieved from duty at Fort Harrison, Mont., will proceed to San Francisco, Cal., and report to Commanding General of the Department of California for transportation to Manila, P. I.

Patton, I. W., First Lieutenant and Assistant Surgeon. Relieved from duty on transport *McClellan,* and ordered to Fort Hamilton, N. Y.

Porter, Ralph S., First Lieutenant and Assistant Surgeon. Upon being relieved from duty at Fort Leavenworth, Kan., will proceed to Fort Niobrara, Neb., for duty.

Powell, William A., First Lieutenant and Assistant Surgeon. Granted fourteen days' leave of absence.

Skinner, George A., First Lieutenant and Assistant Surgeon. Upon being relieved from duty at Fort Snelling, Minn., will proceed to Fort Harrison, Mont., for duty.

Snyder, Henry D., Major and Surgeon. Left Plattsburg Barracks, N. Y., on seven days' leave of absence.

Stedman, Chester J., First Lieutenant and Assistant Surgeon. Granted fifteen days' leave of absence to take effect on being relieved from duty at the Army Medical School, Washington, D. C.

Thornburgh, R. M., First Lieutenant and Assistant Surgeon. Left Fort Warren, Mass., on recruiting duty.

The following named medical officers will proceed to the posts designated after their respective names, for duty:

Bosley, John R., First Lieutenant and Assistant Surgeon, to Fort Thomas, Ky., Department of the Lakes.

Jones, Percy L., First Lieutenant and Assistant Surgeon, to Fort Monroe, Va., Department of the East.

Juenemann, George F., First Lieutenant and Assistant Surgeon, to Fort Ringgold, Texas.

Mabee, James I., First Lieutenant and Assistant Surgeon, to Fort Casey, Washington.

Noble, Robert E., First Lieutenant and Assistant Surgeon, to U. S. Army General Hospital, Washington Barracks, Washington, D. C.

Palmer, Fred W., First Lieutenant and Assistant Surgeon, to Jefferson Barracks, Mo.

Siler, Joseph F., First Lieutenant and Assistant Surgeon, to Fort Logan, Col.

Stedman, Chester J., First Lieutenant and Assistant Surgeon, to Columbus Barracks, Ohio.

Van Poole, Gideon McD., First Lieutenant and Assistant Surgeon, to Fort Stevens, Ore.

The following named medical officers, upon the completion of the course of instruction at the Army Medical School, will proceed to duty as follows:

Bingham, Ernest G., First Lieutenant and Assistant Surgeon, to Manila, P. I.

Brown, Orville G., First Lieutenant and Assistant Surgeon, to Manila, P. I.

Foster, Charles L., First Lieutenant and Assistant Surgeon, to Manila, P. I.

Heysinger, James D., First Lieutenant and Assistant Surgeon, to Manila, P. I.

Howell, Park, First Lieutenant and Assistant Surgeon, to Fort McPherson, Ga.

Huggins, John B., First Lieutenant and Assistant Surgeon, to Manila, P. I.

Kiersted, Henry S., First Lieutenant and Assistant Surgeon, to Fort Myer, Va.

Lamson, Theodore, First Lieutenant and Assistant Surgeon, to Manila, P. I.

Loving, Robert C., First Lieutenant and Assistant Surgeon, to Manila, P. I.

Miller. Edgar A., First Lieutenant and Assistant Surgeon, to Fort Clark, Texas.

Miller, Reuben B., First Lieutenant and Assistant Surgeon, to Fort Screven, Ga.

Pipes, Henry F., First Lieutenant and Assistant Surgeon, to Manila, P. I.

Shook, Jay R., First Lieutenant and Assistant Surgeon, to Fort Leavenworth, Kan.

Smith, Lloyd L., First Lieutenant and Assistant Surgeon, to Manila, P. I.

Snyder, Craig R., First Lieutenant and Assistant Surgeon, to Manila, P. I.

Tefft, William H., First Lieutenant and Assistant Surgeon, to Fort Snelling, Minn.

Whaley, Arthur M., First Lieutenant and Assistant Surgeon, to Manila, P. I.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending April 1, 1904:

Place.	Date.	Cases.	Deaths.
Smallpox—United States.			
Colorado—Denver	Jan. 30-Feb. 27	22	1
Florida—Jacksonville	Mar. 19-26	1	
Illinois—Chicago	Mar. 19-26	10	
Illinois—Galesburg	Mar. 19-26	3	
Kentucky—Burlington	To Mar. 28	16	
Kentucky—Covington	Mar. 19-26	3	
Kentucky—Springfield	Mar. 28	6	
Louisiana—New Orleans	Mar. 19-26	2 imported	
Maine—Madawaska region	Mar. 19-26	2	
Maryland—Baltimore	Mar. 19-26	3	
Massachusetts—Lowell	Mar. 19-26		1
Michigan—Detroit	Mar. 19-26	2	
Michigan—Grand Rapids	Mar. 19-26	2	
Michigan—At 82 localities	Mar. 12-19	Present.	
Missouri—St. Louis	Mar. 19-26	4	
New Jersey—Camden	Mar. 19-26	2	1
New Jersey—Jersey City	Mar. 20-27	1 Porter on train.	
New Jersey—Trenton	Mar. 19-26	1	
New York—New York	Mar. 19-26	1	
Ohio—Cincinnati	Mar. 11-18	1	1
Ohio—Cleveland	Mar. 18-25	5	
Ohio—Dayton	Mar. 19-26	8	1
Ohio—Lorain	Mar. 20-27	2 Probably imported.	
Ohio—Warren	Mar. 19-26	1	
Pennsylvania—Johnstown	Mar. 19-26	2	
Pennsylvania—Philadelphia	Mar. 19-26	35	8
Pennsylvania—Pittsburgh	Mar. 19-26	8 1 imported.	
South Carolina—Charleston	Mar. 19-26	4	1
South Carolina—Greenville	Mar. 12-19	4	
Tennessee—Memphis	Mar. 19-26	30	1
Tennessee—Nashville	Mar. 19-26	2	
Wisconsin—Milwaukee	Mar. 19-26	3	
Smallpox—Foreign.			
Belgium—Antwerp	Mar. 5-12	4	3
Colombia—Barranquilla	Feb. 29-Mar. 13		1
France—Lyons	Feb. 27-Mar. 5		1
France—Paris	Mar. 5-12	32	3
Great Britain—Birmingham	Mar. 12-19	1	
Great Britain—Cardiff	Mar. 12-19	1	
Great Britain—Edinburgh	Mar. 5-12	6	1
Great Britain—Glasgow	Mar. 11-18	21	2
Great Britain—Hull	Mar. 5-12	7	
Great Britain—Leith	Mar. 5-12	1	
Great Britain—London	Mar. 5-12	21	
Great Britain—Manchester	Mar. 5-12	3	
Gt. Britain—Newcastle-on-Tyne	Mar. 5-12	3	
Great Britain—Nottingham	Mar. 5-12	18	3
Great Britain—South Shields	Mar. 5-12	3	
India—Bombay	Feb. 23-Mar. 1		14
India—Karachi	Feb. 21-28	1	1
Java—Batavia	Feb. 13-20	20	8
Mexico—Mexico	Mar. 6-13	16	7
Netherlands—Amsterdam	Mar. 12-19	3	3
Russia—Moscow	Feb. 27-Mar. 5	8	3
Russia—Odessa	Mar. 5-12	1	
Russia—St. Petersburg	Feb. 27-Mar. 5	12	1
Spain—Santander	Mar. 7-14	4	1
Turkey—Alexandretta	Mar. 5-12	1	
Turkey—Constantinople	Mar. 6-13	8	
Turkey—Smyrna	Feb. 21-28	1	
Yellow Fever.			
Ecuador—Guayaquil	Feb. 27-Mar. 5		3
Mexico—Vera Cruz	Mar. 12-19	1	
Cholera.			
India—Calcutta	Feb. 13-20		34
India—Karachi	Feb. 21-28	2	1
India—Madras	Feb. 13-29	3	1
Turkey in Asia—Bassra	Feb. 22	7	7
Turkey in Asia—Kermit Ali	Feb. 22	4	2
Plague—Insular.			
Philippine Islands—Manila	Feb. 6-13	1	1
Plague—Foreign.			
China—Hongkong	Feb. 6-13		2
India—Bombay	Feb. 23-Mar. 1		832
India—Calcutta	Feb. 13-20		75
India—Karachi	Feb. 21-28	113	96
India—Rangoon	Feb. 19	1	
Mauritius	Feb. 18-25	3	2
Peru—Lima	Mar. 31	28 reported	

Births, Marriages, and Deaths.

Married.

Barnes—Sellman.—In Metuchen, New Jersey, on Saturday, March 26th, Dr. William M. Barnes and Mrs. Adelaide Young Sellman.

Feingold—Lowenberg.—In New Orleans, Louisiana, on Wednesday, March 23rd, Dr. M. Feingold and Miss Birdie Lowenberg.

Gill—Armes.—In Birmingham, Alabama, on Thursday, March 24th, Dr. James Edward Gill, U. S. N., and Miss Lucy Hamilton Armes.

Munson—Ward.—In Traverse City, Michigan, on Wednesday, March 23rd, Dr. James D. Munson and Mrs. Marion Ward.

Riggs—McBurney.—In New York, on Monday, April 4th, Dr. Austen Fox Riggs and Miss Alice McBurney, daughter of Dr. Charles McBurney.

Starkloff—Baldwin.—In St. Joseph, Michigan, on Thursday, March 10th, Dr. Max C. Starkloff and Miss Genevieve Baldwin.

Strickland—Adams.—In Atlanta, Georgia, on Wednesday, March 30th, Dr. E. E. Strickland and Miss Mary J. Adams.

Died.

Allen.—In Lestershire, N. Y., on Wednesday, March 23rd, Dr. Solomon P. Allen, in the sixtieth year of his age.

Allison.—In Clarksville, Tennessee, on Saturday, March 26th, Dr. James Allison, in the seventy-first year of his age.

Balkers.—In New York, on Wednesday, March 23rd, Dr. William S. Balkers, in the forty-third year of his age.

Burrows.—In Newark, New Jersey, on Saturday, April 2nd, Dr. Walter Burrows, in the seventy-sixth year of his age.

Butler.—In New York, on Monday, March 28th, Dr. George H. Butler, in the sixty-second year of his age.

Chabot.—In Baltimore, Maryland, on Sunday, March 24th, Dr. G. Henry Chabot, in the forty-fourth year of his age.

Garrison.—In Salt Lake City, Utah, on Saturday, March 26th, Dr. Charles Miller Garrison, in the forty-sixth year of his age.

Gilwee.—In St. Louis, Missouri, on Thursday, March 24th, Dr. John Gilwee, in the sixty-ninth year of his age.

Glover.—In Haddonfield, New Jersey, on Monday, March 21st, Dr. Lawrence L. Glover.

Hammond.—In Freeport, Long Island, N. Y., on Tuesday, March 29th, Dr. George H. Hammond, in the fifty-ninth year of his age.

Hunter.—In Powder Springs, Georgia, on Wednesday, March 23rd, Dr. John H. Hunter.

Kengla.—In San Francisco, California, on Saturday, March 26th, Dr. Louis A. Kengla, in the forty-fourth year of his age.

Mackay.—In Dallas, Texas, on Wednesday, March 23rd, Dr. David Mackay, in the seventy-second year of his age.

McDonald.—In Atlanta, Georgia, on Monday, March 21st, Dr. Henry McDonald, in the seventy-first year of his age.

Mercer.—In Baltimore, Maryland, on Thursday, March 24th, Dr. William Moseby Mercer, in the seventy-seventh year of his age.

Polk.—In New York, on Tuesday, March 29th, Dr. John Metcalfe Polk, in the twenty-ninth year of his age.

Silk.—In New York, on Monday, March 28th, Dr. Morris Silk.

Simmons.—In Utica, N. Y., on Sunday, March 27th, Dr. Arthur Raymond Simmons, in the fifty-seventh year of his age.

Truex.—In Brooklyn, N. Y., on Thursday, March 31st, Dr. Stephen Paul Truex, in the forty-ninth year of his age.

Wetton.—In Elizabeth, New Jersey, on Saturday, March 26th, Dr. Charles E. Wetton, in the forty-first year of his age.

Whitehead.—In Waynesboro, Georgia, on Thursday, March 24th, Dr. Atticus G. Whitehead, in the sixty-fourth year of his age.

Wilkinson.—In Quitman, Georgia, on Sunday, March 20th, Dr. M. C. Wilkinson, in the seventy-ninth year of his age.

New York Medical Journal
AND
Philadelphia Medical Journal.
CONSOLIDATED.

A Weekly Review of Medicine

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Original Communications.

URETERAL CATHETERISM AS A ROUTINE METHOD OF DIAGNOSIS IN RENAL DISEASE.*

By JOHN VAN DER POEL, M. D.,
NEW YORK.

This subject leads us into such a broad field, and involves so many types and phases both of surgical and of what were, up to within the past two or three years, regarded as purely medical cases, that it seems scarcely possible within the limits of a paper of this character to enter into the various questions involved as minutely as should be done.

It is a study still, so to speak, in its evolution, and the value of some of its details, as regards the methods by which results are obtained, is still the subject of differences and discussion among urologists.

It is not my pretension to present original work or research, but rather to review some of the more important facts as known to us to-day.

As to the usefulness of, and necessity for, collecting the urines from each kidney separately for their exact study and analysis, in order to determine, as far as possible, the exact conditions and functional value of each organ, especially that from the supposed healthy side, there is to-day little or no question.

With our present knowledge, but few surgeons would willingly extirpate one kidney without informing themselves, as far as possible, as to the condition of the organ upon the other side; and mistakes, such as the removal of a single kidney, which formerly occasionally happened, are not heard of when catheterism of the ureters is resorted to.

That the procedure is, however, in some cases impossible, impracticable, or unwise, there is no question, and under certain circumstances it will be found necessary to resort to one of the other methods of separation. There is, however, to my mind, no doubt but that when it *is* possible and practicable, the results are far more accurate and certain than by these other methods.

In the management of any disease a diagnosis is most important. Most practitioners have seen cases treated for a cystitis for weeks and months, where the primary disease has been located in the kidney. Pyuria and hæmaturia should never be treated locally until after a cystoscopic examination has been made, the origin of the trouble ascertained, and a rational idea obtained as to the course to be pursued.

I cannot agree with those who hold that it is usually a difficult undertaking, and one which requires an amount of experience such as can be acquired only by the specialist. True, it is essential that an operator should have mastered his technique before he attempts the work, that a certain amount of experience is necessary to accustom one to the use of the cystoscope and the finding of the ureters, and that he should have at his command the conveniences and information necessary for an accurate examination, from which correct deductions may be drawn.

The question as to the advantages and disadvantages of particular instruments is one for the individual operator according to his experience and teaching, each scholar naturally following the bent of his instructor, although it is now generally admitted that no one instrument is sufficient in *all* cases; either of the two types in general use, that upon the Brenner principle—of straight vision—or that with reflected vision—such as the Nitze, Casper, or Albarran—will be successful in the large majority of cases, my personal preference being for the Nitze and Tilden Brown instruments.

That in all cases the operation cannot be viewed as absolutely free from danger, such as the infection of a healthy organ—notably in cases of tuberculosis, where but one kidney and the bladder are involved, or the bladder alone—is a fact which must not be lost sight of, and on account of this element of danger, in these cases, catheterism of a supposed healthy kidney should not be done.

The relation between cystitis and renal infection is an interesting and important one, for, as we know, it is often impossible to ascertain which may be the primary seat of the trouble, though we do know that inflammation of one organ does not necessarily imply a similar condition in the other, as every case of inflammation of the bladder certainly does not cause infection of the kidneys, nor does every case of renal disease necessarily cause a cystitis, as instanced in uncomplicated pyelitis or suppurative pyelitis caused by kidney stone. Considering the anatomical relations of the ureter, its diagonal course through the bladder wall, on account of which it would seem that the greater the internal hydrostatic pressure from distention, the greater the difficulty fluid or urine would have in passing upward, as well as the valve-like fold at the mouth of the ureter, which is increased by a fold of mucous membrane when the walls are relaxed, when they pucker up about the meatus (Sampson); and remembering also the physiology of the ureter, with the flow of urine always in a downward direction, it can easily be believed that ascending infection is difficult! In this connection it is interesting to note the clinical results and experiments of Young, who does not believe that reflux of fluid occurs even on very forced distention of the bladder. Referring to this method of preparing a bladder of small capacity, for subsequent cystoscopic examination, he states that, in no one of eight cases thus treated or prepared, was there any evidence of ascending infection, although the bladders contained many virulent organisms, some streptococci. His experiments in this line were upon both cadavers and dogs, and consisted in dissecting out the ureters in the cadavers, cutting them across, tying them, and then injecting large quantities of colored fluid—1700 c. c. In the dogs, the bladders were first distended, the abdomen then opened, and the ureters cut. In neither cadavers nor dogs could any fluid be found in the ureters or kidneys.

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* Read at the meeting of the American Urological Association, New York.

That fluid from the bladder can, however, be carried or attracted upward by the catheter during catheterism, has been shown by Casper and Cohn, who have both remarked that boric acid in the bladder, during a catheterism, can flow upward or be carried upward with the catheter, and pass outward through the lumen of the catheter; and Casper proved this by injecting colored fluid into the bladder, when it at once appeared with the urine.

Cohn's suggestion that when clear fluid flows with an uninterrupted stream from the catheter, indicating that boric acid is flowing, the bladder should be emptied with a catheter, when at once the boric acid ceases, and, after a pause, the urine begins with its characteristic interruptions, is good. Sampson has shown that, "in certain conditions, where an inflammation of the ureter—a ureteritis—from cystitis or stone is present, which interferes with the function of the vesical portion of the ureter acting as a stricture, the conditions for renal infection are favorable." But, given a healthy bladder and ureter, and a properly functionating kidney, the opinion of the most experienced observers is that infection does not occur from catheterism.

This, of course, presupposes a thorough disinfection of the bladder and instruments before operation, and that the bladder contains a sterile, and at the same time, disinfecting, fluid, as boric acid solution—a safe procedure being the washing out of the kidney, pelvis, and ureters with a weak silver or bichloride solution, as suggested by Casper and Albarran respectively. But if, under certain conditions, as we know, infection occurs when there is no instrumental interference, it is easy to suppose that the use of the catheter would materially aid in bringing this condition about, and whereas, with a normal kidney, the introduction of organisms into its pelvis will probably not cause trouble, yet, as Sampson states, "the introduction of the same organisms into the pelvis of a kidney where stricture of the ureter exists, interfering with the functions of the organ, would permit a mixing of the urine in the lumen of the ureter with the organisms present, thus causing infection."

There is, therefore, a danger in catheterism of a ureter in cases of urinary infection with an apparently diseased mouth of the ureter, and, in such cases the segregator or separator is a safer plan, providing it can be employed. The segregators or separators, however, cannot be regarded as absolutely accurate methods. The instruments of Harris and Downes are more applicable to females than males, and, when the two urines are not very dissimilar, leave us somewhat in doubt as to whether the separation has been successful or not. They are simpler in application than is the use of the catheter, but, on the other hand, they are more painful, and cannot, on this account, be left *in situ* as long as is necessary for a proper study of the urines, *i.e.*, two hours, although many consider this length of time, in the majority of cases, not at all necessary, and that practical results can be obtained, sufficiently accurate, during a half-hour's sitting.

The separator of Luys is also especially applicable in the case of women, where it has given its best results; but it needs a bladder of fair capacity, one that has an anteroposterior diameter of at least 7 cm., that being the distance between the beak of the instrument and the end of the shank; and if the bladder is small or deformed, or if there exist anomalies of the ureter, it can readily lead us into error. It is likewise more or less painful, especially while being introduced, and its position in the bladder is not readily changed. Nevertheless, its adherents report good results.

To be able to separate urines in a small bladder, and to overcome the idea that, in the Luys instrument, the bladder walls must adapt themselves to the instrument and not the instrument to the bladder walls, Cathelin devised his *diviseur gradué*, which at the same time is much easier of introduction. Theoretically the instrument is good, but, practically, I have found it, in many cases, not successful, contrary to my expectation when I first used it, some eighteen months ago, as reported in the Genito-urinary Section of the New York Academy of Medicine.

Not infrequently a catheter will catch at the eye of the instrument when in the bladder, and cannot be passed to the bottom of the cavity near the mouth of the ureter, and, occasionally, when it is in the bladder, the urine will not run through it, perhaps due to a fold of mucous membrane covering the eye of the instrument. Both of these inconveniences may perhaps be overcome by the use of metal catheters, or of metal guides extending down into the cul-de-sac, where the urine collects. The latest modification of the instrument, however, I have not had an opportunity of using. All these instruments—the Harris, Downes, the Luys and the Cathelin, have the advantage of requiring less dexterity, or rather, are much more easily handled than double catheterism of the ureters; besides, they do not *involve the risk of renal infection.*

Besides infection from a reflux of urine from the bladder into the ureters, allowing organisms to travel up the ureter, it can occur (1) from an extension of an inflammatory process from the bladder, through the ureteral wall, or along the lumen of the ureter; and (2) from injuries to the ureteral orifice, thus permitting the entrance of organisms into the ureter.

Sampson has demonstrated the former method in a case of carcinoma of the uterus, where uterus and lymphatics were removed *en masse*, with death on the ninth day from cystitis and purulent nephritis. The infection had passed through the bladder and ureteral wall, thus reaching the lumen of the ureter. The ureteritis caused a swelling of the ureteral wall, and hence a stricture. The stricture interfered with the function of the kidney, and hence predisposed it to infection, also interfering with the function of the ureter, causing a stagnation of infected urine in its lumen, which was able to reach the weakened kidney.

The other method of infection he has demonstrated with a case of tuberculous cystitis, when curettage was performed, after a vesicovaginal fistula for drainage had been made. Symptoms of infection in one kidney at the end of four weeks decided the operator to remove it, when it was found to contain many small abscesses, containing what were probably colon bacilli, but no tubercule bacilli. Death occurred eight days later, and a tuberculous kidney was found on the opposite side. He explains the case as follows—curettage of bladder in the presence of infection, with probable injury to the ureteral orifice, so that organisms were able to gain an entrance. The stricture of the ureter interfered with the function of the kidney, permitted a mixing of the urine in the lumen of the ureter with the organisms present, and hence, renal infection. Of course here, infection through the general circulation, or, perhaps, through the lymphatics, may have occurred, though the above explanation is, I think, correct.

I mention these cases, though *most* instructive in themselves, to call attention to the care with which a cystoscopy should be made, in cases of *diseased bladder,* to avoid all injury to the mucosa, and especially to the mouths of the ureters by tentative probings or attempted catheterism, which is absolutely contraindicated.

In considering the risks of infection from operative interference it is important not to overlook the question of low vitality and lessened resisting powers of a patient, as it is easy to conceive that injuries under such conditions are more liable to take effect than when the tissues are comparatively strong and healthy.

As to Kelly's method of collecting the urines, by pressing the end of his cystoscopic tube over the mouths of the ureters in a bladder distended with air, though yielding satisfactory results in his hands as well as in those of a few others in the female, I have had no personal experience. It has the advantage that it can be used in bladders of too small a capacity to permit of cystoscopy by other instruments, though some of the more recent American makes have this same advantage, by using air instead of water. Whether the air which occasionally enters the ureters when this method is employed, and which can be seen as bubbles issuing from the mouth of the uterus, has been known to carry infection, I am unable to state.

The method of Pawlik is similar in principle to that of Kelly.

I cannot agree with those who regard catheterism as dangerous—the bladder-infected cases excepted, and when care is taken not to injure the mucosa. This fear is, I think, more theoretical than practical, as is clearly shown by the results of those of the greatest experience—as Casper, Nitze, Albarran, each with a thousand or more cases, and many others with large numbers. Personally, I have never seen a rise in temperature after the operation, though I have seen this occur after a quick or careless cystoscopic examination, where the lamp has been allowed to come in contact with the bladder wall, and where, upon subsequent examination, I have been able to make out the whitish plaque, caused by the burn, though this was before the days of the so called cold lamps.

Usually, where the kidney pelvis has been successfully reached, the urine flow is free and in sufficient quantity, but occasionally there is no result. This may depend upon one of several conditions, as to whether or how the catheter eye is stopped up, it being presupposed that every catheter is tried beforehand as to its patency. Should the eye be covered with, or have sucked in, a fold of ureteral mucous membrane, carefully working the catheter slightly upward and downward will free it. Should the lumen of the catheter contain an air bubble, a careful injection of a few drops of boric acid will either drive the air into the kidney pelvis, or will siphon it out when flowing downward again. The injection of fluid, however, should be done with care, as with certain people it is apt to cause, not only pain, but occasionally a severe attack of renal colic, as Margulies has reported in a case of chronic nephritis, from closing the ureter by the passage of the catheter alone. Should the contents of the pelvis be so thick that it will not run through the catheter, a larger catheter can be used, either alone or under the guidance of a ureteral sound over which to pass it, with one having the eye at the end, as first recommended by Albarran. In other cases it may be found necessary to resort to suction upon the catheters by means of the syringe. Occasionally it happens that, after having entered the ureter successfully for a short distance, further advance is prevented by some obstruction, the catheter coiling up in the bladder, which latter cannot be appreciated unless under direct control of the eye. This can sometimes be overcome by giving the catheter a slightly different direction by means of the directing lever, or, when it is caused by a sharp bend in the ureter from a loosened kidney, an assistant, pulling upward on the kidney, will straighten the ureter out. This point was well exemplified in a case (which afterward proved to be a tuberculous kidney) where I thought I had to do with a spasm of the ureter, preventing advance of the catheter about 1 to 2 cm. beyond the ureteral mouth, from the fact that there was a urethral spasmodic stricture, requiring the passing of a steel sound, before I could either wash out the bladder with a soft catheter, or afterward pass the cystoscope; and when upon two occasions I first passed a ureteral probe, to overcome the supposed spasm of the ureter, which subsequently was straightened out by traction on a slightly loosened kidney, which I had previously overlooked.

If, in spite of all endeavors, it is impossible to overcome an obstruction, then the catheter should be allowed to remain *in situ* against the face of the obstruction (twist, stricture, stone, or pressure from abdominal tumor), for though the lumen of the ureter may be impassable for an instrument, it may still be sufficiently patent for the urine to pass downward. At any rate, the urine from the other kidney will give us, by exclusion, in many cases, the information necessary.

It sometimes happens where, on account of the continuous flow of blood or pus from the mouth of the ureter, it cannot be made out, as the fluid medium becomes too quickly turbid. Under these conditions, after thorough and quick irrigations have been unsuccessful, one can, not unfrequently, as has been suggested by Margulies, enter the ureter by directing the catheter toward the point whence the blood or pus is seen to be coming through the thickened medium, as it is often easy to enter a ureter when within a centimetre or half a cm. of its mouth, by gently sliding it along the mucous membrane toward the mouth, and when it reaches the latter, it suddenly falls in. I have seen this occur more readily with a soft metal probe with rounded end, as used by Lewin, than with the catheter.

At first it was considered that all the urine passed during the twenty-four hours, or, at least, during twelve hours, was necessary for examination, *i.e.*, that a catheter should remain *à demeure* during this length of time, when, occasionally, it could thus be shown that one kidney would functionate but little or not at all, and that life depended wholly upon the other organ. More recently, since the phloridzin test has been introduced, but twenty to thirty minutes are (according to Casper and Richter) sufficient to establish the functional capacity of a kidney. And when to this are added the test of cryoscopy of both urines, the proportion of urea excreted, the methylene blue test, and the microscopical examination of the urine from each kidney separately, a relatively safe conclusion can be drawn as to the condition of each organ.

Unfortunately, however, the same kidneys do not give the same results at all times, due to the variations in the activity of the healthy kidney, as shown by Albarran, as to the amounts of urine passed during a given time, its chemical composition, and its density or its freezing point, so that, according to him, four to six hours are necessary for a *perfect* comparison. This refers especially to the supposed healthy kidney, as it has been shown that, with the diseased organ, the differences are much less marked, and the more advanced the disease, the less the variations. If with unilateral disease we compare the results from the two kidneys, for a quarter or half an hour, with those for twenty-four hours, we *sometimes* obtain quite similar results and, at others, quite dissimilar ones; but if we compare the results obtained from a catheterism of two to three hours with those from one of twenty-four hours, they are more uniform. From a physiological and pathological point of view it would be better that the collection should be made during as long a time as possible; but, from a practical point of view, during a comparatively short time, Albarran thinks that, bearing in mind both the care necessary for a good result and the necessities of practice, two hours can be adopted as a general rule.

It is very evident that our knowledge of any urine will be more satisfactory when the functions of the kidneys are studied from several different points of view, and the most frequently employed of these are: (1) the quantities of urine; (2) the freezing point, and (3) the amount of urea passed—that is, the real quantity passed, and not the percentage. With these sufficiently practical results can be obtained, because, as Albarran states, the two kidneys receiving blood of the same composition, the difference between the two urines indicates the difference in functionating power of the two glands.

To these are usually added: (1) The phloridzin test, the injection of .075 gramme half an hour before collecting, or, according to Casper and Albarran, .01 gramme and comparing the *quantities* of sugar eliminated by each kidney (and not the percentage).

(2) The methylene blue test, by injecting the blue three quarters of an hour before the separation—though the results from this method cannot be considered constant, as the retardation in its appearance is different in different forms of disease—is sufficiently accurate in the majority of cases of *surgical* kidney.

Where the elimination is markedly bad we can conclude that the renal function is defective, but we cannot say that, when it is good, the kidneys are normal. According to Bard and Bonnet, there is no retardation in parenchymatous lesions, the retardation can exist without any lesion, and the time is normal, or even shortened, in epithelial lesions.

The important practical point which we are anxious to establish, before operating, is, whether one kidney is capable of taking the place of, and performing the work or most of the work usually done by, both. If we can prove by these tests that a clear urine having a good composition functionates well, we can easily be satisfied to take the risk that it will be able to supplant the other; but when both kidneys are diseased, the one more than the other, we are confronted with a question which is extremely difficult to decide.

The suggestion of d'Illyes and Kovesi, to cause an artificial polyuria from the ingestion of large quantities of water, has shown that the polyuria is very much less from a diseased, than from a healthy, kidney, and is of great assistance; and from recent experiments it is shown that, the more advanced the disease, the less the polyuria, and that the latter is especially marked with compensatory hypertrophy.

Besides, for the purpose of gathering data for the approximation of the functional activity of the separate kidneys, catheterism of the ureters is of valuable aid in some conditions and indispensable in others, in giving us knowledge and assistance in differential diagnosis: (1) between disease of the bladder and disease of the kidneys; (2) between certain abdominal tumors, and (3) in recognizing and localizing obstructions of the ureters, such as stricture, twists or bending, and stone; and, again, it is of assistance in the avoidance of injuries to the ureters, in operation for some abdominal tumors (*i.e.*, fibroids of the uterus).

Under certain circumstances, as stated, with an infected or tuberculous bladder, it is safer to have recourse to one of the separators or segregators, and it is fortunate that we possess these other methods, which yield practical, though not as accurate, results.

The advantages of catheterism over the other methods can, I think, be expressed as follows:

I. The cystoscope is more easy of introduction than are the separators or segregators, is less painful during the bladder manipulations, and much less so during the collection of the urines. Hence, as a rule:

II. With ureteral catheterism we can collect the urines during as long a time as may be thought necessary, the patient not requiring any supervision.

III. A cystoscopic examination of the bladder can be made at the same time, which, in some cases, is useful, in others, indispensable.

IV. We are much more certain of the exact results, especially when the two urines are of a similar character, whether clear, bloody, or purulent (Albarran); and

V. It is the only method by which we are fairly certain that there is no bladder contamination.

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New Hospital for Fall River, Mass.—A matter of great importance to the Catholics of Fall River is the furtherance of a plan conceived by Father Grolleau to establish a hospital and a home for working girls under the auspices of the Dominican order. While the reverend gentleman was connected with the Dominican church in Lewiston, Me., he succeeded in having constructed one of the biggest hospitals in the State for the care and treatment of the sick and injured in general. He intends to do the same here. For a long time the matter of a Catholic hospital in Fall River has been under consideration, not only by the Dominicians, but by leading Catholics in all of the parishes. Father Grolleau has reached the decision that Fall River Catholics are well able to begin the project and carry it to a successful completion. One of the order, in discussing the financial aspect of the proposition, said: "The question of money in this affair is not troubling us in the least, for when Catholics of Fall River realize what is in contemplation they will applaud our project and be the first to come to encourage us and make possible our success."

PENETRATING AND PERFORATION GUNSHOT AND STAB WOUNDS OF THE ABDOMEN,

WITH REPORT OF CASES.*

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It is generally agreed among surgeons that all penetrating gunshot and stab wounds of the abdomen should be treated by immediate section, with repair of all visceral injuries. A careful analysis of the statistics of Klem, Douglas, and Parker will lead us to but one conclusion. True it is that the experience of those surgeons who served in the Spanish-American and Anglo-Boer wars led them to advocate the expectant treatment of such cases. It will, however, be difficult to convince those surgeons who have had any experience in the operative treatment of wounds of this character, that bullet wounds of the bowel received in battle differ in any particular from the visceral injuries and peritoneal perforations inflicted in times of peace; and while, as Senn remarks, "there are many circumstances in military practice that militate against the propriety and feasibility of resorting to formidable surgical interference in such cases," he strongly advocates prompt surgery in all cases in which, owing to the course of the missile, it is reasonable to assume that the bullet has made visceral injuries that would be almost certain to destroy life without surgical interference. The brilliant work of H. H. Grant, Richard Douglas, Mayo, Rodman, Vance, La Place, Ochsner, Louis Rassieur, and others, leaves no room to question the advisability of prompt and thorough surgery in the treatment of these cases. The questions to be determined in the future are, not when to operate, but how and by what surgical methods we can best meet the indications in such cases. My opportunities for observing wounds of this character are exceptionally good. At the St. Louis City Hospital, of which institution I have charge, we receive almost all of the gunshot injuries occurring in that city, and as St. Louis is a city of 700,000 people, we, perhaps, treat more of these cases than are treated at any one institution in this country. During the last three months I have operated in an interesting series of cases, which I wish to report for your consideration, giving, in detail, the methods employed. This I can best do under separate heads.

PREPARATION OF PATIENT.

When a gunshot or stab wound of the abdomen is received at the hospital, it is assumed that the wound is a penetrating one, until it is proved to the contrary; consequently, the patient is immediately prepared with the same care as for a laparotomy; catheterization is performed, the abdomen shaved, scrubbed with green soap, washed with bichloride and alcohol, and when the preparations are complete, his wounds are examined, to determine whether the bullet or knife has penetrated the peritoneal cavity. The wound of entrance is enlarged and the track of the bullet is traced with the sterile finger. The probe is never used, except to complete the investigation. Occasionally a case will occur where, even after cutting down to peritonæum, it is difficult to demonstrate penetration. This condition is often found where the wound is made by a bullet of small calibre. Here, the probe is a valuable instrument. Case VI illustrates this point. This patient was brought to the hospital with small bullet wound through the right rectus muscle, half an inch below and to the right of the umbilicus. There were no evidences of shock. Pulse good; to all appearances the wound was an innocent one. The wound was enlarged but the finger could not demonstrate penetration. The patient was anæsthetized and wound opened down to the peritonæum; with a probe a small opening in the peritonæum was found. Section was immediately made and two wounds of the small bowel repaired.

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* Read before the Mississippi Valley Medical Association. Memphis, Tenn., October 7, 1903.

This case is doubly instructive in that it demonstrates the difficulty encountered at times in determining penetration, as well as the importance of demonstrating this point. Here was a wound, apparently a non-penetrating one, which proved to be not only penetrating but perforating. When a knife or bullet has penetrated the peritoneal cavity, there is but one method of determining perforation, and that is, by means of an abdominal section and a careful investigation of the abdominal viscera. An extensive operative experience has taught me that this is the only safe course. I have time and time again opened the abdomen when all symptoms pointed to perforation and have, after thorough search, found no injury to the viscera. Then, again, I have operated, expecting to find no injury to the bowel, and have found anywhere from one to nine perforations. Section properly performed is safe and, like some of our election laws, "leaves nothing to chance." During the last three months we have had eight exploratory laparotomies for gunshot wounds, without a death. The hydrogen gas test of Senn I do not consider safe. In distending a bowel injured in one or more places, fæcal extravasation is almost bound to occur. When penetration is proved, section should follow as a natural sequence.

THE INCISION.

In the majority of cases I have found a median abdominal incision best suited. The incision may be short or long; personally, I prefer a long incision. It may be below or above the umbilicus. In gunshot wounds it is wise to make an incision from the ensiform cartilage to the umbilicus. Through such an incision the viscera can be systematically gone over, and this is essential, for the extent of injury done by a bullet can never be determined until the abdominal contents have been thoroughly gone over. In stab wounds, the location of the wound should govern us, both as regards length and situation of abdominal opening.

SEARCH FOR VISCERAL INJURIES.

I cannot emphasize too strongly the importance of systematic search for visceral injuries. Success in the treatment of these cases depends on the thoroughness with which the surgery is done. To repair three or six wounds of bowel and leave one, defeats the purpose for which the operation was performed. Case VIII will illustrate this point.

While it is probable that this patient would have died, even if perforation had not been overlooked, it nevertheless emphasizes the importance of careful search for all bowel injuries. It is our custom, in all cases of gunshot wounds of the abdomen, to examine the viscera in the following manner: The stomach is examined fore and aft; the liver and spleen are then gone over. Beginning at the angle of Tritz, the small intestine is followed to ileocæcal valve. The ascending, transverse, descending colon, and the sigmoid flexure are then examined. A systematic search of this character precludes the possibility of overlooking injuries to peritoneal contents.

CONTROL OF HÆMORRHAGE.

Injuries to vessels of the mesentery and omentum can be readily controlled by ligature. Hæmorrhage from the liver, pancreas, and spleen are, in some cases, hard to manage, either by ligature or suture. In such cases a properly applied gauze tampon should be used. The following is of exceeding interest and demonstrates how difficult it is, in many cases, to control hæmorrhage:

Mandy B., aged twenty-eight years, was admitted to hospital suffering from stab wound of the abdomen. A knife had entered the outer border of the left rectus muscle, on a level with the eighth rib. The wound was traced and found to have taken a slanting course and to have penetrated. Patient was suffering considerably from shock. She was immediately anæsthetized, and the abdomen was opened. On opening the peritonæum the hæmorrhage was found to be profuse. An incised wound of the lower border of left lobe of liver was found and closed with two silk sutures. There was marked gastroptosis. The knife blade was found to have grazed the upper border of the pylorus, to have cut through the gastrohepatic omentum and to have entered the head of the pancreas. The hæmorrhage from this source was alarming. An effort made to control this with ligature, and by tying *en masse*, was partly successful. Careful gauze packing stopped the bleeding completely and the patient made an uneventful recovery. There are a number of interesting points in regard to this case, which I will fully discuss in a future article.

IRRIGATION AND DRAINAGE.

I am a great believer in the virtues of irrigation and drainage in the treatment of wounds of this character. Physiological salt solution is invariably used, and used in large quantities. The apparatus is the flush tube and funnel of Price. The objects to be attained are: First, to cleanse the peritoneal cavity; second, to combat shock. To accomplish the first purpose, the irrigation should be thorough. The region of the liver, spleen, both iliac regions, and the pelvis are flushed until the irrigating fluid returns clear. This, as a rule, is done at the completion of the operation. In cases where the shock is great, it is my custom to fill the peritoneal cavity with salt solution as soon as the abdomen is opened. The solution is rapidly absorbed, and it is remarkable how quickly the pulse will respond. Regarding drainage: I believe that in all cases where there has been a solution of continuity of bowel, the drain should be used. In my early work it was my custom to use the gauze wicks; these I found unsatisfactory. I now drain with glass, the tube being placed in the pelvis through a stab wound above the pubes. The patient is then placed in the exaggerated Fowler position. I cannot speak too highly of this method of drainage. If it is necessary to use a gauze tampon, I invariably endeavor to bring the gauze through the wound of entrance, so that the laparotomy wound can be completely closed.

CLOSURE OF WOUND.

As the incision in these cases is always a long one, the greatest care consistent with rapid work should be exercised in closing it. A properly applied through and through silkworm gut suture meets all the indications. It can be rapidly applied and saves much valuable time. If the patient's condition is good, buried sutures may be used.

RESECTION OF BOWEL.

In no class of surgery is time so important a factor as in cases of this character. There may be surgeons who can make an anastomosis by one of the various suture methods as rapidly as it can be done with a Murphy button. I cannot; consequently, I use the button. I consider the button the ideal method of making an end to end anastomosis. It is quick, the approximation is perfect, and the union, as I have demonstrated, both in animals and on the human, is superior to any known method of suture. The specimen, which I will presently show, is a beautiful illustration of this fact.

The following cases I shall briefly report:

CASE I.—Wm. O. Patient was admitted to the hospital suffering from a stab wound of the left side, the knife entering at lower border of twelfth rib, one inch to left of mammary line. The wound was traced and found to penetrate peritoneal cavity. The patient was immediately prepared for section. An incision was made in the median line extending from one inch below the ensiform cartilage to one inch below the umbilicus. On opening the abdomen, the peritonæum was found filled with beer, spaghetti and blood. On examining the stomach, a wound was found in the anterior wall, from which the contents of stomach were freely escaping. The stomach wound was immediately closed with through and through sutures of silk, which were buried by a row of Lembert stitches. Systematic search was made for other injuries to viscera, but none were found. Abdominal cavity was freely flushed with five gallons of physiological salt solution. A drain was introduced through the original stab wound, and the median incision was closed with buried silk for the peritonæum, and fascia and silkworm gut for the skin. In this case, although the stomach was perforated and the abdomen was full of blood and stomach contents, there were no evidences of perforations revealed prior to section. Before the patient came out from anæsthetic, the stomach was washed out with stomach tube. Recovered.

CASE II.—Wm. W. Patient was admitted to hospital suffering from gunshot wound of the abdomen. The bullet had entered the abdominal cavity on the left side, three inches to the left of and one inch above the umbilicus. The wound was traced and found to be penetrating. The abdomen was opened —a six inch incision extending from one inch below the ensiform cartilage to the umbilicus. The usual search was made for visceral injuries. Seven perforations of ileum were found, which were closed with through and through sutures and buried with Lembert sutures. The peritoneal cavity was flushed with five gallons of salt solution. Two gauze drains were placed. The wound was closed with through and through sutures of silkworm gut. Recovered.

CASE III.—Laura P. Patient was admitted to hospital suffering from a gunshot wound of the abdomen and right forearm. The bullet had entered the abdominal cavity three inches to the right of the median line and one inch below the umbilicus. The wound was traced and found to penetrate the peritoneal cavity. She was immediately prepared for section. A median incision was made, six inches in length, extending one inch below the ensiform cartilage to one inch below the umbilicus. Examination revealed two perforations of the small bowel, which were closed with through and through sutures, buried by Lembert sutures. The peritoneal cavity was flushed with hot salt solution, a gauze drain placed, and incision closed with through and through silkworm gut. Patient made an uninterrupted recovery.

CASE IV.—Lucille M. (colored). Patient was admitted to hospital suffering from gunshot wound of the abdomen. The bullet had entered the right rectus muscle half an inch to the right of, and above, the umbilicus. Patient had been drinking freely prior to admission. The bullet wound was traced and found to penetrate the peritoneal cavity. Patient suffered little from shock and there were absolutely no evidences of penetration. The bladder was catheterized and the urine contained no blood. She was immediately prepared for section. An incision, six inches long, in the median line, extending from one inch below the ensiform cartilage to one inch below the umbilicus, was made. On opening the peritoneal cavity, quite a good deal of blood was found. The stomach was examined, fore and aft, and no perforation found. Beginning at the angle of Tritz, the small intestine was gone over. Nine perforations were found in the small bowel. Six inches of small bowel were resected and anastomosis was made with Murphy button. Three other perforations were repaired with through and through silk sutures, buried by interrupted Lembert sutures. The ascending transverse and descending colon and sigmoid fixture were then examined and found to be intact. The peritoneal cavity was copiously irrigated with five gallons of physiological salt solution. A glass drain was placed at the lower angle of the wound and a small gauze drain through the wound of entrance. The incision was closed with through and through silk sutures and the usual dressing applied. Patient was put to bed in fairly good condition. Time of operation, sixty-five minutes. Patient recovered.

Case V.—William L. Patient entered hospital suffering from a stab wound of the abdomen. The knife had entered the abdominal cavity in right iliac region, midway between the anterior superior spinous process of the ilium and the umbilicus. Patient gave no evidence of perforation. The wound was traced and was found to penetrate the peritoneal cavity. Section was made immediately after the usual preparation. Incision was in the median line, four inches in length, extending from the umbilicus to one inch above the pubes. Four perforations of small intestine were found and repaired with through and through sutures of silk, buried by a row of Lembert sutures. Cavity was flushed with hot salt solution. Gauze drain. Wound closed with through and through sutures of silkworm gut. Patient made an uninterrupted recovery.

Case VI.—Charles W. Patient admitted August 24th, suffering from gunshot wound of the abdomen. Bullet entered right rectus muscle half an inch below, and to right of, umbilicus. There were no evidences of penetration or perforation. The wound of entrance was enlarged, but finger was unable to demonstrate peritoneal penetration. Patient was anæsthetized and the wound further enlarged and a retractor introduced. After careful search, peritoneal penetration was demonstrated with probe. On opening the abdomen, there was considerable blood in the peritoneal cavity. The usual search was made for intestinal perforations. Two perforations were found in the small bowel and closed with a double row of Lembert sutures. The peritoneal cavity was copiously irrigated with hot salt solution and the wound closed with layer sutures of silk. No drainage. This case was interesting in the extreme, as the patient gave no evidences of penetration or perforation, and it was only after a free division of the track down to the peritonæum and the introduction of a retractor that the penetration of the peritoneal cavity was demonstrated. The dressings were of dry gauze and the usual binding.

August 26th.—Forty-eight hours after section the patient developed symptoms of intestinal obstruction. The abdomen was opened. Owing to close proximity of wounds in the small bowel, it was found that the lumen of the gut was contracted. Quick resection was made with a Murphy button. Cavity irrigated. A drain placed in upper angle of wound. Incision closed. Patient did well up to September 3d, when he developed pneumonia. He died September 6th. Autopsy showed the Murphy button loose in the bowel; union perfect. No evidences of peritonitis. A small fæcal fistula was found in the upper angle of the wound; result of agglutination of the bowel to the line of peritoneal incision. No leakage into the peritoneal cavity.

Case VII.—Will J. Patient entered hospital suffering from a gunshot wound of the right shoulder, left arm and wrist; also a gunshot wound of the abdomen. The bullet had entered the abdomen above the umbilicus, one inch to right of the median line. The bullet was traced and found to penetrate the peritoneal cavity. Patient vomited a considerable quantity of blood and was suffering from shock and gave evidence of severe internal hæmorrhage. Section was done immediately. On opening the abdomen in the median line, quite a quantity of blood was found in the peritoneal cavity. Search revealed a hugh tear in the transverse colon; extensive injury to mesentery and omentum. Bowel contents, consisting of beer, etc., were free in peritoneal cavity. Hæmorrhage was checked and quick resection of transverse colon made with Murphy button. Cavity flushed with hot salt solution. Gauze drain placed. Patient returned to bed. Patient died of shock three hours after operation. This case was very unpromising from time he entered hospital and surgery held out to him little hope.

Case VIII.—Frank M. (colored). Patient was brought to hospital suffering from gunshot wound of right ilium. He was brought in from the country, having been shot the night before, and when admitted his abdomen was distended. Temperature 103° F.; pulse 140. He was immediately prepared for section. Six inches of the small bowel were resected, in which four perforations were found. Anastomosis made with the Murphy button; the wound in the cæcum was closed. Patient died forty-eight hours after operation. Autopsy showed leakage from undiscovered wound in small bowel. The other wounds showed no leakage. Murphy button union tight. This patient was suffering from widespread peritonitis when admitted to hospital. The peritoneal cavity was full of bowel contents, a number of grains of corn being found. Although a careful search was made for bowel injuries, one was overlooked. This was due to the congested condition of the bowel and to the desire on my part to finish the operation quickly, owing to the bad condition of the patient. The autopsy was interesting, in that it showed the Murphy button union was tight; also, the wounds closed with the sutures. The case was unpromising from the beginning, and the patient perhaps would have died even if the perforation had not been overlooked.

Case IX.—Matheu L. Patient was admitted to hospital at 1:25 A.M., suffering from gunshot wound of the abdomen. The bullet had entered the right rectus muscle, half an inch to the right of and one inch above navel. Patient was suffering from shock and gave evidence of internal hæmorrhage. The bullet wound was traced and found to penetrate the peritoneal cavity. Patient was immediately prepared for section. An incision was made in the median line, six inches in length, and extending from one inch below the ensiform cartilage to one inch below the umbilicus. Examination revealed eight perforations of the small bowel, all within an area of nineteen inches. The bowel was resected, with the Connell suture, nineteen inches of gut being removed. Considerable bowel contents free in peritoneal cavity. No other visceral injuries discovered. Abdomen freely flushed with hot salt solution. Wound closed with through and through silkworm gut sutures. Patient died forty-eight hours after section. General peritonitis.

WOUNDS OF LIVER.

Case I.—James McC. Patient was brought to hospital suffering from stab wound of the abdomen. The knife had entered the epigastric region through the right rectus muscle. Patient showed no evidences of shock. The wound was traced and found to penetrate peritoneal cavity. Patient was prepared for section in the usual manner. An incision was made in the median line, six inches in length, and extending from one inch below the ensiform cartilage to one inch below the umbilicus. Stomach and intestines examined; no perforation. An incised wound of the liver was found, which was closed with two silk sutures. Blood was sponged out of peritoneal cavity. Wound closed without flushing or drainage. Patient made uninterrupted recovery.

Case II.—Fannie D. Patient was admitted to hospital suffering from stab wound of the abdomen. The knife had entered one inch and a half below the ensiform cartilage, slightly to left of the median line. Wound traced with finger and found to penetrate. Patient was immediately prepared for section. A six inch incision was made in the median line, extending one inch below the ensiform cartilage to one inch below the navel. On opening the peritoneal cavity, the abdomen was found filled with blood. Abdominal contents carefully gone over, but no injury to intestine found. An incised wound in the liver was discovered, from which the hæmorrhage came. Wound was packed with gauze, which controlled the hæmorrhage. Cavity flushed with hot salt solution. Abdomen closed. Patient made uninterrupted recovery.

Case III.—Al. S. Patient admitted to hospital suffering from two stab wounds of abdomen. Knife entered on left side in axillary line at border of eleventh rib. Omentum was found protruding from this wound. A second wound on the right side, one inch and a quarter to left of the mammary line in the tenth interspace. Patient was prepared for section. Incision was made in the median line, extending from one inch below the ensiform cartilage to one inch below the umbilicus. On opening the abdomen, the peritoneal cavity was found filled with blood. A wound was found in the liver, right lobe, which admitted one finger. Hæmorrhage was quite free. The wound was immediately plugged with gauze and the gauze brought out through wound of entrance. This controlled the hæmorrhage. Systematic search was made for other visceral injuries, but none were found. Copious irrigation, with salt solution, was then made and the incision closed with buried sutures; silk for the peritonæum and fascia and silkworm gut for the skin. Patient left the table in fair condition. Recovered.

Case IV.—Harry D. Patient was admitted to hospital suffering from gunshot wound of the abdomen. The bullet had entered the right side, at the border of the ninth rib, two inches and a half to the right of the median line, radiating downward and outward. The wound was traced and found to be penetrating. Patient was immediately prepared for section. A median incision was made six inches in length, extending from the ensiform cartilage to one inch below the navel. A wound in the right lobe of the liver was found; hæmorrhage quite free. Wound was packed with gauze and hæmorrhage checked. No injury to other viscera. Gauze drain inserted and abdomen closed with through and through sutures of silkworm gut. Patient had an uneventful recovery.

Case V.—Wm. B. Patient admitted to hospital suffering from gunshot wound of the abdomen. The bullet had entered the left rectus muscle half an inch below the border of the ribs. The wound was traced and found to penetrate. Patient was suffering greatly from shock. Pulse rapid and feeble. He was hurriedly prepared for section. On opening the abdomen, the hæmorrhage was found to be terrific. The source of hæmorrhage was from the liver, the left lobe containing a large bullet wound. The hæmorrhage was partially controlled by gauze plugging. No other visceral injuries discovered. Patient never reacted from shock, but died three hours after operation.

An analysis of the above report shows nine cases of perforating wounds of intestines, with six recoveries and three deaths. Of the deaths, it will be seen that one was due to shock; the injuries being so extensive that patient never reacted. The second patient entered hospital with general peritonitis, and while a perforation was overlooked, it is probable that the result would have been the same if this injury had been repaired. The third patient should have been saved.

Of the wounds of the liver—five cases in all—four patients recovered and one died. This patient died three hours after operation from shock, the result of hæmorrhage.

In the wound of the pancreas case the patient recovered.

To these cases I wish to add eight cases where laparotomy was performed and no injury to viscera found. This makes a total of twenty-three cases, with nineteen recoveries and four deaths.

RETROUTERINE HÆMATOCELE.

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It was my good fortune, while in Professor Döderlein's Frauenklinik, in Tübingen, to be permitted to reexamine thirty-six women who had suffered from a retrouterine hæmatocele and had been treated according to the various methods now in vogue. The object of this examination was to find out which method of treatment permitted of the most rapid recovery, and which method produced the best ultimate results.

The patients, who lived in the surrounding country, were given railroad fare and expense money, and told that an examination at the hospital was necessary for their welfare. This was not true, but was very necessary in order to permit us to carry on our investigations.

The general consensus of opinion is that almost all retrouterine hæmatoceles are caused by one of the results of an ectopic pregnancy. The great majority of cases are caused by an abortion of the contents of a pregnant Falloppian tube.

Cases which are caused by the rupture of a tube are comparatively rare. Zweifel (1) says that practically all retrouterine hæmatoceles are caused by extrauterine pregnancy; adding that the idea of a hæmatocele caused by a reversed menstrual flow is antiquated. However, there are reported in the literature many authentic cases in which a pregnancy of no kind enters as an ætiological factor.

Schambacher (2) performed laparotomy in fourteen cases, and found that in four of the cases the hæmatocele was not caused by an extrauterine pregnancy.

Kober (3) reports two cases, one of which was caused by the lifting of a heavy weight and the other by a violent coition.

Munde (4) reports three cases following dilatation of the cervix and curretting of the uterus. I cannot quite understand these three cases, and cannot help thinking that the curretting must have been very violently done.

Thirty-three of our cases were caused by tubal abortion, two by tubal rupture, and one was without a doubt caused by an escape of menstrual fluid into the abdominal cavity. The last one was a very beautiful case. A young woman who had never conceived, who asserted that she had never had sexual intercourse, and whose hyman was intact, entered the hospital with a soft tumor in the *cul de sac.* The tumor decreased in size during the month, but when the menstruation came again, it very appreciably increased in size. This was repeated regularly for several months.

There are three kinds of hæmatoceles to which I refer. All are encapsulated. In the first variety, the bleeding takes place into a sac that is already formed. In the second variety the encapsulation follows after the bleeding has stopped. In the third variety the blood oozes from a Falloppian tube and becomes encapsulated, leaving the fimbriated extremity in the centre of the tumor. Fresh bleedings swell the tumor from within.

We all agree that uninterrupted extrauterine pregnancies and those that have been violently interrupted should be operated on at once, but there are many opinions as to what the method of procedure should be when a hæmatocele has been formed.

I find, on looking over the newer literature, that a more intimate knowledge of the pathology of tubal pregnancies, gained within the last two years, has changed the opinion in regard to the treatment of these cases. It has been found that the mucous membrane of the tubes is incapable of the rapid hypertrophic changes that take place in the uterine mucous membrane immediately after the egg has forced its way into it. As a result, the chorionic villi force themselves between the connective tissue fibres and the muscular fibres of the tubes themselves.

Zweifel (5) has reported a case in which a small clump of villi pierced the peritoneal covering of the tube, causing an almost fatal hæmorrhage. Thorn thinks that the villi which force themselves into the substance of the tubes cannot do much damage, as they must soon die of lack of nutrition. Shenck (6) thinks that the anatomical discoveries have not yet been fortified by clinical experience, and he is insists rather that clinical experience points the other way.

Laparotomy was performed on 18 of our 36 patients. One died of sepsis, 15 were absolutely well at the end of the four years, and two still complained of pains and discomfort in the pelvis. The average time until the complete recovery of the 15 who *did* recover was six weeks.

The three who had been operated upon by way of the vagina were absolutely well. The period of convalescence was very short, and two had again become pregnant.

The conservative treatment consisted of rest in bed, liquid diet, and application of warmth to the abdomen. Only 13 of the 15 patients who were treated conservatively responded to our request to return for reexamination. Eleven were free from their complaints, and showed no abnormities upon internal examination.

Two still complained of pain, a feeling of fulness and pressure in the pelvis, and had a decided resistance in the *cul de sac* upon internal examination. One of these was the virgin of whom I spoke before. She refused to submit to an operation.

The average time that these patients stayed in the hospital was twenty days. The average time till their complete recovery was a little more than four months.

These observations teach, I think, that these patients should be given three weeks' trial conservative treatment, in an institution where surgical interference is conveniently at hand all the time.

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(1) Zweifel, *Münchener med. Woch.*, 1903, No. 34.
(2) Schambacher, *Centrallblatt für Gynäkologie*, 1903, No. 36.
(3) Kober, *Centrallblatt für Gynäkologie*, 1903, No. 22.
(4) Munde, *American Journal of Obstetrics*, March, 1901.
(5) Zweifel, *Münchener med. Woch.*, 1903, No. 34.
(6) Shenck, *Münchener med. Woch.*, No. 16, 1903.

MULTIPLE NEURITIS: A CASE RESULTING PROBABLY FROM MORPHINE TOXÆMIA.

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CASE.—Mr. S. W., aged fifty years, a widower, and by occupation a farmer. He has five children, all of whom are healthy. His family history, so far as relates to his recent illness, is negative.

Up to twelve years ago he was a strong, healthy man of fairly regular habits. Used liquor very rarely, but used tobacco excessively. At the period referred to (twelve years ago) he was very ill for one year with so called stomach and liver diseases. At this time morphine was prescribed for a long time, and, unfortunately, he acquired the morphine habit and continued its use in increasing doses until he went to a so called " gold cure " establishment one year ago. After six weeks' treatment the habit was broken, but he was a physical wreck. He gradually regained his flesh, but he has never been strong enough to do any work.

Therefore, in studying this case we have before us for consideration morphine toxæmia of twelve years' duration, and possibly poisoning from the so called gold cure medication.

Present Illness.—About the first of February the patient observed a prickling sensation and numbness in his mouth, involving his cheeks and lips. His teeth seemed too long and produced an unnatural sensation when closed together, though they did not appear tender or loosened.

After a week or ten days he observed tenderness, prickling, and a numb sensation through the fingers of both hands simultaneously. His fingers appeared very clumsy and awkward when attempting to dress himself, and it was with difficulty that he could pick up small articles.

In another two weeks' time the feet presented some of the same symptoms, prickling and numbness, observed first at the toes. He said he " had to lift his feet carefully or he would fall over them," they were so clumsy and numb. He also observed numbness about the buttocks and the inner and back surface of the thighs.

Later, he noticed his vision failing; also diplopia, or double vision. When looking down at his plate at the table, or on to the ground when walking, his vision was dim and it gave him an unsteady or uncertain sensation and gait. He had slight attacks of vertigo and he has had some falls from stumbling or losing his balance, but not from the vertigo.

Although he had no pain he had some weakness through the lumbar region. He had a marked pallor and his muscles were flabby.

His temperature was 99° F., pulse 96, and respiration normal, though quickened when he made any exertion. He had sharp pains through the temples at irregular intervals, but they were not frequent or of long duration. There were no coarse tremors of the head, but there was a fine neurasthenic tremor of the facial muscles and tongue. There was no mystagmus or Argyll Robertson phenomenon. The eye derangement was doubtless a toxic amaurosis, requiring only the general treatment given for the physical disturbance. There was no disturbance of hearing. The elbow and wrist reflexes were absent, as well as the knee jerks, and there was no ankle clonus.

The hands and arms were extended and held so quite well, but the limbs soon tired when extended. The grip was weakened, registering about 25. The hands had a marked tremor, increased on exertion, and there was some difficulty in their coordination, as elicited by bringing the index finger of each hand together, and in touching the tip of the nose with the first finger; but this was doubtless due in part to a certain amount of paresis and to the coarse tremor.

There was no particular gastrointestinal derangement, except slight nausea, no constipation, and no vesical disturbance. The sexual organs were weakened.

There were some areas of anæsthesia where the patient did not distinguish heat from cold, a dull from a sharp point, or one prick from two or more, when applied at the same time. He complained of cold extremities, tenderness, aching and cramping sensations in the calf of the leg and toes after walking; also when holding the limb extended. The cramps simulated the contractures which are characteristic of this disease.

The patient's body swayed when standing with the eyes closed, and he was afraid to attempt to walk, lest he should fall. Faradaic excitability was well marked, and was not particularly changed by either the anodal opening and closing or the cathodal opening or closing.

The response to galvanism was very much weakened, even when carried to thirty milliampères with a short circuit and all resistance possible overcome, owing doubtless to the variable amount of injury and irritation in the nerves.

We find the electrical tests in multiple neuritis give all possible changes from the normal, varying in different cases, and frequently at different periods in the same case.

The muscles supplied by the affected nerves in multiple neuritis undergo changes only in less degree than those in simple neuritis and degeneration nerve diseases.

The escape of numerous fibrils in the nerve trunk is probably to be correlated with the persistence of numerous apparently normal fibres in the atrophied muscles; thus the motor disturbance is principally one of deficit, or a paresis that only in severe cases reaches complete paralysis, affecting the distal extremities of the limbs in the great majority of cases and particularly the extensor muscles.

I have seen some of these cases where the power of locomotion was almost absent, but where the patient could propel a wheel chair remarkably well, as the hands and arms were affected to a lesser degree. There were no mental symptoms in this case, though we frequently meet with that condition, resulting, of course, from the prolonged toxæmia; neither was there difficulty of swallowing or insomnia, which we often observe as a complication.

My patient was directed to remain in bed or in a reclining chair much of the time, as rest is an important element in the treatment.

Treatment.—For the toxic condition and its attendant anæmia large doses of the tincture of iron chloride and salol were employed also a nutritious diet, with oil rubs, sun baths and eliminatives. In the early stages hot applications gave great relief to the pain; others get greater relief from cold. Gentle stroking or kneading of the muscles is very grateful to these patients, and aids return circulation and local nutrition. In some of the cases nitroglycerin seems to have a specific effect. The use of anodynes here as in sciatic neuritis and the other prolonged painful affections, requires judgment and great conservatism. I have often employed the coal tar derivatives in these cases; sometimes they act well and are not so objectionable as opiates and cocaine, which alone seem capable of controlling the pains in the severest cases. In the present case, active massage of the weakened muscles and exercising them by galvanic electricity faithfully and systematically was carried out once daily; this strengthened the weakened tissue and the patient soon showed marked improvement in locomotion, coordination, and his general appearance, and he has practically recovered.

Quoting from standard writers, we find it laid down as a general rule, that "if the cause of multiple neuritis can be removed, the patient has a very good chance of complete recovery; but the more acute the invasions and rapid the evolution, the greater is the apprehension of respiratory and cardiac failure and an early fatal termination. On the other hand, an insidious onset and slow advancement imply chronic tenacity and prolonged impairment;" also "the gravity of neuritis is in some proportion to its extent, particularly in relation to its advancement toward the trunk, implying great helplessness, and toward the pneumogastric, implying fatal accidents from its implications. The general state, the powers of digestion and assimilation, and the ability to sleep, have a strong bearing on the recuperative prospects of the patient."

With fairly well marked symptoms, an average full history, and a detailed examination, one can hardly be mistaken in the diagnosis, but frequently in the early stages, when a diagnosis is most important, the condition is mistaken for locomotor ataxia, poliomylitis, transverse myelitis, or progressive paralysis.

The major items upon which a diagnosis rests are the motor and sensory symptoms, their symmetrical distribution, their predominance in the extremities, the marked affection of the extensors, the modification of the reflexes, the marked tenderness of nerve trunks and muscles, and the history or presence of some toxic agent capable of producing the neuritis.

In multiple neuritis we do not get the girdle pains or gastric and intestinal crises, the Argyll Robertson pupillary phenomenon, the ulcers, joint lesions, arthropathies, optic atrophy, and very seldom the vesical troubles observed in locomotor ataxia. The peculiarity of gait is due more to paresis than to incoordination. The patients walk in a straight line but strike on the toes and outer border of the foot, rather than on the heels, which is a characteristic of locomotor ataxia.

The development of multiple neuritis is much more rapid than that of locomotor ataxia, and we have the history of toxic poisonings rather than of syphilis. Poliomyelitis occurs most frequently in children. The onset is abrupt, it embraces the entire limbs, instead of the extremities, and is not symmetrical.

There is an immediate tendency to improvement instead of a gradual extension as in neuritis.

The sensory symptoms are slight or absent, while in neuritis they develop early and persist.

Recovery is complete in multiple neuritis if the patient recover at all, while poliomyelitis leaves some deformity. In myelitis the deep reflexes are exaggerated. Bed sores are common.

The sphincters are uncontrollable and paraplegia is often complete. The symptoms form a picture quite the opposite of that of multiple neuritis. And yet these three diseases are very frequently mistaken the one for the other.

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GUIDES TO THE PROGNOSIS IN EPILEPSY, WITH REMARKS ON THE CURABILITY OF THE DISEASE; INCLUDING REPORTS OF THIRTY-FOUR CASES.*

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(*Concluded from page 684.*)

CASE 582 (Colony No.).—Male; age at onset of epilepsy, eight years; type, *grand mal;* duration of epilepsy on admission, two years; frequency of attacks before entering the colony, daily; approximate total number of attacks before entering the colony, 730; number after entering the colony, 644; mental condition when admitted, imbecile; aura, none. Duration of treatment, four years; length of time free from attacks on January 1, 1904, two years.

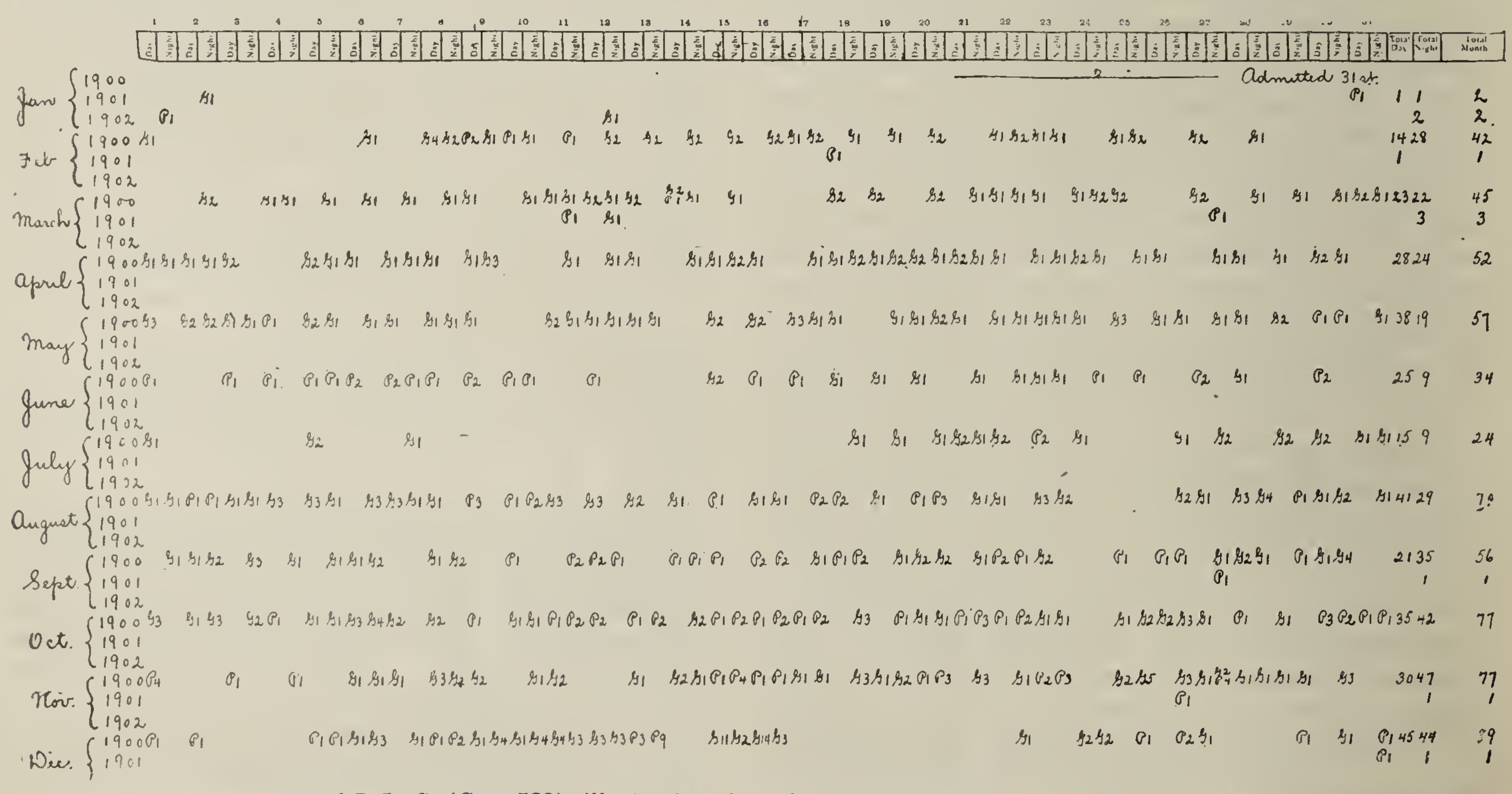
CASE 599 (Colony No.).—Male; age at onset of epilepsy, eighteen years; type, *petit mal;* duration of epilepsy on admission, two years; frequency of attacks before entering the colony, 4 to 5 daily; approximate total number of attacks before entering the colony, 3,500; number after entering the colony, 884; mental condition when admitted, good; aura, "tickling sensation confined to the neck." Duration of treatment, two years and a half; length of time free from attacks on January 1, 1904, three years and two months.

CASE 631 (Colony No.).—Male; age at onset of epilepsy, two years and a half; duration of epilepsy on admission, thirteen years and a half; frequency of attacks before entering the colony—first two attacks, one year apart; between the ages of two years and a half and twelve years had an attack on an average of every six weeks; between the ages of twelve to fifteen years had 3 attacks; approximate total number of attacks before entering the colony, 112; number after entering the colony, 11; mental condition when admitted, impaired; aura, numbness in paralyzed side (hemiplegic). Duration of treatment, three years and nine months; length of time free from attacks on January 1, 1904, three years and one month.

CASE 662 (Colony No.).—Male; age at onset of epilepsy, five days; type, *grand mal;* duration of epilepsy on admission, twenty years; frequency of attacks before entering the colony—at first, "very frequent;" at the time of admission they were occurring at the rate of 1 every five or six months; approximate total number of attacks before entering the colony, impossible to ascertain with any degree of accuracy; number after entering the colony, none; mental condition, feeble minded; aura, none. Duration of treatment, three years and nine months; length of time free from attacks on January 1, 1904, three years and nine months.

CASE 817 (Colony No.).—Male; age at onset of epilepsy, fifteen years; type *grand mal* and *petit mal;* duration on admission, five years; frequency of attacks before entering the colony, every four to five months; approximate total number of attacks before entering the colony, 15; number after admission, 1; mental condition when admitted, good; aura, dizziness. Duration of treatment, one year and eight months; length of time free from attacks on January 1, 1904, three years and six months.

CASE 819 (Colony No.).—Male; age at onset of epilepsy, four years; type, *grand mal;* duration of epilepsy on admission, eight years; frequency of attacks before entering the colony—indefinite; had several during infancy; approximate total number



Seizure Chart in the case of J. L. C. (Case 582), illustrating the value of persistency in treatment. He had 633 attacks during 1900—42 to 89 a month—9 during 1901, and 1 only during 1902. He later made a complete recovery.

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* Read before the New York Academy of Medicine on January 7, 1904.

before entering the colony, indefinite; number after admission, 4; mental condition, imbecile; aura, none. Duration of treatment, three years and six months; length of time free from attacks on January 1, 1904, three years.

CASE 847 (Colony No.).—Male; age at onset of epilepsy, five years; type, *petit mal;* duration of epilepsy on admission, twenty years; frequency of attacks before entering the colony, 1 a month; approximate total number of attacks before entering the colony, 240; number after admission, none; mental condition on admission, feeble minded; aura, none. Duration of treatment, three years and three months; length of time free from attacks on January 1, 1904, three years and three months.

CASE 901 (Colony No.).—Male; age at onset of epilepsy, two years; type, *grand mal* and *petit mal;* duration on admission, six years; frequency of attacks before entering the colony—at first, 3 to 4 a month; later, 1 every three or four days; approximate total number of attacks before admission, 200; number after admission, 7; mental condition, good; aura, epigastric. Duration of treatment, two years and eleven months; length of time free from attacks on January 1, 1904, two years and one month.

CASE 957 (Colony No.).—Male; age at onset of epilepsy, thirty-five years; type, *petit mal;* duration of epilepsy on admission, six years; frequency of attacks before entering the colony, 1 a month; approximate total number of attacks before admission, 72; number after admission, none; mental condition, good; aura, "a cold feeling." Duration of treatment, two years and nine months; length of time free from attacks on January 1, 1904, two years and nine months.

CASE 977 (Colony No.).—Male; age at onset of epilepsy, nine years; type, *grand mal;* duration of epilepsy on admission, ten years; frequency of attacks before entering the colony—at time of admission, 1 every three months; at first, oftener than that; approximate total number of attacks before admission, 40; number after admission, 1; mental condition, feeble minded; aura, vertigo. Duration of treatment, two years and nine months; length of time free from attacks on January 1, 1904, four years and four months.

CASE 1,156 (Colony No.).—Male; age at onset of epilepsy, five years and a half; type, *grand mal;* duration of epilepsy on admission, three years and a half; frequency of attacks before entering the colony—first 2 attacks thirteen months apart; 3 four months later, then none for fifteen months; had 2 attacks in August, 1901; approximate total number of attacks before entering the colony, 5; number of attacks after entering the colony, 1; mental condition, good; aura, none. Duration of treatment, one year and ten months; length of time free from attacks on January 1, 1904, one year and ten months.

CASE 1,250 (Colony No.).—Male; age at onset of epilepsy, nine years; type, *grand mal;* duration of epilepsy on admission, sixteen years; frequency of attacks before entering the colony—at first they were six weeks apart; at time of admission they were eight weeks apart; approximate total number of attacks before entering the colony, 112; number after entering the colony, 1; mental condition, good; aura, vertigo. Duration of treatment, one year and six months; length of time free from attacks on January 1, 1904, fourteen months.

The first point of interest in connection with these cases is *the age at which the disease first developed.* In 20, or 59 per cent., it developed before the tenth year; in 9, or 26½ per cent., between the tenth and twentieth years; and in 4, or 12 per cent., between the twentieth and fortieth year (the majority of these occurring before the thirtieth year), while it commenced in 1 only after the fortieth year.

But, before ascribing any prognostic value to youth, we must remember that epilepsy is essentially an early life disease; that fully eighty per cent. or more of all cases occur before the twentieth year, and that recoveries are, therefore, simply more frequent at the age the disease itself most frequently arises.

At the same time there is another factor in the successful treatment of young epileptics, that was first observed by Gowers, and in which I have come fully to agree, and that is that the best results can often be secured in cases in which heredity is supposed to have been most active as a cause. A knowledge of the handicap of heredity seems not infrequently to make the treatment of the young epileptic doubly cautious and exacting, constantly keeping him free from influences likely to stir his epileptic predisposition to action.

The second point of interest is found in *the type of epilepsy* these patients suffered from. Twenty-three of them had *grand mal* attacks alone; 7 had *grand mal* and *petit mal* attacks combined; 3 *petit mal* only; while 1 had hysteroepileptic convulsions of great violence, with occasional attacks of *grand mal,* uncontaminated by hysteria.

It is noted that no case of psychic epilepsy appears among them. The best reason for this, perhaps, is found in the comparative rarity of this form of disease. In 1,325 cases studied at Sonyea, only 4 were classed as psychic. At the same time I do not regard even this form of epilepsy incurable in some cases. Its cure is least to be expected in those who show early or marked intellectual impairment or who have a very striking intellectual aura.

We also note the absence of cases of Jacksonian epilepsy, a form of the disease generally regarded as quite curable. A probable reason for this is that we get so few patients at Sonyea, whose disease is not chronic (less than 1½ per cent. of them have had the disease less than a year). In the same 1,325 cases referred to above there were 9 Jacksonian epileptics only, and the majority of these were due to organic causes, such as cerebral hæmorrhage, of too long standing to admit the possibility of a cure. Fits that are localized in the beginning, and called Jacksonian, may later on pass into a more general form of the disease, losing their greater possibility of cure by reason of such transformation. Of all the forms of epilepsy, the Jacksonian type demands the earliest treatment.

The next point of interest, and one of great value, is *the duration of the treatment.*

It is the epileptic's misfortune that the length of time he is kept under treatment is often far too short to be of effective and lasting value.

The shortest period of treatment in any of the 34 cases under discussion was twelve months, only one being as brief as that, the short treatment in that being unavoidable.

The longest period was sixty-six months—five years and a half—while the average for the whole number was thirty-five months and a quarter—substantially three years.

Persistency in treatment is always to be commended. The patient and his friends should be actively impressed with its necessity. Good results are sometimes delayed for several months, or even years, to finally appear in an abrupt but very gratifying manner.

This is shown in case 582, in which the patient had 42 to 89 seizures each month during the first year, aggregating 633 in that time, and in spite of the most persistent treatment, quite suddenly the attacks underwent a marked decrease early in the second year, during which nine only occurred; while during the third and last year of the disease there was but a single fit.

The duration of the disease when the patient comes under treatment, is a point of some prognostic value.

In the cases under discussion, 13 of them had suffered from epilepsy from one to five years; 10 from five to ten years; 7 from ten to twenty years; while 4 had had it twenty years or more.

These figures appear to indicate that while the degree of chronicity should have some weight in arriving at a prognosis, it cannot be held that even marked chronicity should be regarded as a cause of failure to cure. While it is generally true that the more frequent the attacks, and the greater their number in the aggregate, the less favorable the prognosis, because of the generally disastrous effects the attacks are likely to produce, there are notable exceptions to it. Take Case 4, for instance, in which there were from 50,000 to 60,000 seizures during the sixteen years of this man's illness, yet he finally made a complete recovery.

Another patient (No. 50) had 9,758 seizures during twenty-seven years; a third (No. 364) had 4,300 during the two years preceding his admission to the colony, and 2,830 after admission. Both of these recovered fully later on.

On the other hand, infrequent attacks do not necessarily argue a favorable termination, and in my experience many such cases require a longer treatment than do the severer ones.

Case 489 had only 20 attacks during seven years before coming to Sonyea, and 4 after admission; a second case (No. 1,156) had only 5 attacks in three years and a half before, and 1 after admission.

The patients who had 50,000 to 60,000, and 9,758 seizures respectively, were cured in two years and a half, while those who had 20 and 5 attacks respectively had to remain under treatment three years and a half.

I have sometimes thought that there must be some relationship between the *facile* expression of attacks, and the ease with which they yield to proper treatment, on the one hand, and the attacks that appear only under great provocation and at long intervals, and the stubbornness with which they resist the most persistent efforts to dislodge them.

There is also this about some occasional attacks to which I have previously called attention: they seem to appear in selected cases, at long intervals, as expressing the acme of some morbid state from which the patient must find relief or become insane. Time and again I have seen this occur, in some cases over and over again, during the past seven to eight years. It must be either an occasional epileptic convulsion, or insanity of an active and disorganizing kind. And insanity usually comes in the end.

It is, therefore, never safe, in my opinion, to tell a patient with positiveness during the first months or year of his treatment, that his chances of recovery are good because his attacks are so infrequent.

Aura in Prognosis.—Eighteen, or a fraction over 50 per cent. of the cases under review, were subject to an aura of some kind, and it is worthy of note that all save three were sensory in type. Five of the 18 had an epigastric aura, the rest being disturbances in sensation in some other part of the body.

It is impossible, at this time, to ascribe to the aura anything of significant value in the prognosis of epilepsy.

The Influence of Sex.—Twenty-five of the 34 cases were in males, and 9 in females, but we must not hastily conclude that the prognosis is therefore better in males than in females.

It is well established that more males than females have the disease, in the ratio of 20 of the former to 16 of the latter in every hundred. I have established this fact through a study of 68,040 cases in this country and in Europe, running back to 1854. Of this number 36,865 were males, 31,175 females.

A local cause of the disproportion in the sex of those cured at Sonyea has been the constant treatment of 150 more males than females, on account of greater accommodations for the former.

Turner, Reynolds, Gowers, and others agree that while the disease seems capable of arrest oftener in males than in females, the proportion of confirmed cases, at the same time, is greater among males.

Notwithstanding all this, I am quite fully prepared to believe, if not to assert, that after the twentieth year or thereabouts, when the disease begins oftener to be due to certain causes in males, such as trauma, alcoholism, and syphilis, that the proportion of cures is somewhat higher among males than among females.

But up to the beginning of adult life, I should say there is no difference.

The Influence of the Mental Condition on Prognosis.—The physician, habituated for years to the daily study of large numbers of epileptics of all types, comes sooner or later to experience certain intuitive feelings and conclusions as to a patient's chances of recovery, through observation of the patient's mental condition alone.

There are types of epilepsy that destroy all the faculties of the mind within a very short while. There are other types, of frequent expression, that leave the mind but little impaired, even if the epilepsy exists from infancy to the end of the ordinary span of life. Again, there are epileptics who seem to manifest almost no mentality; not because it has been lost, but because of its subversion through powerful bromide drugging that has gone on uninterruptedly for years.

This was notably true in the case of the man who had 50,000 to 60,000 seizures before entering the colony, whose epilepsy had existed sixteen years, and who was accustomed to receive 120 or more grains of bromide daily, merely as a routine treatment. His mental condition on admission was most unsatisfactory, but it began to improve at once when the bromide was stopped.

Of late years the bromides have been far more rationally administered. Epileptics are seldom admitted to the colony at this time showing such distressing evidences of bromide intoxication we were accustomed to see so often six to eight years ago.

In a study of 1,364 cases we were struck with the undoubted relationship between the mental state, the age at the onset of the epilepsy, and the average duration of the disease.

Two hundred and forty-one patients, whose mental condition was described as "good," had an average age at the onset of their epilepsy of fourteen years, while the average duration of their disease was 9.8 years.

We parallel these with 97 epileptic imbeciles, whose average age at the onset of their epilepsy was 5.3 years, the average duration of their disease being eleven years and a half.

The rule, therefore, seems to be that the younger the patient when the epilepsy develops, the longer its duration without proper treatment, the more unsatisfactory the mental condition becomes.

The prognosis in epilepsy is always better when the mind in its essential elements is unimpaired.

Length of Time the Cases in Question Have Been Free from Attacks.—In this lies the very keystone of the arch of all that is valuable in the subject. I have previously given it as my belief that a person may be cured of epilepsy, and then have it again.

Epilepsy is not essentially different from insanity in this respect, notwithstanding the longer time it takes to cure it, and its lower percentage of cures at the present time.

Ten of the 34 cases I am reporting had gone, on January 1, 1904, five years or over, without an attack (some of them, seven years and over); 7 had gone four years and over; 11, three years and over; while 6 had gone two years and over.

Some writers on epilepsy assume to fix a definite length of time an individual should remain free from attacks before he can be regarded as cured.

Turner, an English epileptologist of note, sets the time of freedom from attacks as a prerequisite of cure, at nine years. I think this is too long. The patient is apt to lose hope, a thing in itself that greatly hazards his recovery.

I do not see how any inflexible rule can be made to cover this point. The best we can do is to study the peculiarities of individual cases and fix a period in each case.

Some epileptics can be cured in from two to three years, in a way permanently to remain so; others can be cured only with the greatest difficulty in three to five years, and only with the greatest difficulty kept so.

It may be thought that the 34 recoveries I have here reported constitute a small percentage of the total number that have been under treatment at Sonyea. In explanation of this, I will say that one-half of the patients who have been admitted to the Craig Colony to this time have been regarded as wholly incurable at the time of their admission.

One half or more suffered from epileptic dementia, idiocy, or imbecility; their condition in all respects being so unsatisfactory as to render the possibility of cure out of question. After deducting 50 per cent. as unmistakably incurable, we have about 665 more or less chronic cases left, and it is from among these that the 34 recoveries have been effected. They constitute about 5 1-5 per cent. of the 665 possibly curable cases.

If a colony like Sonyea could get one half its patients before their epilepsy became chronic, and if it could have the almost unlimited resources found, or that should be found, in well equipped modern private sanitaria, including an ample corps of well paid physicians, each having from 20 to 30 patients only to treat in a day, instead of 125 to 150 or more, I am confident that the recoveries in epilepsy within a few years' time could be raised fully as high as they now are among the insane—that is 25 per cent. to 30 per cent. or more.

As a final word, I desire to reassert my unqualified belief in the curability of a disease there is too often failure to treat in the manner to attain the best results. Not only can it be cured, but not infrequently cases that are apparently most hopeless can be improved in a way to make them useful factors in a community's life.

ERGOT IN TYPHOID FEVER.

By ALFRED T. LIVINGSTON, M. D.,

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The mortality from typhoid fever is variously given as 7 to 30 per cent., the most extensive statistics of Murchison averaging about 19 per cent., which means that practically one out of every five subjects dies.

The recognized cause of the disease is the development in the subject of a bacillus which is usually introduced with water or milk that has been contaminated by the excreta from a previous case; but, notwithstanding the myriad forms of germ-destroying substances assuringly urged upon the profession from every laboratory of the land, there appears to be no general acceptance of a power in any of them to cope with this bacillus in his field of fatal activity.

In most instances of typhoid fever there is a marked elevation of temperature, which slightly ebbs through the night and flows through the day, and the register of its tides shows no, or but slight, modification by the opposing tides of antipyretics.

The distinctive lesion, as shown *post mortem*, is an inflammation of certain little glands of the small bowel, and this inflammation extends along the bowel and sometimes through it to the peritonæum, producing one of the most serious complications of the disease, peritonitis.

The local inflammation and, particularly, the disturbance of the secretions into the bowel because of the inflammation and neighboring congestion, develop fermentation and distention of the bowels with gases and consequent pain and discomfort, for the relief of which opiates were formerly universally employed, and, I fear, there yet remains too much of a remnant of such irrational practice.

The diarrhœa, too, which ordinarily characterizes the typhoid fever case, was also treated with opium, but lately there has been developing the common sense recognition that eliminative processes should be promoted and the bowels kept as free as possible from abnormal secretions and fermenting ingesta, not to speak of the swarms of bacilli that develop in such foul cultures.

The disorganization of tissue resulting from prolonged inflammation leads to disruption of vessels and hæmorrhage which, though it may temporarily modify the engorgement of the neighboring vessels, is too weakening to be desirable as a therapeutic measure in a disease the most commonly fatal element of which is exhaustion of the vital forces.

The supremely fatal sequence of the local inflammation is ulceration and perforation of the bowel.

There is a notable tendency to such serious complications as congestion of the lungs or the kidneys.

Related to the nervous system are headache, general nervousness, neuralgia, and delirium, and sometimes a simulation of meningitis due to meningeal congestion, and occasionally a succeeding insanity.

In the fatal cases in which death does not result from hæmorrhage or peritonitis, there is prostration of the vital centres, probably owing in part to toxic influence, but in great part also to the exhaustion of the heart from the long continued overexertion in pumping against the dammed (congested) areas of the circulation until, at least, it utterly fails.

The usual treatment of this serious disease would seem to be best characterized as expectant, nothing being done on general principles, but only as conditions arise demanding special treatment. When such conditions have been permitted to arise there is not satisfactory assurance that the special treatment will avail.

For some (to me occult) reason there seems to be a disinclination to *treat* a case of fever until it is determined, by "watching a case," just what kind of a fever it is, thus giving all questionable fevers the benefit (!) of the typhoid expectancy.

I would not be understood as commending or countenancing indifference to accuracy in dealing with disease; but as I regard the endeavor to get the man out of the water as more immediately pertinent than the demand for his name, nativity, age, and occupation, I prefer the consciousness of prompt and heroic endeavor to save the life of a fever patient to the ability to place the case accurately on the mortality records, such ability being attained by neglect of the prompt and heroic treatment.

If I have fairly sketched the more serious elements of typhoid fever there appears to be an urgent demand, upon purely rational grounds, for immediate and vigorous preparation of all recognized cases, and of all doubtful cases as well, in order that no precious time may be lost in securing, to the greatest degree, a state of general and local circulation that will prevent or modify these serious elements. Should the doubtful cases prove to be other than typhoid fever, no harm will have been done, as good general circulation or the nearest attainable approach to it cannot be detrimental in any case.

A careful analysis of the conditions that develop in the course of typhoid fever, one or more of which directly causes the deaths which occur, will demonstrate that the one element that is the fundamental factor of each of these fatal conditions, is insufficient tone of some area or areas of the vital or unstriped muscular fibre which comprises the muscular coat of the blood vessels, lymphatics, and alimentary canal.

The more thoroughly and promptly this class of tissue is placed upon the highest attainable plane of tone, and the more securely it is maintained there, the less is the likelihood of the occurrence of a fatal degree of any of those conditions.

It is upon this ground that I urge the immediate and continued use of that drug whose peculiar function I have demonstrated to be the stimulating, toning, and strengthening of whatever unstriped fibre is weak, relaxed, stretched, or paralyzed.

The many ways in which the application of this efficient drug will favorably affect the various elements of typhoid fever and the complications to which it is subject will appear to any one who, keeping in mind the function of ergot which I have stated, carefully analyzes each individual element.

Some of the more important results that will be attained by a sufficient hypodermic use of ergot in typhoid fever are:

Prevention or relief of general nervousness, insomnia, or delirium, all of which depend chiefly upon congestion of nerve centres; prevention or relief of headache and of abdominal pains and discomfort, and of any pain that depends upon congested blood vessels; relief or modification of tympanites by stimulation of the muscular coat of the bowel and by modifying the congestion and inflammation that disturb the functions of the bowels; hence, also, better general action of the bowels; modification of the local inflammation, thus lessening the likelihood of hæmorrhage or extreme ulceration or perforation; prevention or relief of excessive sweating; better eliminative action of glands generally, thus aiding the natural activities in removing both septic and waste elements; reduction of frequency of pulse and strengthening of the heart's action; lessening the likelihood of complications by securing improved general vascular tone; and, finally, preventing exhaustion of the heart by removing the chief obstacles to its free action—areas of vascular congestion; for, if we relieve the internal congestions, the heart is better supplied with blood to pump through the peripheral vessels. The easiest possible action of the heart is when every region of the vascular system is supplied with its proper proportion of blood, and this is attained by holding in tone, with ergot, those areas that would otherwise be relaxed, congested. The truest *support* to the heart is in bringing about, with ergot, an equalization of blood distribution rather than in applying the so called heart tonics and stimulants, since the more energetically they cause the heart to labor, the more they fatigue it, as they do not lessen the difficulties and degree of its task.

I will not presume to indicate a plan of treatment for this grave disorder, but I am free to say that I do not accept the dictum of any one who declares that "typhoid fever is not a disease to be treated by medicines." The object of this paper is solely to call the attention of the profession to what I believe to be the most important single medicinal agent in the treatment of the disease, because its peculiar province is to correct that which underlies every one of the more serious phases which typhoid fever develops.

As I have been so frequently questioned by letter regarding solution and administration, I will say that the solution of ergot which I have thus far found the most satisfactory for hypodermic use is made by dissolving one drachm of solid extract of ergot in one ounce of sterilized distilled (cooled) water. After filtering the solution add two minims of chloroform.

The greatest care should be exercised to secure a sterile solution by having everything made sterile which is used in preparing it. The ergot "lozenges" (each containing one drachm of the extract wrapped in sterilized tin foil) are convenient in making one's own solution.

The best syringe is an all glass one, with asbestos packing, the needle being the only metal part. It is filled by removing the piston from the barrel and pouring in the solution.

The dose is one half to one drachm, which may be given from twice to six times a day or oftener, as indicated in the individual case.

There is more tendency to irritation at the site of injection in fever cases than when no fever exists, but such irritation will not be serious if proper attention is paid to sterilization of solution, syringe, and needle, as well as of the skin where the needle is to be introduced.

ON LABORATORY DIAGNOSIS.*

By M. P. OVERHOLSER, M. D.,
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(*Concluded from page 696.*)

We now come to study the composition of the urine—the elements or compounds of which it is composed. The urine can be separated into a large number of component parts. The most important chemical constituents of normal urine are urea, chlorides, phosphates, carbonates, sulphates, uric acid, and urinary pigments. There are a number of other compounds in normal urine, but they are of no great practical import to the physician, and we shall not take time to consider them here. Urea is the most important of all the constituents found in the urine. It owes its origin largely to retrograde tissue metamorphosis and to the splitting up of the unassimilated nitrogenous compounds of the food. It is the chief end product of tissue metabolism in man and all mammals. It is the great indicator in the urine by means of which we can detect certain abnormal processes going on in the system, particularly in diseased conditions of the kidneys and liver; for we must remember that the liver is the chief seat of urea formation. The unassimilated nitrogenous elements of food and the nitrogenous débris resulting from the normal destructive metabolism, we must remember, are not urea, but various complex non-eliminable proteid compounds, which must be transformed by the liver cells into the soluble, diffusible, and easily eliminated compound urea, which is carried off through the urine. If the liver does not change these nitrogenous compounds into urea they cannot be eliminated by the kidney, and the patient then suffers from an autointoxication from the retention and accumulation of these non-eliminable compounds, and may become unconscious, or have convulsions, and die from the effects of these retained, obnoxious compounds. The elimination of urea is diminished or impeded, therefore, in degenerative changes of the liver, as in acute yellow atrophy, cirrhosis, and carcinoma of the liver. Again, the liver may be healthy and perform its work well and change these compounds into urea, but the kidney may be diseased and by reason of its crippled state may be unable to separate the urea from the blood, so that it can be carried off with the urine, and again our patient may become intoxicated and have convulsions or coma, and may also die from the retention of urea and other eliminable compounds, as we find in the various kidney affections known as Bright's disease. Normally, a person in health should excrete about three grains of urea to every pound of body weight—a person weighing 150 pounds should, therefore, excrete about 450 grains of urea in twenty-four hours, and a person weighing 200 pounds should excrete about 600 grains in twenty-four hours. We ascertain the amount of urea that a person excretes, by the following method: This instrument I show you is called the Doremus ureameter, and this is a curved glass pipette graduated in centimetres. In making this test we use 20 cubic centimetres of a 40 per cent. solution of caustic soda in water. To this we add 20 cubic centimetres of water and one cubic centimetre of bromine. We mix them thoroughly, either in the ureameter directly, or in a separate vessel from which we then fill the instrument. We then take one cubic centimetre of the specimen of urine to be tested in the graduated glass pipette and introduce it slowly, in this manner, by gently compressing the rubber bulb on the end of the glass pipette until all the urine is expelled into the solution in the ureameter. A chemical decomposition then takes place between the urine and the solutions in the ureameter by which the nitrogen of the urea is set free, displacing the solution downward in the tube. The amount of solution displaced represents the amount of nitrogen liberated, and the amount of nitrogen set free represents the amount of urea in one cubic centimetre of the specimen of urine tested. In some of these instruments the figures mean parts or fractions of a gramme of urea to the cubic centimetre of urine. On others they are graduated to measure fractions of a grain of urea to the cubic centimetre of urine. On this ureameter the markings mean fractions of a gramme. We find this solution is displaced down to the mark 0.02, which means two hundredths of a gramme of urea in one cubic centimetre of our specimen. In one ounce of urine there would, therefore, be 32 times 0.02 of a gramme of urea, which is 0.64 of a gramme, and as there are 15 grains in one gramme in 0.64 of a gramme, there would be 0.64 times 15 grains, which is 9.6 grains of urea to one ounce of our specimen of urine. If our patient excretes 50 ounces of urine in twenty-four hours he would then excrete 50 times 9.6 grains, which is 480 grains, in twenty-four hours, which is an average amount in a healthy individual. Urea is increased in diabetes mellitus, and in acute fevers and inflammations and in all conditions of the system where there is increased retrograde metamorphosis.

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* The first special lecture of a series delivered at the Kansas City Medical College, October 16, 1903.

Uric acid is a nitrogenous compound found in normal urine in small quantities, about eight or ten grains in twenty-four hours. It crystallizes in the urine in rhombic, rectangular prisms, or wedge or whetstone-shaped crystals of a yellowish color. It is increased in the urine in febrile and wasting diseases, such as phthisis, in diseases of the liver and spleen, malarial fever, diabetes, scurvy, rhachitis, and following an attack of gout. It can be readily recognized under the microscope by the shape and color of its crystals.

In ascertaining the percentage of chlorides, phosphates, and sulphates, in practical work, the bulk percentage is sufficiently accurate. In ascertaining the percentage of chlorides we use the graduated centrifuge tube, filling it with urine up to the mark U, which corresponds to 10 cubic centimetres of urine. We then add to this five cubic centimetres of a silver nitrate solution, which is composed of one drachm of silver nitrate to two ounces of water. We then shake the tube so as mix the urine and solution thoroughly, and then centrifugate the mixture in the tube for about three minutes, which precipitates the chlorides to the bottom of the tube, and by the graduations on the tube we note the bulk percentage of the precipitated chlorides. Normally, there should be about ten or twelve per cent., by bulk, of chlorides in urine, by this method of estimation. The silver solution, as soon as it comes in contact with the urine, precipitates the chlorides in a white cloud. If the white cloudiness is not marked on the addition of the silver solution, the chlorides are deficient in amount in the specimen examined. Next to urea the chlorides constitute the chief solid constituent of the urine. In febrile diseases there is a diminution of the chlorides in the urine. In pneumonia, during the acute inflammatory stage, we often find them almost absent in the urine. A return of the chlorides in pneumonia is a favorable sign. We precipitate the earthy phosphates in the urine by ammonia, using ten cubic centimetres of urine and five cubic centimetres of ammonia, or even less of ammonia will suffice, and then centrifugating the mixture. In ascertaining the bulk percentage of the alkaline phosphates we use a solution composed of ammonium chloride, magnesium sulphate, and liquor ammoniæ, of each four drachms, and water four ounces. We use the same amount of urine and solution as in the previous tests, centrifugate for three minutes, and then read the percentage of precipitated alkaline phosphates. Normally there should be about eight per cent. of phosphates by bulk in the urine.

In examination of urine for albumin there are a number of tests used, but the heat and nitric test are sufficient for all practical purposes. The heat test we demonstrated in considering the various causes of the non-transparency of urine. The contact nitric acid test is made as follows: Place a small quantity of urine in a test tube and, by means of a glass pipette, introduce a small quantity of nitric acid in the bottom of the tube below the urine, the urine being displaced upwards by the acid. If albumin is present a white cloudy ring will form between the acid and the urine.

In testing for sugar there is also a number of tests in use. Fehling's test, however, is a very practical and reliable one. We have two solutions for this test kept in separate bottles: No. 1, the copper solution, is composed of copper sulphate 34.65 grammes, and water 500 cubic centimetres, or 430 grains of copper sulphate and 16 ounces of water. No. 2, the alkaline solution, is composed of caustic soda, 125 grammes, Rochelle salts, 173 grammes, and water 500 cubic centimetres; or caustic soda, 1,875 grains, Rochelle salts, 2,595 grains, and water 16 ounces. In using this test we take equal parts of each solution in a urinary test tube; about a drachm of each is amply sufficient. These two solutions form a beautiful blue cupric hydrate solution. We then heat this solution until it boils, and then add a small quantity of the suspected urine; a few drops may be sufficient if the sugar is abundant, and keep on boiling the mixture. If sugar is present in the specimen, a cuprous oxide is formed, which is first yellow, then red, and then reddish brown, as the boiling is continued.

In testing for bile in the urine, we use Roe's test, which may be made by adding two drachms of tincture of iodine to eighteen drachms of absolute alcohol. In applying the test, we simply overlay a small quantity of urine in a test tube, by means of a glass dropper or pipette, with this test solution, and if bile is present in the urine a greenish ring will form between the urine and the test solution, due to the presence of bilirubin.

The diazoreaction of urine is another important test with which we should all be familiar. This reaction is very frequently found on the third and fourth days of typhoid fever, and if not found then, it may be found a few days later. It may be found also in measles, scarlet fever, some septic conditions of the system, and also in tuberculosis; but in the absence of these diseases it becomes, in my judgment, a very valuable diagnostic sign, when found, pointing to typhoid fever. For this test we use three solutions: No. 1, is composed of sulphanilic acid two grammes and a half, hydrochloric acid, 25 cubic centimetres, and water 500 cubic centimetres, or thirty-seven grains and a half of sulphanilic acid, six drachms of hydrochloric acid, and sixteen ounces of water. Solution No. 2 consists of one half per cent. of sodium nitrate in water, which may be made by dissolving half a gramme of sodium nitrate in 100 cubic centimetres of water, or seven grains and a half in three ounces and six drachms of water. No. 3 solution consists simply of stronger ammonia. In making this test we use forty parts of the sulphanilic solution and one part of the sodium nitrate solution, a drachm and a half of the No. 1 solution placed into a test tube to which is added two drops of No. 2 solution, is sufficiently accurate; or two drachms, to which three drops may be added. To these solutions we add an equal quantity of the urine to be tested, mixing the solutions and the urine thoroughly in the test tube, by closing the end of the tube and inverting and shaking it. We then carefully overlay the mixture in the test tube with a small quantity of stronger ammonia—one cubic centimetre is sufficient—by means of a glass dropper or glass pipette. If the diazoreaction is present, a beautiful deep red or garnet colored ring will be formed at the junction of the stronger ammonia and the mixture already in the test tube. If we wish to prove the test, or if we are undecided as to its presence, pour all the contents of the test tube into a white porcelain dish or a large test tube, containing two or three times the amount of water; when, if the diazoreaction is present, a beautiful, rich red color will be imparted to the water, much like the color of red cherry juice. If the color of the water should be yellow or yellowish brown, or any other color aside from a beautiful red, the diazoreaction is then not present.

Microscopical examination of the urine is chiefly concerned with the sediments. Sedimentation is obtained in a few minutes by means of the centrifuge. By means of this instrument the normal and abnormal sediments are speedily precipitated to the bottom of the small conical end of the test tube. In centrifugating a specimen of urine, we simply fill the tube nearly full of urine. We then revolve the centrifuge rapidly for about three minutes. The sediments, or deposits, in the urine being of a slightly greater density than the watery elements, are driven to the lower end of the tube by the centrifugal force imparted to them by the rapid revolutions. We then gather up a small portion of this deposit at the bottom of the tube by means of a long glass pipette. We place a small drop of this deposit on a cover glass or glass slide. We examine it microscopically with one of the lower powers first, preferably a number 6 or 7 objective. By this means we can discover a great many of the normal and abnormal constituents of the specimen examined. These deposits, or sediments, in the urine are divided into two great classes, the anatomical or organized sediments, and the chemical and unorganized sediments. The anatomical, or organized, sediments are blood, pus, mucus, epithelium, casts, spermatozooids, microorganisms, cancerous and tuberculous matter, and entozoa. The chemical, or unorganized, deposits are uric acid, calcium oxalate, calcium carbonate and phosphate, triple phosphates, leucine, tyrosine, cystine, and cholesterin, etc.

If there is blood in our specimen we shall find the corpuscles and be able to recognize them by their size and shape. In the urine, however, blood corpuscles frequently loose their hæmoglobin and then look like pale yellow discs. If they retain their hæmoglobin we can readily recognize them by their well known biconcave appearance. If we find blood in the urine we should then endeavor to determine whether it comes from the kidney, bladder, or urethra. If it comes from the kidney, it is well mixed with the urine, and we can sometimes find long, cylindrical blood casts of the ureter, long, thin plugs an inch or more in length, with perhaps the history of pain in the ureter, something like a nephritic colic. If it comes from the bladder we find the clots of blood more abundant and more irregular in shape, and the blood less intimately mixed with the urine; and if its origin is the neck of the bladder, there is usually frequent and painful micturition, with tenesmus of the bladder, and frequent and painful passages of only a small quantity of bloody mucus. If the blood comes from the urethra, there is usually a history of gonorrhœa or of an injury. Blood coming from the urethra may be recognized by the hæmorrhage preceding the flow of urine, and also by the escape of blood between the acts of micturition. We may find, on microscopical examination of this urinary sediment, pus corpuscles also, either alone or with the blood corpuscles. The pus corpuscle is an opaque, spherical, granular cell usually a little larger than the blood cell. Sometimes the pus cells are discrete. Sometimes they are found in dense clumps, and sometimes nothing but a dense mass of pus cells appears in the field of the microscope.

If we find pus in the urine (excluding leucorrhœa in the female), we can be sure there is a catarrhal or suppurative condition somewhere along the genitourinary tract. It may be from an abscess of the kidney, or pyonephrosis, a pyelitis—suppuration of the pelvis of the kidney—a suppurative cystitis, prostatic abscess, or a gonorrhœal urethritis. Some clue to the origin of the pus can often be obtained from the urine itself. Urine containing pus from the kidney is usually acid; if from the bladder it is most always alkaline, and the alkalinity is found to be due to a volatile acid. Besides, if pus comes from the bladder we can frequently find triple phosphates in the urine, the ammoniomagnesium phosphate crystals, and also numerous bacteria.

The urinary tube casts are among the most important of the urinary deposits. They are of the highest diagnostic value. These casts are moulds of the renal tubules, formed by a disintegration of the epithelium of the renal tubules, or they may consist of a secretion of morbidly irritated epithelium lining the renal tubules and consist of various coagulable elements, such as fibrin, pus, blood, etc. They are indicative of an acute or chronic inflammation of the kidneys and are of great diagnostic import.

The various pathogenic microorganisms, gonococcus, tubercle bacillus, colon bacillus, staphylococcus, streptococcus, cancerous and tuberculous matter, all of these have important pathological significance and aid the diagnostician in ascertaining the various diseased conditions of the genitourinary tract. The presence of the various abnormal chemical constituents of the urine—such as leucine, tyrosine, cystine, cholesterin, crystalline calcium phosphate, calcium oxalate crystals, ammoniomagnesium phosphate crystals, and still others, each of which has its diagnostic significance—if found and properly interpreted by the pathologist and diagnostician, is of great value from a diagnostic, prognostic, and therapeutic standpoint, in the management and treatment by the physician of many ailments of the human body.

Some of these methods of work may, at first, seem to you to be unnecessarily elaborate, too tedious and too refined to be practical, but the longer you practice medicine, gentlemen, the more you will realize the necessity and importance of *accurate diagnosis*.

The time allotted us for our next lecture we shall devote to a consideration of the blood.

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Dr. Harry Heth Rodman, of Morristown, N. J., desires us to state that he is not the Dr. Rodman whose marriage was reported in our issue of April 2nd.

ARE THE ANTIDOTAL EFFECTS OF ALCOHOL, GLYCERIN, ETC., UPON CARBOLIC ACID, CHEMICAL OR PHYSICAL?*

By PHILIP ASHER, PH. G., M. D.,
NEW ORLEANS.

At a previous session of this society the question arose, "upon what special characteristics do the antidotal properties of alcohol, glycerin, etc., depend?" By some they were considered purely physical; by others, chemical. To prove these assertions either pro or con the writer undertook quite a number of experiments, but mention will be made only of such as have special bearing upon this subject. In Experiment I, just sufficient alcohol was added to the carbolic acid, so that when the mixture was reduced to 0° C., crystallization should be prevented. A drop of this, when placed upon the skin, produced an eschar within one minute, while a mixture of equal volumes of carbolic acid and alcohol did not produce any escharotic results whatsoever. The carbolic acid used in these experiments had a boiling point between 179° and 180° C. (354.2°-356° F.), and a melting point at 35° C. (95° F.).

In Experiment II, equal volumes of the acid and alcohol were placed in a distilling flask and distilled. Boiling began at 80° C. (about the boiling point of alcohol). When the alcohol was entirely removed the residue showed a melting point of 35° C.. The results of this experiment show that the carbolic acid and alcohol were only in a state of mixture, as it is almost wholly impossible to have had chemical union without some change in the physical properties of either one or all the factors, which in the case of both the acid and the alcohol were unaltered. A point was raised by the supporters of the chemical theory that the special antidotal effects of alcohol toward carbolic acid resided in the fact of the acid being chemically an alcohol, the truth, however, of its belonging to an entirely distinctive class of alcohols being wholly disregarded, although neither the former nor latter points should have any special bearing upon the antidotal properties.

As the next experiment depends largely upon the question of solubility, a few considerations of the solubility of carbolic acid and glycerin will add to its importance. Carbolic acid is very soluble in alcohol, ether, and glycerin, whereas glycerin is insoluble in ether.

In Experiment III equal volumes of glycerin and carbolic acid were used; perfect solution resulted, but upon the addition of three volumes of ether the glycerin was completely thrown out. If chemical union had taken place between the glycerin and acid, it could certainly not have been so readily broken up by the simple addition of ether; and we all know that chemical change is accompanied by a rise of temperature, which was absent in this experiment.

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* Read before the Orleans Parish Medical Society, August 22, 1903.

The ethereal solution from the above experiment had a boiling point of 38° C. (100.4° F.), and the residue, after separation of the ether, which consisted of carbolic acid, a melting point of 35° C., while its boiling point was the same as that of the acid originally used. The factors in this experiment, as in Experiment II, were unaffected in any of their properties, which again strengthens the proof that the above resultant changes were purely physical. Thus far, mention has been made of carbolic acid, also known as phenol, which is a monatomic alcohol belonging to the aromatic series, and having as its base the radical (C_6H_5), known as phenyl. Common, or ethyl, alcohol is also a monatomic alcohol, but of a different class than the former. It is the second alcohol of the paraffins. The formula is $(C_2H_5)OH$, the base or radical called "ethyl."

Glycerin is entirely different from either of the above; while it is classified under the same list as ethyl alcohol, it differs from it in being triatomic—that is, in containing three OH radicals, whereas both the carbolic acid and ethyl alcohol contain only one. The formula is $C_3H_5(OH)_3$. Another alcohol also possessing antiseptic properties, but somewhat milder than those of phenol, is resorcin. It is an aromatic alcohol, but of the diatomic type—that is, contains two O H radicals. It is known chemically as metadioxybenzol. Its formula is $C_6H_4(OH)_2$.

Equal parts by weight of resorcin and phenol form a perfect solution, but this solution is not wholly void of escharotic effects. This mixture possessed a boiling point in the vicinity of 195° C. (383° F.), and the first portion of the distillate, consisting of carbolic acid, melted at 35° C. The residue had a melting point above 115° C. (239° F.), and corresponding to properties of resorcin.

From the foregoing experiments the following facts must be summarized: First, The physical or chemical properties of the various factors used were never affected, and consequently chemical change never occurred. Secondly, the antidotal power possessed by alcohol and glycerin depends largely upon its state of dilution. We well know that a drop of sulphuric acid will produce escharotic properties at once, while the same quantity of the acid in a diluted state has no such tendency. This is evidenced by the frequent administration of the acid internally in a host of diseases. In addition to that of dilution, alcohol possesses dehydrating and astringent properties, which prevent absorption of the acid by the tissues.

Therapeutical Notes.

Vesicular Eruptions.—*Journal de médecine de Paris,* for January 24, 1904, states that Bazin uses turpeth mineral (mercury subsulphate) in these eruptions:

℞ Turpeth mineral	1 part;
Oil of sweet almonds	5 parts;
Lard	30 parts.

M. Ointment.

Another formula is:

℞ Turpeth mineral	1 part;
Glycerin	5 parts;
Oil of sweet almonds	5 parts;
Lard	45 parts.

M. Ointment.

Warts.—In discussing the therapy of warts, *Journal de médecine de Paris,* for December 6, 1903, recommends salicylated collodion, of which the following is the formula:

℞ Salicylic acid Alcohol	of each 1 gramme (15 grains);
Ether	2½ grammes (37½ grains);
Collodion	5 grammes (75 grains).

M. Paint the warts daily.

Kaposi, according to the same journal, advises:

℞ Mercury bichloride	1 part;
Elastic collodion	30 parts.

M. Paint warts and surrounding tissues daily.

Coryza Neonatorum.—Comby directs, in *Journal de médecine de Paris,* for December 6, 1903, that crusts should be removed two or three times daily and the baby's face held over a jug containing hot water, into which two teaspoonfuls of camphorated alcohol, eau de cologne, or tincture of benzoin have been dropped. Inhalations of fresh tincture of iodine give relief. The following may be used:

℞ Carbolic acid Ammonia water	of each .1 gramme (15 minims);
Water Alcohol	of each 15 grammes (½ ounce).

M. Cause inhalation of a few drops poured on a handkerchief.

After the catarrhal period, hypersecretion may be prevented and excoriations protected by:

℞ Bismuth subnitrate Petrolatum	of each 10 grammes (1/3 ounce);
Boric acid	2 grammes (30 grains).

M. Ointment.

The lower extremities should be warmly covered with cotton wadding boots.

Attacks of Coughing.—Berlioz and Laufer, according to *Journal de médecine interne,* for February 1, 1904, prescribe as follows:

℞ Bromoform Alcoholate of aconite root Tincture of drosera Glycerin	of each 2 grammes (30 minims).

M. For infants, 5 to 10 drops; adults, 20 to 30 drops during the 24 hours, in three doses and preferably in a warm infusion.

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"INFECTIOUS" ANGINA PECTORIS.

In a communication made to the Paris Academy of Medicine, a physician of Warsaw, Dr. Joseph Pawinski, (*Revue de médecine*, March), treats of a form of false angina pectoris which he terms infectious, even going so far as to call it septic. Apparently, however, he does not mean either that the simulated cardiac affection is itself communicable, or that it is connected with what we commonly understand as septicæmia, but simply that it occurs as an expression of the presence of an acute infective disease, such as influenza, follicular amygdalitis, and the like.

According to Pawinski, this form of false angina pectoris shows itself mostly in middle-aged men, seldom attacking women. It occurs early in the course of the disease of which it is a complication, and tends to subside as soon as any inflammatory localization of the substantive disease declares itself, although in some cases, especially those in which the real disease leads to changes in the coronary endangeium, it ends in true angina pectoris with persistent recurrences. The pain counterfeits that of real angina pectoris so closely as to extend down the left arm, but the author does not inform us that it is accompanied by the terrible feeling of impending death that is so characteristic of angina pectoris dependent on actual cardiac disease.

In this form of angina pectoris such remedies as nitroglycerin, sodium nitrite, and amyl nitrite, which are generally so efficacious in attacks of the true affection, produce no effect. Pawinski advises applications of hot compresses to the front of the chest, cupping, leeching, and subcutaneous injections of morphine. We may be allowed to suggest that, inasmuch as this affection is probably a pure neuralgia, it would probably yield promptly to a measure that has been found efficient in the agonizing pain in the pectoral muscles that occasionally occurs in the early stage of influenza—namely, the administration of chloroform by inhalation, far short, however, of the production of unconsciousness.

ALCOHOLIC HEART DISEASE.

There are few subjects of the physician's study that are more interesting than the varying effects of addiction to alcoholic drinks. The physical consequences of the prolonged use of such beverages seem to differ quite as much as the psychical results of an occasional debauch. If it is true—and we all know it is—that overindulgence on an occasion makes one man hilarious, lulls another into increasing mental and bodily torpor, and converts a third into a murderous fiend, it is none the less true that some steady drinkers fall a prey to arterial degeneration, others get multiple neuritis, and still others appear to live to a good old age without showing any damage fairly attributable to alcohol. The difference, of course, is due to some peculiarity of the individual. A well known physician of London, Dr. W. Hale White, has recently gone rather further than this statement would imply, for he infers that peculiarities of certain parts of the body are necessary to the induction of special effects. Dr. White has contributed to Vol. lviii of *Guy's Hospital Reports* an article entitled On Disease of the Heart Due to Overindulgence in Alcoholic Drinks, and he has kindly sent us a copy of the article in pamphlet form. "Inasmuch as it is impossible," says the author, "for alcohol to produce neuritis of the anterior tibial nerve unless there is something in the nerve for the alcohol to act upon, the cause of the neuritis lies as much in the nerve as in the alcoholic drink, so that, regard the subject which way we will, we must look not only to the agent applied to the body from the outside, but to the body itself, if we are to try and get a clear comprehension of the ætiology of a disease."

The special subject of Dr. White's essay is hypertrophy of the heart, with final dilatation, attributable to the habitual use of excessive amounts of certain alcoholic drinks—especially, it appears, of beer. The trouble is accompanied by increased rapidity of the pulse, with irregularity, and by attacks of dyspnœa occasioned by trifling exertion. It does not seem to be alcohol *per se* that gives rise to the cardiac disease, for it has been observed almost altogether in persons addicted to the excessive drinking of beer, and naturally has attracted more attention on the Continent of Europe than in the United Kingdom. It seems to have been first recognized in Tübingen, by Münzinger, and soon came to be called the "Tübingen heart," but presently the phrase "Munich heart" was employed, for the disease was found by Buhl and Bollinger to prevail in Munich also, and it is said to be very common in the employees of breweries, who sometimes drink as much as thirty-five pints of beer a day. Krehl is quoted as having suggested that the disease is "especially common among beer drinkers who do much muscular work, for he believes it to be especially frequent among students who fence." No particular histological changes appear to characterize it.

BOOKS FOR THE GENERAL PRACTITIONER.

A multitude of small medical works is constantly being issued from the press, epitomes of every specialty, of every branch of medicine, each stated to be for the use of the student and the "busy general practitioner." They present bare outlines of the various subjects, leaving the details to be filled in by cognate reading. Such books are very well for the student, who is obliged to work hard in order to impress on his mind in the space of four years an outline of all kinds of medical work, such as will enable him to obtain his degree and pass the State examination. But they are well for him only on condition that after graduation he shall get more complete works, master these while waiting the advent of patients, and then, for the rest of his life, add and correct details by gleaning in the contemporary journals. After the examinations have been passed, most of the students become general practitioners, and they are usually keenly aware of deficiencies in their knowledge; deficiencies which may be supplied to a great extent by the study of books into which have been garnered the results of past investigation. True, such books will, before many years, be behind the times, but they can furnish the information which will enable a young practitioner to start abreast of his own time, furnish him a standard of comparison by which he can select the valuable from the mass of journalistic literature which passes like a never failing stream before him, and render it possible for him to keep abreast of the times by the presence of a body of knowledge with which he can incorporate such selections.

He cannot expect to master every specialty. Something more than book knowledge is necessary for him to master one. Daily habituation to the treatment of a certain class of cases is the only education for the specialist, nothing else can give the skill and technique whether diagnostic or operative, which is characteristic of the practitioner accustomed to treat one class alone. But patients suffering from diseases of all organs consult the general practitioner, and rightfully expect that he shall know something of their ailments, or shall recommend them to some one who does. Near the large cities he may be able to refer patients to this or that specialist, but many times this cannot be done and he must rely on himself. Then he needs a book, not one from which to cram up answers to pass an examination, but one that will give him as thorough a knowledge of the condition he must face as a book can give. Does he need help in a case of doubtful diagnosis? Must he treat this inflamed eye? Must he cut down on a mastoid abscess? How farcical the consultation of the elementary textbook then. His need is for the best product of the specialist's brain, an unabridged work that deals with every detail of the condition he has to study, a large book, necessarily, because all the other pathological conditions which appertain to that branch of medicine must be treated with equal fulness. A work which does not thus meet the need for it in emergencies is of little help to the practitioner, for it leaves him to follow, more or less clumsily, the general outline with which he was made familiar when a student.

Then there are epitomes of a branch of a specialty, many of them, usually on the most difficult branch of that particular specialist's art, avowedly insufficient for the specialist himself, but deemed ample for the general practitioner. If the general practitioner needs such books, which may perhaps be questioned, he certainly needs to obtain more help from them than the specialist, for he has no mass of accumulated clinical experience from which to supplement the textbook. No one doubts that the specialist needs full and complete books of reference, but the general practitioner needs them yet more if he is to do any work in that line.

Finally, a book intended for the general practitioner should give some account of the various lines of treatment which have been tried and found wanting, as well as of those of the author's choice. Those lines were originated by bright minds, and after they have been forgotten other bright minds conceive the same ideas. A study of what has been done in the past shows that we have neither absorbed nor inherited the knowledge of our forefathers, and too often reveals the fact that the same line of treatment or the same operation is brought forward repeatedly as original. Each time a certain number of patients must pay the penalty they need not have paid if we had devoted a little more time to the history of our art. The history need not be very full, but it should be explicit. A book which combines a brief account of the errors which have been made in the past with a full exposition of what is believed to be true to-day, is the only one which can give the general practitioner all the knowledge which can be obtained without the years of clinical experience which go to educate the master.

THE DIAGNOSIS OF PANCREATIC LITHIASIS.

The diagnosis of pancreatic lithiasis is obscure, and in order to come to a correct conclusion in a given case one should review those affections which to a certain point simulate the presence of calculi in the gland. First, one should make a diagnosis from those pathological entities belonging to the pancreas, a problem never easy to solve. Diabetes with wasting is by far the most common symptom of nearly all pathological changes arising in the pancreas, and is the usual finale.

Generally speaking, the pancreatic inflammations have the same sudden onset as pancreatic colic has, but the important diagnostic element in the former is the absence of calculi in the stools. All neoplasms of the organ are easily distinguished from lithiasis. Benign pancreatic growths may be detected by palpation, when they have attained a certain size, in the left hypochondrium, and the presence of retention cysts should lead one to suspect the presence of pancreatic lithiasis.

The malignant neoplasms of the pancreas are usually carcinomatous, seated in the head, body, or tail of the organ, but it would be hardly possible to mistake the malignant process for calculi, although both affections terminate in the same manner—namely, by diabetes. Then, again, the evolution of pancreatic cancer is quite different. In lithiasis the début is sudden, while that of carcinoma is insidious, and for quite a laspe of time its presence does not give rise to any apparent disturbance. Finally, dull pain is complained of and the patient loses flesh and strength. The consecutive anæmia produces the straw-colored tint of the integuments and mucous membranes.

By careful palpation one may possibly discover a tumor situated between the sternum and umbilicus, having an irregular surface and hard to the feel, but in practice this is a difficult matter, because in most instances the liver, which is filled with secondary foci of disease, completely fills the epigastrium, thus hiding the region of the pancreas.

It is during the ultimate stages of their evolution that lesions of the pancreas become difficult to distinguish, because when diabetes exists, accompanied by loss of both flesh and strength, there can no longer remain any doubt as to the existence of a more or less complete pathological change in the gland, but the question is to know its origin and nature. Should one ascertain the fact that the patient has had attacks of pancreatic colic in the past, the diagnosis of lithiasis is quite admissible, but should such a history be wanting, the solution of the problem becomes more difficult, and it is only by taking into careful account the history and evolution of the affection that its real nature will be discovered.

There are still other affections which might be mistaken for pancreatic calculi. Pancreatic colic may pass by without any diagnosis being made, or, on the other hand, it may be considered as due to hepatic lithiasis. But if one studies the case attentively, it would seem impossible to confound the two morbid processes in spite of their apparent symptomatic similarity. The pain produced by the passage of a biliary calculus is found in the region of the gallbladder or epigastrium, while its sudden onset with a rise of temperature, usually about two hours after a meal, and accompanied by reflex phenomena, such as chills, vomiting, small pulse, and icterus, all belong to, and are in favor of a diagnosis of hepatic lithiasis. Attacks of pancreatic colic are rarely followed by jaundice and are accompanied by stearrhœa and glycosuria, so that the diagnosis should not be faltering.

A left-sided nephritic colic should not be mistaken for one due to a pancreatic calculus, for in the former we find the characteristic pain extending to the groin and testicle, while the amount of urine is decreased. At the end of the attack, when the urinary sediment is washed down, this will also settle the diagnosis. It is possible that the diagnosis of neuralgia of the solar plexus or of the intercostal nerves might be made, while instances of a diagnosis of gastralgia or gastric or duodenal ulcer have been recorded by Nicholas, when in reality the case was one of pancreatic colic. But all these affections have their own symptoms, which should be carefully searched for.

On the other hand, if one carefully studies the various symptoms to which calculi seated within the pancreatic parenchyma give rise, such as pancreatic colic with stearrhœa, lipuria, and clay-colored stools containing carbonate of calcium calculi, diabetes with wasting and its accompanying symptoms, viz.: glycosuria, polydipsia, polyphagia, and polyuria, one should at least suspect, if not affirm, the existence of pancreatic lithiasis.

Charles Greene Cumston.

DISEASE OF THE DUCTUS ARTERIOSUS.

Among the curiosities of pathology, O. Wagener, of Kiel (*Deutsches Archiv für klinische Medizin*, lxxix, 1, 2; *Münchener medizinische Wochenschrift*, February 23d), reports two cases of patulous ductus arteriosus in which there was found post mortem an occlusive membrane at the pulmonary extremity that had been forced to project into the pulmonary artery. The subjects were a woman, thirty-eight years old, who had died of croupous pneumonia, and a man, forty-two years old, who had died of purulent peritonitis. In neither case had there been any heart symptoms during life.

THE PROLONGED SLEEP OF HYSTERIA.

Sleep more or less remarkably protracted is known to be of not infrequent occurrence in the subjects of hysteria, but it must be seldom indeed that such a pronounced example is observed as in a case recently reported to the Paris Academy of Medicine by M. Lancereaux (*Semaine médicale*, March 9th). A girl, twenty-two years old, the daughter of a man who had indulged in alcohol immoderately, was attacked with convulsions after a severe emotional disturbance. She then fell into a deep sleep accompanied by anæsthesia and generalized contractures. With occasional convulsive interruptions the sleep lasted for twenty years, when, after a fresh crisis, she awoke and recovered her faculties, though her memory, especially of occurrences shortly preceding her falling into this prolonged sleep, was seriously impaired. In a few days after her awakening she died of pulmonary tuberculous disease.

THE PALMY DAYS OF MEDICAL PARIS.

Under the title of Medical Paris During the Reign of Louis Philippe, Dr. J. Chalmers Da Costa contributes to the March number of the *University of Pennsylvania Medical Bulletin* exceedingly interesting sketches of most of the prominent physicians and surgeons of Paris in the second quarter of the last century. We are sure he is quite right in his belief that "never in the records of the human race have so many illustrious surgeons been gathered together at one time in one city as were living in Paris during the time of Louis Philippe."

News Items.

Society Meetings for the Coming Week:

Monday, *April 18th.*—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

Tuesday, *April 19th.*—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

Wednesday, *April 20th.*—New York Academy of Medicine (Section in Genitourinary Diseases); New York Society of Dermatology and Genitourinary Surgery (private); Woman's Medical Association (New York Academy of Medicine); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society.

Thursday, *April 21st.*—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

Friday, *April 22nd.*—New York Clinical Society (private) (annual meeting); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

Saturday, *April 23rd.*—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending April 9, 1904:

	Week end'g April 9.		Week end'g April 2.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	1,706	49	1,265	28
Diphtheria and croup	387	70	343	39
Scarlet fever	474	30	393	30
Smallpox	..	..	..	..
Chickenpox	101	..	56	..
Tuberculosis	417	200	289	185
Typhoid fever	22	8	19	12
Cerebrospinal meningitis	..	29	..	31
Totals	3,107	386	2,365	325

A Dinner to Professor Ehrlich.—A dinner will be given to Professor Ehrlich at Delmonico's on Monday evening, April 18th, by the German Medical Society of the City of New York.

Appointment to Health Department.—Dr. John A. McCorkle, a Brooklyn physician, was chosen on April 6th by Health Commissioner Darlington as a member of the advisory board to the health department. The position is honorary.

Annex to St. Luke's Hospital.—Plans for the large pavilion to be built for St. Luke's Hospital by the Plant estate have been filed with the Building Bureau. The building is to be ten stories high and will adjoin the great hospital building crowning Morningside Heights, opposite the cathedral site. It is to be fireproof, fully equipped for general hospital purposes, and will have a large roof garden. The building is to have a frontage of 126 feet and a depth of 80 feet, and will have façades of marble and granite at the two lower stories and ornamental brick above. The cost is estimated at $400,000.

The New York Academy of Medicine.—The section on medicine will meet on Tuesday evening, April 19, 1904, at 8.15 o'clock. Order: Presentation of Cases. Clinical Reports: Tabes with Early Appearance of Charcot Joint, with exhibition of patient, by W. B. Noyes, M. D.; Myxœdema, with Exhibition of Patient, by H. S. Patterson, M. D.; Typhoid Fever with Repeated Chills, by John Howland, M. D. Papers: The Isle of Man as a Climatic Station, by James K. Crook, M. D.; Who is Underfed? by Heinrich Stern, M. D. Charles H. Lewis, M. D., chairman. E. E. Smith, M. D., secretary, 26 East Twenty-ninth Street.

Work of the Lying-In Hospital, Second Avenue, Seventeenth and Eighteenth Streets.—In the month of March the Lying-In Hospital had 389 applicants for treatment, of whom 122 only could be admitted and cared for in the hospital wards. The number of children born in the hospital during March was 107. For the same period in the outdoor department 212 applicants applied for assistance in their own homes and 206 were treated in confinement. The number of medical visits was 1,123. Through the Ladies' Auxiliary 1,289 garments were distributed and 217 patients supplied with caretakers. The Ladies' Auxiliary also gave coal and other articles, and made 1,128 visits to assist and aid. The diet kitchen assisted families who were absolutely destitute with tea, coffee, bread, sugar, oatmeal, and milk.

Columbia University Makes Changes.—Dr. William T. Bull, professor of surgery, has tendered his resignation, to take effect on June 30th, and it has been accepted. While he will no longer be responsible for the conduct of the department, students will be permitted to attend his clinics as heretofore. Dr. George E. Brewer, professor of clinical surgery, has been assigned to a seat in the faculty of medicine. Dr. Edward L. Trudeau, of Saranac Lake, has tendered his resignation as a trustee, and it was accepted with regret. Dr. Trudeau's resignation is due to his necessarily prolonged absences from the city. As his successor the board of trustees of the university elected T. Matlack Cheesman, M. D., Columbia '74, who is one of the most active of the younger alumni of Columbia.

The New York Odontological Society.—There will be a regular meeting of this society at the New York Academy of Medicine, No. 17 West Forty-third Street, on Tuesday evening, April 19, 1904, at eight o'clock. Order of business: Incidents of office practice and casual communications. Subjects of the evening: Dr. A. E. Webster, of Toronto, Canada, will present a paper, entitled A Protest Against the Use of Inaccurate Terms in Dental Literature. Eustace H. Gane, Ph. G., of New York, member of the Society of Chemical Industry, will present a short paper, entitled The Dental Applications of Some New Oxygen Compounds. Mr. Gane will illustrate his paper with chemical experiments. Owing to the large amount of business to be transacted at this meeting, members are requested to meet promptly at eight o'clock. W. D. Tracy, corresponding secretary.

Resolutions on the Death of Dr. John Metcalfe Polk.—At a special meeting of the class of 1899 of the Cornell University Medical College, held April 4, 1904, the following resolutions were unanimously adopted:

Whereas, We have learned with deep regret of the death of our classmate, John Metcalfe Polk, M. D.,

Resolved, That in the death of Dr. Polk the class of 1899 loses one of its most promising members, and that the medical profession is deprived of one whose career opened with unusual brilliancy.

Resolved, That we tender to the family of our late fellow student our heartfelt sympathy in their great bereavement.

Resolved, That a copy of these resolutions be forwarded to the family of our deceased classmate, and that they be sent for publication to the medical journals of this city and to the *Cornell Alumni News.*

Frederick L. Keays,
R. J. E. Scott, } *Committee.*
William J. Jones, Jr.,

Dr. Willy Meyer's Name in Connection with Anæsthol.—[We publish the following at the request of Dr. Meyer]:

March 29, 1904.

" We beg to state that the use of the name of Dr. Willy Meyer, of New York, upon the label of the new anæsthetic 'anæsthol' was introduced without his knowledge, though in entire good faith upon our part.

" At his request the label has been changed, and, in order to protect the medical profession against unreliable imitations, it will henceforth bear the name of Dr. Weidig, the originator of the new compound.

" Charles Cooper & Co.,
" 194 Worth Street, New York,
" Sole Manufacturers.

" Lehn & Fink,
" 120 William Street, New York,
" Sole Selling Agents."

New York State Medical Association.—The New York county branch of this association will hold its annual meeting, Monday evening, April 18th, with the following programme: Reading of the minutes of the previous stated meeting; appointment, by the president, of three inspectors of election and the declaration that the poll is open for the annual election; report of the executive committee; election of candidates for membership; report of treasurer; report of corresponding secretary; report of secretary; reports of standing committees; report of special committees; unfinished business; new business; presentation of clinical cases or reports, pathological specimens, new instruments, etc. Papers: The Management of Some Forms of Spasmodic Asthma, by Thomas F. Reilly, M. D.; Ergot in Surgery, by Alfred T. Livingston, M. D. Announcement of the results of ballot at such time as the inspectors may report. A collation will be served at the close of the meeting.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g April 2.		Week end'g April 9.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	32	7	20	5
Diphtheria	67	9	73	13
Scarlet fever	92	7	77	4
Typhoid fever	321	24	389	30
Consumption	..	74	..	74
Cerebrospinal fever	..	..	..	..

The Constituents of the Venom of the Rattlesnake was the title of an interesting address by Dr. John Marshall, of the University of Pennsylvania, at the recent meeting of the American Philosophical Society, held in Philadelphia.

Smallpox in Philadelphia has been rapidly decreasing during the past weeks, many sections of the city being practically exempt. Considerable credit is due the assistant medical inspectors recently appointed.

Dr. M. P. Ravenel, of the Henry Phipps Institute of Philadelphia, will shortly sail for Italy for the purpose of investigating, with Professor Maragliano, the question of specific therapy of tuberculosis.

Bequests to Hospitals.—Bequests of $500 each to the Jewish Hospital Association and the Jewish Foster Home are contained in the will of Herman Weiller, which was admitted to probate on April 4th. The estate is valued at $51,500.

Dr. John V. Shoemaker, professor of materia medica at the Medico-chirurgical College of Philadelphia, on April 7, 1904, delivered the third lecture at Walnut Lodge Hospital, at Hartford, Conn., before the Hartford Medical Society on The Abuse of Drugs.

New Physician for Frankford Hospital.—Dr. H. E. McGaffery, of Bristol, R. I., yesterday assumed the duties of resident physician of Frankford Hospital. Dr. McGaffery has long been the head of a sanitarium at Bristol. At Frankford he succeeds Dr. Joseph W. Kenney, who recently resigned.

The Epidemic of Typhoid Fever in Philadelphia.—For the week ending April 9th three hundred and eighty-nine new cases of typhoid fever were reported. It is stated that such an epidemic has not occurred since the bureau of health has been in existence. The cases are spread throughout the city, the section supplied with filtered water being comparatively almost exempt.

Filtered Water for Part of Philadelphia.—Another filter bed, making six in all, is now being successfully operated in Philadelphia, the part it supplies receiving four million gallons of filtered water daily, which is, however, only a small amount of the total consumption of that district. More filters are in process of construction, and are expected soon to furnish all the water necessary for that part of the city which they are intended to supply.

Hospital Improvements in Philadelphia.—Plans have been drawn and work will soon begin on the construction of the Aspinwall ward for the Episcopal Hospital. The new building will be used as a ward for convalescent children. It will be two stories and a half in height, built of brick and terra cotta, and will cost about $30,000. Plans for the completion of the building for the Wills Eye Hospital have been revised, and the work will soon proceed. A commission, appointed by the legislature, to select a site for a State hospital for the feeble minded and epileptics is ready to receive offers from land owners.

GENERAL

Statement of Mortality in Chicago, Ill., for the Week Ending April 9, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on estimated midyear populations of 1,950,000 for 1904, and of 1,885,000 for 1903:

	April 9. 1904.	April 2. 1904.	April 11. 1903.
Total deaths, all causes	562	576	592
Annual death rate per 1,000	15.03	15.40	16.36
Important causes of death:			
Acute intestinal diseases	30	35	22
Apoplexy	15	23	13
Bright's disease	42	36	27
Bronchitis	21	21	30
Consumption	65	80	59
Cancer	14	22	28
Convulsions	12	11	19
Diphtheria	4	4	12
Heart diseases	49	36	41
Measles	1	0	10
Influenza	3	5	4
Nervous diseases	17	30	45
Pneumonia	127	124	135
Scarlet fever	2	5	7
Smallpox	1	0	3
Suicide	6	11	7
Typhoid fever	5	4	7
Violence (other than suicide)	27	22	19
Whooping cough	1	0	13

The additional 199 deaths from consumption during the week in New York city have increased its consumption rate 37 per cent. over the rate of the previous week—that is, from 8.1 per cent. of all deaths to 11.1 per cent., and the 429 deaths from the pneumonias have increased the pneumonia rate from 20.9 to 21 per cent. The Chicago rates remain unchanged. Following are the figures for the two cities during the current pneumonia season:

NOVEMBER 1, 1903 TO APRIL 9, 1904.

	New York.	Chicago.
Total deaths, all causes	35,046	12,970
Deaths from consumption	3,898	1,345
Deaths from pneumonia	7,360	2,857
Proportion per cent. of all deaths:		
From consumption	11.1	10.3
From pneumonia	21.0	22.0
Deaths rates per 1,000 of population	23.16	15.10
Consumption deaths per 10,000	11.3	6.9
Pneumonia deaths per 10,000	21.4	14.6

Dr. John G. Orton, of Binghamton, N. Y., celebrated, on April 5th, his golden jubilee as a practitioner. The fifty years have been spent in Binghamton.

The Utica Medical Club, at its annual meeting on March 17th, elected the following officers: President, Dr. R. O. Lees; vice-president, Dr. C. R. Hart, of New Hartford; secretary and treasurer, Dr. W. B. Roemer.

The Eyes of School Children.—During the coming year Milwaukee will follow the example of New York city, its health department having urged the superintendent of schools to insist upon the careful annual examination of the eyes of school children.

Massachusetts Medical Society.—At its meeting on March 23, 1904, the Massachusetts Medical Society, Suffolk District, Section for Obstetrics and Diseases of Women, elected Dr. Daniel H. Craig, president. On March 24, 1904, after presenting a paper for their consideration, Dr. Daniel H. Craig was given an honorary membership in the New Hampshire Surgical Club, at its semiannual session, held at Concord, N. H.

Dr. Elisha P. Clarke, for forty years one of the best known physicians of the South county, Mass., died on April 7th at his home in Hope Valley. He was an army surgeon during the civil war, served in the State senate for two years, and was chairman of the school committee and assessor of taxes for several years. A widow and two sons, one of whom is Dr. Elliott M. Clarke, of Mansfield, Mass., survive him.

Seventh International Congress of Otology.—The French railways have agreed to reduce their rates fifty per cent. to members of this congress. Intending visitors are requested to enter their names before May 15th, with the treasurer, Dr. Lannois, 14 Emile Zola Street, Lyons, at the same time remitting the fee, $5.00 for physicians, $2.50 for students. Titles of papers should be sent to the secretary, Dr. Lermoyez, La Boétie Street, 20 *bis*, Paris.

Birmingham, Ala., Medical College.—Captain Richmond P. Hobson delivered the commencement address before the graduating class of the Birmingham Medical College on April 2nd. The graduating class was composed of Messrs. John Earle Garrison, Frank Leigh Crenault, Jerry Madison Stephens, Lee Othel Mason, and James Neal Jackson, all of whom received their degrees. An interesting address was made by the dean, Dr. B. L. Wyman. The tenth year of the institution was the best in the history of this remarkably successful college.

Atlanta College of Physicians and Surgeons.—The following gentlemen graduated from this institution on April 5th:

H. S. Allyn, G. L. Austin, W. L. Bowers, R. E. Bowman, L. J. Burch, F. P. Calhoun, C. L. Carter, F. W. M. Cornwell, G. A. Dame, J. M. Dennis, C. C. Fargason, A. G. Fort, J. D. Griffin, A. W. Harris, E. W. Hawkins, F. C. Herring, W. E. Lipscomb, T. Lowry, R. S. Lucius, J. T. McCall, D. B. McMullen, S. B. Malone, J. D. Manget, J. W. Martin, W. D. Martin, H. L. Montgomery, W. W. Morris, L. T. Pattillo, E. C. Seawright, O. E. Shankle, P. S. Smith, H. Stapleton, E. E. Strickland, J. B. Tanner, J. P. Turk, W. H. Turner, G. E. Weems, S. P. Wells, E. L. Williams, D. J. R. Youngblood.

Lecture by Dr. Ehrlich.—Dr. Paul Ehrlich, the famous German bacteriologist and director of the Prussian Institute of Experimental Therapeutics, Frankfort-on-the-Main, gave the first lecture of his course of three in McCoy Hall, Johns Hopkins University, Baltimore, Md., on April 12th, on Immunity. The special topic yesterday was The Mutual Relations Between Toxine and Antitoxine. The large assembly room was well filled, fully 800 persons being seated. Dr. Ehrlich spoke in German, but small pamphlets containing a brief synopsis of the lecture in English were distributed at the door by one of the university attendants.

Medical Association of the District of Columbia.—At the regular stated meeting of this association, held April 5th, the folowing were elected: H. H. Barker, M. D., president; John D. Thomas, M. D., and R. W. Baker, M. D., vice-presidents; D. W Prentiss, M. D., secretary; Frank Leech, M. D., treasurer. New members were elected as follows:

Dr. Eric Alonzo Abernethy, Dr. Charles Middleton Beall, Dr. Harry Hampton Donnally, Dr. Samuel Fry, Dr. George H. Heitmuller, Dr. Henry Agett May, Dr. Robert John McAdory, Dr. James G. McKay, Dr. James Farnandis Mitchell, Dr. Robert Cathcart Ransdell, Dr. Joseph Decatur Rogers, Dr. Thomas J. Rossiter, Dr. Harry H. Stromberger, Dr. Garden Clarkson Stuart, Dr. Louise Taylor-Jones, Dr. James Cartwright Wynkoop.

The West Virginia State Medical Association will hold its thirty-seventh annual meeting at Fairmont, May 10th, 11th, and 12th. As usual, special hotel and railroad rates will be made. Title of papers to be read must be in the hands of the secretary not later than April 20th. William W. Goldin, M. D., secretary, Elkins, W. Va.

Medical Graduates of University of Louisville, Ky., 1904.—The following gentlemen received their diplomas on March 31st:

A. H. Pannenborg, of Indiana; L. Ryans, of Kentucky; J. W. Gilbert, of Kentucky; C. C. English, of Kentucky; A. M. Forster, of Kentucky; C. O. Zahner, of Kentucky; W. W. Britton, of Texas; H. J. Brown, of Kentucky; C. V. Williams, of Tennessee; G. C. Patterson, of Louisiana; C. P. Wilson, of Illinois; A. E. Burke, of Kentucky; F. C. Fox, of Kentucky; O. E. Johnson, of Kentucky; W. A. Ashbrook, of Kentucky; S. J. Martin, of Kentucky; R. E. Hearn, of Texas; F. K. Whitfield, of Pennsylvania; L. Heimann, of Indiana; R. R. Elmore, of Kentucky; W. F. Clifton, of Texas; C. P. Cottingham, of Kentucky; C. W. Dixon, of Arkansas; P. E. Blackerby, of Kentucky; H. Humphrey, of Kentucky; J. C. Harris, of Pennsylvania; J. H. Ward, of Kentucky; J. P. Casper, of Indiana; R. P. Carr, of Tennessee; R. M. Stallard, of Kentucky; G. W. Cleaver, of Kentucky; R. M. Means, of Kentucky; F. L. Kiefer, of Kentucky; R. P. Crawford, of Kentucky; G. H. Wetzell, of Indiana; N. A. James, of Indiana; L. A. Casper, of Indiana; W. C. Smith, of Kentucky; W. M. Ewing, of Kentucky, valedictorian of the class.

Precautions Regarding Milk in Chicago.—

The bulletin of the Chicago board of health states that during the week the laboratory analyzed 508 samples of milk and cream. Of these, only 3.3 per cent. were found below grade. During this month the milk usually shows a larger per cent. below grade. The milk inspectors are directing their attention especially to the taking of shipper's samples and the examination of depots and dairies throughout the city.

A complete list of all milk dealers and the condition of their dairies and wagons is being prepared. Those whose premises are found to be in an unsanitary condition will be given fifteen days' notice to comply with the requirements of the department. At the end of that time if the requirements have not been fulfilled they will be denied a license when they apply on May 1st.

During the next two months there will be a great many fresh cows, and in order to prevent the selling of the milk from these before it has become fit for domestic use, the meat inspectors have been instructed to condemn all calves under age, and to notify the shippers that this ordinance will be rigidly enforced and that their milk will be carefully watched for evidences of violation of the ordinance, which requires that the milk shall not be used within fifteen days after calving.

A number of samples of the new ice supply have been examined in the laboratory each day during the week, and none of them has been found below grade. The weather conditions during the early part of the winter have produced a very good, clear ice.

University of Nashville, Tenn.—The following graduated in medicine from this institution on March 31st:

Lawrence Gibbons Alexander, of Kentucky; Elijah Cox Bills, of Mississippi; Estes N. Blount, of Mississippi; Charles Watkins Brown, of Tennessee; John Alexander Bostick, of Arkansas; Ralph Jackson Criss, of Mississippi; William Flournoy Copeland, of Tennessee; Burk Hull Campbell, of Mississippi; James Wyly Crawford, of North Carolina; Ridly Herman Draper, of Tennessee; Edwin Childress DeMoss, Jr., of Tennessee; Joseph Oliver Greenlaw, of Mississippi; Champ M. Cully, of Mississippi; Luther B. Hall, of Tennessee; Mastin Duke Hendrick, of Louisiana; John Aaron Harris, of Mississippi; Maecenas Benton Hendrix, of Tennessee; Henry Lafayette Horsley, of Alabama; Henry Irvin Jones, of Kentucky; Joseph Pearl Kellar, of Tennessee; Harmon Jonathan Kolb, of Arkansas; Robert Edwin Key, of Tennessee; Eugene Samuel Little, of Mississippi; Charles Percy McCall, of Georgia; Joseph Walker Morris, of Alabama; James Abston McFerrin, of Tennessee; Charles Wesley McDonald, of Alabama; Wilbur Ashley McPhaul, of North Carolina; Benjamin Franklin McNeal, of Mississippi; Benjamin Maddin Phillips, of Tennessee; Milton Clay Ragsdale, of Alabama; Fritz Edward Rehfeldt, of Mississippi; William Clarence Sizemore, of Alabama; Lonzo Edward Steele, of West Virginia; James Ford Simpson, of Louisiana; Robert Edward Lee Saxon, of Arkansas; William Brooks Turner, of Alabama; Eugene Marlin Thompson, of Arkansas; William Winferd Winters, of Tennessee; Samuel Thomas Woodruff, of Tennessee; Sidney Fletcher Yoho, of West Virginia; Chatam Coffee York, of Tennessee.

Naval Medical School, Washington, D. C.—Thirty-one assistant surgeons of the Navy Medical Corps were presented with diplomas by Mr. Charles H. Darling, assistant secretary of the navy, on March 20th. The following are the names of the successful candidates:

Assistant Surgeons James Presbury De Bruler, of Indiana; Ransom Edwards Riggs, of South Carolina; Frederick William Symmes Dean, of South Carolina; Richard Lightburn Sutton, of Missouri; Clarence Francis Ely, of Pennsylvania; Benjamin Henry Dorsey, of Maryland; James Robert Dykes, of Georgia; Albert Julius Geiger, of Michigan; William Wiswell Verner, of Pennsylvania; Otto Kohlhase, of South Dakota; Percival Sherer Rossiter, of Maryland; Wesley Hartman Rennie, of Pennsylvania; Walter Scott Hoen, of Virginia; Wallace Bruce Smith, of Alabama; Charles Courtney Grieve, of Michigan; John Darwin Manchester, of Wisconsin; Paul Tonnel Dessez, of the District of Columbia; James Savage Woodward, of Maryland; James Augustus Randall, of Georgia; Charles Edward Ryder, of Massachusetts; Allen Donald McLean, of Michigan; Harry Lee Brown, of the District of Columbia; Sydney Lockhart Scott, of Virginia; Theodore Normand Pease, of New York; Frederick Gustavus Abeken, of Missouri; Winfield Scott Pugh, Jr., of Pennsylvania; James Miller, Jr., of Massachusetts; Edward Carlton Taylor, of New York; Franklin Edward Campbell, of New Hampshire; James Edward Gill, of Illinois; Isaac Stockton Keith Reeves, of the District of Columbia.

Owing to illness and inability therefrom to complete his examination in time, Assistant Surgeon James Miller, Jr., of Massachusetts, could not be classified.

Queen's College, Kingston, Canada.—Thirty-seven students have been granted their medical degrees by Queen's Medical College. Two Jamaica negroes, who went there to get a Canadian degree, are among the graduates:

R. W. Bailey, of Kingston, Jamaica; M. E. Branscombe, B. A., of Picton; W. C. Brown, of Bellview; J. S. Carruthers, of New Glasgow, N. S.; J. C. Caskey, of Tweed; A. K. Connolly, of Kingston; T. J. Costello, of Calgary; E. W. Delong, of Gananoque; A. C. Driscoll, of Trenton; A. D. Falkner, of Williamstown; E. A. Ferguson, of Kingston; A. A. Ferguson, of Glen Walter; J. V. Gallivan, of Kingston; W. Gibson, of Emerald; J. J. Gillespie, of Morrisburg; J. R. Goodfellow, of Kingston; J. A. Graham, of Montreal; T. J. Gray, of Kingston; L. W. Hoppins, of Kingston; E. C. Kinkaed, of Kingston, Jamaica; A. J. Lalonde, of Barrie; G. C. Leach, B. A., of Fenelon; R. A. Lee, of Port Hope; A. T. Munroe, of Moose Creek; F. C. McCullough, of Gananoque; H. A. McDonald, of Sunbury; M. McGonigle, of Newboro; N. I. Pennock, of Brookville; Miss Victoria Reid, B. A., of Kingston; E. J. Robinson, of North Williamsburg; S. H. Rutledge, of Thomasburg; A. H. Singleton, B. A., of Newboro; N. Smith, of Kingston; H. Tandy, B. A., of Kingston; E. J. F. Williams, B. A., of Brockville; C. S. Vanness, of Wolf Island; J. M. Young, B. A., of Bristols Corners.

Medals and prizes—In medicine, H. Tandy, B. A., of Kingston; in surgery, William Gibson, of Emerald; house surgeons, William Gibson, H. Tandy, B. A., A. H. Singleton, B. A., Dr. Clarke's prize in mental diseases, J. M. Young, B. A.; Dean Fowler's scholarship, third year, A. C. Spooner, B. A., of Latimer; McCabe prize, in pathology, H. J. Williamson, B. A.; faculty prize second year, E. Bolton Philipsville; Hayungt prize in materia medica, P. A. McIntosh, B. A., of Dundela.

The "Osteotherapy" Bill.—We understand that the osteopaths of New York city and State disclaim any interest in the bill concerning their tenets and practice now before the State legislature.

Atlanta, Ga., College of Physicians and Surgeons.—At a meeting of the board of trustees of the Atlanta College of Physicians and Surgeons, March 29th, Dr. Hunter P. Cooper was elected Professor of Gynæcology and Obstetrics to fill the vacancy caused by the death of Dr. Virgil O. Hardon. Dr. Cooper has been professor of anatomy and clinical surgery in the institution for a number of years.

University of Alabama.—The following received the degree of M. D. from this institution on March 31st:

J. M. Austin, of Wetumpa, Ala.; W. Barnes, of Ozark, Ala.; B. R. Bradford, of Octagon, Ala.; H. I. A. Cooke, of Mobile, Ala.; B. S .Carpenter, of Aliceville, Ala.; W. W. Deal, of Mantua, Ala.; L. N. Flippo, of Bear Creek, Ala.; E. C. Hagler, of Northport, Ala.; E. C. Harris, of Coal City, Ala.; H. W. Hill, of Carrollton, Ala.; H. L. Hinds, of New Hope, Ala.; S. K. Jennings, of Pensacola, Fla.; T. C. Kelly, of Fulton, Ala.; L. W. Kirkland, of Castleberry, Ala.; H. J. Krudöp, of Mobile, Ala.; L. T. Lee, of Clayton, Ala.; T. M. Littlepage, of Mt. Sterling, Ala.; H. D. Loflin, of Troy, Ala.; J. C. McDaniel, of Whitfield, Ala.; J. C. McLeod, of Gains, Ala.; H. T. McGehee, of Northport, Ala.; T. L. Mathers, of Matherville, Miss.; G. W. Mixon, of Hamilton, Ala.; J. A. M. Nolen, of Equality, Ala.; G. A. Pate, of Roanoke, Ala.; J. O. Rush, of Dothan, Ala.; T. J. Russell, of Winton, Ala.; J. M. Sankey, of Hatchechubbee, Ala.; W. A. Sellers ,of Inverness, Ala.; C. E. Sellers, of Steadman, Ala.; L. H. Senteff, of Moblie, Ala.; J. D. Smith, of Laurel, Miss.; Guy Stewart, of Abercrombic, Ala.; T. F. Taylor, of Mulberry, Ala.; D. A. Tucker, of Jericho, Ala.; C. W. Vandiver, of Talladega, Ala.; C. E. Williams, of Wetumpka, Ala.; E. E. Williams, of Furman, Ala.

"First Aid" Instruction to be Given to Chicago Policemen.—Medical training is to be given to members of the Chicago police in order that they may be properly equipped to act in emergency injury cases. This new departure has been made possible by the offer of Dr. L. Blake Baldwin, of the Dearborn Medical College and the Samaritan Hospital. Arrangements have been made with the faculty of the medical college to give a series of lectures to members of the police department on practical remedies in emergency cases. Chief of Police O'Neill has taken kindly to the idea and is an enthusiast over the proposal, which he considers entirely feasible. The first lecture is scheduled for April 25th, when the amphitheatre of the college at 465 State Street will be at the disposal of the policemen. This will accommodate 500 policemen, and it is the suggestion of Dr. Baldwin to have 100 men from each of the five police districts at each lecture. First Aid to the Injured is the subject to be covered by the first lecture of a series of five. This lecture will be illustrated by the use of a cadaver and the policemen will be made familiar with each of the vital points of the human body. The lectures as arranged by Dr. Baldwin are as follows: 1. The vital points of the body. Illustrated by cadaver. 2. Fractures and bandaging. 3. Hæmorrhages and the most efficient means of checking them. 4. Emergency aid in cases of poison, drowning, asphyxiation, etc. 5. Emergency remedies and antidotes.

Pith of Current Literature.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT.

February 2, 1904.

1. Anatomical Changes in Labyrinth Suppurations, By E. P. FRIEDRICH.
2. Origin of Basophile Nucleated Red Blood Cells, By NAEGLI.
3. Acute Idiopathic Pyelitis in Pregnancy, By HAEBERLIN.
4. Artificial Ischæmia (*To be concluded*), By BENNO MUELLER.
5. Suprarenin, By HECHT.
6. Excessive Pigmentation After Injection of Suprarenal Extract, By A. SCHUECKING.
7. Origin of Pulmonary Tuberculosis, By K. OPPENHEIMER.
8. Palliative Operations in Incurable Cases of Cancer, By WINSELMANN.
9. New and Rapid Gasometric Determination of Sugar, By E. RIEGLER.
10. Modified Azotometer, By A. JOLLES.

2. **Origin of Basophilic Nucleated Red Cells.**—Nægeli concludes that in many pathological conditions, nucleated red blood cells are thrown into the circulation by pathological changes in the bone marrow. The origin of nucleogenic or plasmogenic granulations is not, at present, clear. The morphological change is not, however, a degenerative one, although in some pathological conditions elements similar to mesoblasts appear in the blood which are to be regarded as a sort of regenerative process and which are seen otherwise only in the embryo. These cells, like the basophilic nucleated erythrocytes, must be looked upon as the result of a pathological condition of the bone marrow, and their character must be regarded as a pathological regenerative reaction.

3. **Idiopathic Pyelitis of Pregnancy.**—Hæberlin records eight cases of this character, one of which ran an especially severe course. The symptoms are mainly high fever, severe lumbar pain, chills, and signs of irritation of the bladder, painful and frequent discharge of urine of a cloudy character. The fever may reach 103° to 104° F., and the pain is usually sharply localized in the neighborhood of the kidney and bladder. Pus is found in the urine and peri and parametritis must be excluded in the diagnosis. The prognosis is good. In from one to two weeks the cases are well, after delivery, and usually, no after effects are felt. The treatment is expectant, including a fluid diet, the use of urinary disinfectants and diuretics.

7. **Ætiology of Phthisis.**—Oppenheimer opposes Behring's view that tuberculosis in nurslings is due to the ingestion of tuberculous milk. He tabulates his conclusions as follows: 1. Relatively few children die of tuberculosis in the first few months of life. 2. Behring's statements that most cases of tuberculosis date back to the nursing period is disproved statistically and by the negative result of the tuberculin reaction in very young infants. 3. Alimentary infection through the use of cow's milk is unlikely because the death rate from tuberculosis is as high in countries where children are

nursed as in those in which they are artificially fed; primary intestinal tuberculosis is not sufficiently frequent to regard it as the universal primary focus of infection. Finally, the "gray nodules" described by Behring as found experimentally in animals have not been seen in the bodies of infants. The author concludes that, as yet, overweening anxiety as to the influence of cow's milk upon the origin of tuberculosis need not be felt.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT.

February 9, 1904.

1. Apparatus for Producing Hyperæmia, By A. Bier.
2. Œsophagoscopic Diagnosis, By Hugo Starck.
3. Synchronous Movement of the Sound with the Respiration in an Œsophageal Carcinoma, By Ludwig Steiner.
4. Pregnancy and Perityphlitis, By A. Labhardt.
5. Retention of Speech in Status Epilepticus, By Raecke.
6. Can Pulmonary Emphysema Be Produced by Glass-blowing? By Prettin, and Leibkind.
7. Multiple Tænia *Saginata*, By Emil Reiss.
8. Modern Views of Eclampsia, By W. Weichardt.
9. Artificial Ischæmia (*Concluded*), By B. Mueller.

2. **Œsophagoscopy.** — Starck recommends placing the patient in the lateral position so that mucus and saliva shall easily flow away. The only disadvantage noticed in 100 cases was the difficulty, with the patient in this position, of recognizing dilatations of the œsophagus.

3. **Coincident Movement of Sound with Respiration.**—Steiner records a case in which, when the œsophageal sound was introduced, it moved synchronously with the respiration. This phenomenon was explained at the necropsy where the œsophagus was found firmly adherent to the diaphragm through cancerous degeneration.

4. **Permanent Gastric Sound.**—Schiele kept an œsophageal stricture due to carcinoma open by means of a sound introduced into the stomach and permanently kept there. The upper end of the sound was secured by a cord wound about one of the teeth. The patient experienced no annoyance, and was able to swallow soft-boiled eggs, chewed toast, etc.

5. **Appendicitis and Pregnancy.** — Labhardt reports a number of these rather unusual cases. He calls attention to the difficulty of recognizing the condition particularly in the later months of pregnancy. From a review of the literature and from his own experiences, the author cautions against too active intervention in these cases.

6. **Emphysema and Glassblowing.** — Prettin and Leibkind have examined 230 glassblowers who have worked at their trade for many years. In only five instances, was an emphysema found. This would very logically permit the conclusion to be drawn that neither glassblowing nor prolonged forcible expiration is responsible for the production of an emphysema.

11. **Artificial Ischæmia.**—Müller concludes that suprarenin has a distinct contractile influence upon the blood vessels. Parenchymatous organs are emptied of their blood instantly by a one per cent. solution, while skin, fat, and muscles are similarly affected by solutions of 1 to 5,000 to 1 to 10,000. In these strengths, suprarenin is non-toxic to man or to the cells. It is easily soluble in water and sterilizable. In solutions of from one half to 1 to 10,000 it is a cardiac stimulant.

BERLINER KLINISCHE WOCHENSCHRIFT.

February 22, 1904.

1. Hæmolytic Property of Blood Serum in Uræmia, By H. Senator.
2. Motility in Paralyzed Eye Muscles in a Case of Korsakoff's Psychosis, By A. Westphal.
3. Ultramicroscopic Examination of Glycogen, Albuminous Substances, and Bacteria, By E. Raehlmann.
4. Hæmolysis Evoked by Cancer Extract, By Kullmann.
5. Tuberculous Infection of Children (*Concluded*), By Westenhoeffer.
6. Epithelioma Chorioectodermale, By L. Pick.

1. **Uræmia and Hæmolysis.**—Senator calls into question Neisser and Doering's observation that the serum of an uræmic person in inactive state, has the power of inhibiting the hæmolytic power of the original serum, and that this power is innate in all uræmic sera. Senator reports a case of undoubted uræmia which does not substantiate this view, diminution of the hæmolysis not occurring at all. Senator says that at present no definite general conclusions can be drawn.

2. **Korsakoff's Psychosis.**—Westphal reports the case of a man of thirty-six years of age suffering from Korsakoff's psychosis for many years together with a paralysis of the muscles moving the eyeball up and down. When the patient attempted to close the eyes slowly and the pupil was very small, the author could demonstrate that the eyeball made a decided upward movement. The phenomenon can be explained only on the ground of correlated movement. These movements always resulted in great fatigue on the part of the patient.

4. **Hæmolysis of Cancer Extract.**—Kullmann has found a hæmolytic agent of great intensity in extracts of cancer tissue, freed as much as possible from organic tissues and from blood. When injected into dogs, this extract evoked hæmolytic properties in the serum of the animal. The extract dissolves not only human red blood cells, but those of various animals as well.

MONATSSCHRIFT FUER GEBURTSHILFE UND GYNAEKOLOGIE.

Vol. viii, 4.

1. Stretching of Lower Uterine Segment with Fixed Bladder, By S. Goldner.
2. Bossi's Method in Abortion and Births After Disappearance of the Vaginal Portion, By E. Schuermann.
3. Secondary Perineal Suture in the Puerperium, By Abuladse.
4. Aplasia of the Uterus and the Vagina, By Hofmann.
5. Relation of Hysteria to the Female Sexual Organs, By G. von Voss.
6. Hyperemesis Gravidarum, By Jung.
7. Technics of Laparotomy, By Mueller.

2. **Bossi's Method of Dilatation.** — Schürmann regards rapid dilatation of the cervix by Bossi's method as a less dangerous procedure than Dührssen's incisions. This is especially true when the vaginal portion of the cervix has disappeared. When the cervix is still retained to more or less degree, the dilator is to be very carefully used if at all. The author prefers the modified instrument of Preiss.

3. **Secondary Perineal Suture.** — Abuladse prefers secondary to immediate suture of the perinæum, during the puerperium. It is easily performed, it is harmless, the parts can still be well coapted and the result is usually very good.

4. **Hysteria.**—Von Voss denies that diseases of the female generative organs are more often responsible for hysteria than other diseases in general. As a rule, reflex disturbances arising from the genital tract can be traced by direct continuity. The greater number of neuroses observed in gynæcological practice are to be assigned rather to the degenerative hysterical group than to typical hysteria. The history of the patient and the minor lesion with the major complaint, together with a vicious heredity, will often support the diagnosis of hysteria. Gynæcological operations of a simple nature and the anæsthesia itself can have an important bearing on the nervous system. Suggestive treatment is useful, while local measures often cause a decided change for the worse in conditions resting on a nervous basis.

6. **Hyperemesis Gravidarum.**—Jung says that the excessive vomiting of pregnancy represents a pathological increase in what may be regarded as, in a certain measure, a physiological process, rendered worse by the changes in the body of the pregnant woman. It is of comparatively rare occurrence, and is to be sharply differentiated from the simple vomiting; it can easily be confused with autosuggestion and simulation. Specific treatment, so called, is to be avoided. If the diagnosis is positive, the patient is to be put to bed, fluid diet is to be tried, and if this is vomited, rectal feeding must be instituted, to be followed in a few days with renewed attempts at oral feeding. Bad results in private practice are sometimes to be attributed to patients securing food which is forbidden. Jung does not think it usually necessary to interrupt the pregnancy for excessive vomiting and advises hospital treatment before proceeding to this extremity.

7. **Technics of Laparotomy.**—Müller prefers Pfannenstiel's horizontal incision through the fascia to all other methods of opening the abdomen. He does not believe, however, that the method can equal the vaginal route when this is at all feasible.

ZENTRALBLATT FUER INNERE MEDIZIN.

March 5, 1904.

1. Abdominal Palpation in the Warm Bath, By G. Sticker.

1. **Abdominal Palpation in the Warm Bath.**—Sticker originally advocated this method thirteen years ago. It permits palpation of abdominal parts and organs much more deeply than the ordinary methods practised, and it can often replace, on this account, examination under an anæsthetic. The author has diagnosticated, by means of the warm bath, displacements and adhesions of the abdominal organs, atrophy and enlargement of the liver, the spleen and the kidneys, calculi in the gallbladder and renal pelvis, exudates and tumors which could be felt vaguely or not at all by ordinary methods of palpation.

SEMAINE MEDICALE.

February 24, 1904.

1. Part Played by Animals in Transmitting Tuberculosis and Other Contagious Diseases, By Bard.
2. Phlegmonous Forms of Cancer, By Lejars.

1. **Animals and Contagious Disease.**—Bard humorously groups cattle, fleas, and mosquitoes as suspects and doubts the power attributed to these last; he also throws considerable doubt on the possibility of the transmission of disease from man to the lower animals and vice versa, and does not believe that the epidemic throat disease of pigeons and chickens is at all identical with human diphtheria. He recalls Koch's dictum that the tuberculosis of cattle is not transmissible to man, and makes light of the possibility of transmission through the milk and *a fortiori* through the cooked meat of cattle. The possibility of contagion through the lower animals is not denied, but Bard thinks that we have been much too alarmed regarding this supposed source of disease.

2. **Phlegmonous Forms of Cancer.**—Lejars dwells upon several cases of genuine cancer upon which he operated, supposing them at first to be simple abscesses or perhaps tuberculous in their nature, but which turned out to be malignant. He advises that a microscopical examination be made in all such cases, even where the diagnosis seems to be quite clear.

LYON MEDICAL.

February 28, 1904.

Treatment of Syphilis (*Concluded*), By Gailleton.

Syphilis *(Concluded)*.—Gailleton finishes his article on the treatment of syphilis by summarizing that of a typical case. 1. A first treatment of at least four months by mercury, continuing till all signs of the disease disappear. 2. Suspension of treatment for six months. 3. If no signs have appeared, another month of mercury and another six months of suspension. 4. No further signs appearing, during the third and fourth years, one month of mercury during each. 5. During the fifth and sixth years, a purgative and potassium iodide for a week or so, in the spring and fall.

In case of relapse during the first year, mercury till all signs disappear; during the second year, mercury by inunction or injection; for late secondary symptoms, the mixed treatment is prescribed. Careful treatment and vigorous hygiene are required to prevent the dangerous tertiary lesions. If they appear, Fournier's régime is valuable: Mixed treatment, 45 to 60 days; suspension, 20 days; mercury alone, 20 days; the iodide alone, 20 days; recommence. This should be continued for several weeks after apparent cure. If the tertiaries are very grave, begin at once with 90 grains of the iodide and injections of ¾ to 1½ grain of calomel every sixth day; as the symptoms improve, resume the regular treatment. A regular, open air life is essential in the tertiary stage. Secondary manifestations are helped by sulphur baths, lotions of boric acid, tincture of iodine, gargles, mouth washes, etc. Hydrargyrated ointments are helpful in palmar and plantar psoriasis. Ulcerated gummata may be poulticed and dressed with gauze wet with a 3 to 30 per cent. solution of tincture of iodine, and alkaline baths, together with calomel fumigations, sometimes give remarkable results.

PRESSE MEDICALE.

March 2, 1904.

1. The Ration of the Newborn, By V. BUÉ.
2. Jejunostomy in Cancer of the Stomach; Y Shaped Jejunostomy, By P. RICHE.

1. **Ration of the Newborn.**—Bué points out that the mother's milk is not always exactly suitable to the child and that the latter often takes too much or too little, and that the attending physician should supervise carefully the nursing during the first three weeks or so. Premature children require more food in proportion to their weight than those born at full term, but they are also more liable to gastrointestinal disturbances. If artificial feeding is necessary, sterilized cow's milk is the best food, but the child must be watched daily under such circumstances and the amount of milk allowed carefully modified according to the curve of the child's weight, the amount of urine passed, and the color and weight of the stools.

2. **Jejunostomy.**—Riche urges this operation not only in cancer of the stomach, but also in severe cases of ulcers, wherever there is pyloric stenosis, as less dangerous immediately, and as affording a longer lease of life. In cases of ulcer, it is superior to gastroenterostomy in allowing greater rest to the stomach and consequently affording the ulcer a better chance to heal. Riche details his method at great length.

March 5, 1904.

Radical Cure of Femoral Hernia, By GUIBÉ and PROUST.

Femoral Hernia.—Guibé and Proust state that the radical cure of this condition depends upon careful operation, comprising first the cutaneous incision and the separation of the sac; the cutting of Gimbernat's ligament, the isolation of the peritoneal infundibulum, and the opening, tying, and resection of the sac; closure of the femoral ring, insertion of deep sutures to unite the obliquus internus and transversalis to the infundibuliform fascia; suture of the femoral ring to the pectineal aponeurosis; closure of the cutaneous incision.

BOSTON MEDICAL AND SURGICAL JOURNAL.

March 24, 1904.

1. Ultimate Results of Some Gynæcological Operations at Massachusetts General Hospital, By RICHARD G. WADSWORTH.
2. Eyestrain Considered as a Factor in Production of Lateral Curvature of Spine (Preliminary Communication), By HENRY W. KILBURN.
3. Supernumerary Breasts and Nipples, with Report and Photograph of a Case, By ERNEST BOYEN YOUNG.
4. Ring Bodies in Anæmic Blood, Additional Forms, By RICHARD C. CABOT.
5. Typhoid Fever in Infancy, with Report of Case Complicated with Meningitis Terminating in Recovery, By CHARLES P. SYLVESTER.

1. **Gynæcological Operations.** — Wadsworth has attempted to establish, by a study of patients operated upon in the Massachusetts General Hospital, what basis there is, if any, for the adverse criticisms at times heard regarding the results of gynæcological operations. He attempted to obtain the postoperative histories of 450 patients. Of course many patients could not be traced, and the histories and examinations of many other cases that were traced were, for different reasons, valueless. The author's study is, therefore, based on 58 cases in which both the anatomical and symptomatic results were obtained, and on 159 cases in which only the symptomatic results could be obtained. The author's investigation covers only a consideration of the results obtained from operations undertaken for the correction of the following conditions: Lacerations of the cervix and vaginal outlet; displacements of the uterus; endometritis and uterine fibroids. No formal conclusions can be deduced from the author's study. His observations will be of value only if taken in connection with more extended observations.

2. **Eyestrain and Lateral Curvature of the Spine.**—Kilburn has observed a number of cases in which he believes that eyestrain played an important part in bringing about lateral curvature of the spine. Three such cases are reported in detail. He believes that the relationship between eyestrain and lateral curvature is a subject that deserves careful investigation.

4. **Ring Bodies in Anæmic Blood.**—Cabot reports some new forms of ring bodies which he has observed in the blood in various kinds of anæmia. Six pictures are given. The origin and significance of these bodies are a mystery.

5. **Typhoid Fever in Infancy.**—Sylvester discusses the general subject of typhoid in infancy. He believes the disease to be more frequent than is generally admitted. A positive diagnosis must be based on the Widal reaction. Failure to resort to this test has led to diagnosticating typhoid fever as bronchopneumonia or meningitis. Hence the apparent rarity of typhoid in infancy. The author reports, at great length, one case of typhoid in infancy complicated by meningitis.

March 31, 1904.

1. The Partial Passing of Neurasthenia, By CHARLES L. DANA.
2. The Cystoscope—Its Diagnostic Value, By A. M. WOSE.
3. Ligation of Lacrymal Canal to Prevent Infection Following Cataract Extraction, By ALEXANDER QUACKENBOSS.

1. **Neurasthenia.**—Dana does not deny the existence of neurasthenia. Nerve exhaustion is probably a real thing and the term therefore has its uses. It also has its abuses. Insanity is a psychosis or morbid mental state. There are a number of morbid mental states that are not insanities, though they show a kinship to them. It is to these noninsane psychoses that some such name as neurasthenia, perversity, hysteria, or degeneration is given. The author contends that a large number of these so-called neurasthenias, and all the hys-

terias, should be classed as prodromal stages, abortive types, or shadowy imitations of the great psychoses. The first part of the paper is devoted to elaborating the idea that the prodromal stages of the major psychoses often manifest themselves as conditions to which the name neurasthenia is usually given. In the second part is given a description of the different types of psychoneuroses.

2. **The Cystoscope.**—Wose traces the development of the cystoscope and describes its uses and its limitations. Special attention is devoted to the importance of the cystoscope in the diagnosis of diseases of the kidney by means of ureteral catheterization. It is on account of its applicability to diagnosticating diseases of the kidneys that the instrument is of such importance.

3. **Ligation of the Lacrymal Canal.**—Quackenboss advocates ligating the lacrymal canal before operating for cataract in all cases in which there is infection of the tear passages. He has resorted to this expedient twice in the past year. One case is reported for the purpose of illustrating the author's method of procedure.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

April 9, 1904.

1. Some Toxicogenic Germs Found in Drinking Water, By Victor C. Vaughan.
2. A Case of Atrophy of Hand Muscles with Localized Sensory Disturbances; Possibly Early Syringomyelia, By D. I. Wolfstein.
3. Accidental Perforation of the Uterus, By D. S. Fairchild.
4. The Chemistry of the Medical School, By J. H. Long.
5. Tropical Cutaneous Myiasis in Man, By J. Lee Adams, Jr.
6. Carcinoma of the Lungs; Pancreatic Cyst, By W. W. Grant.
7. Tahiti from a Medical Standpoint (*Concluded*), By N. Senn.
8. Laryngectomy for Cancer, By H. H. Germain.

1. **Toxicogenic Germs in Drinking Water.**—Vaughan describes a new method for the bacteriological examination of drinking water, which he has employed with good results for the past sixteen years. His studies have led him to the following conclusions: "(1) Of 709 samples of drinking water examined between October 1, 1888, and December 31, 1903, 213, or 30 per cent., contained toxicogenic germs. (2) Ten samples contained no bacteria capable of growth at 38° C. Of these 10 samples, 4 were from deep springs, and 6 from the Great Lakes. (3) Waters that contain no germs capable of growth at 38° C. or higher cannot cause disease. (4) Waters that contain no toxicogenic germs are not condemned. (5) Waters that contain as their only toxicogenic organism a typical colon bacillus are not condemned. (6) Waters which contain as their only toxicogenic organism a typical proteus bacillus are not condemned. (7) Waters that contain any member of the venenosus group or any such germ as we have marked doubtful in the table given are condemned. (8) A germ that responded to the Widal test was never found."

3. **Accidental Perforation of the Uterus.**—Fairchild reviews the various ways in which the uterus may be accidentally perforated. Two cases that came under his observation are reported. The author's advice as to treatment follows: "If the perforation is small and made with clean instruments and if irrigation is not employed, rest and the application of ice will generally be followed by recovery with probably nothing more serious than a circumscribed peritonitis. If irrigation has been employed one of two courses of action will be necessary. If the infection is mild the treatment by rest and ice may be sufficient. If the infection is of a character to excite a septic peritonitis a vaginal hysterectomy with drainage will be indicated. In the milder form of infection there is danger of chronic inflammatory processes occurring in the pelvic connective tissue or peritonæum, leading to abscess formation and the train of sequences which so often attend chronic infection in this region, and will require the treatment usually demanded in such condition. If the perforation is more extensive or is made with a large size curette, the fundus may be delivered through an anterior vaginal incision and the wound in the uterus closed by sutures. As an immediate operation a hysterectomy is not often demanded unless the organ has undergone some degenerative change. It is certainly not good surgery to allow an opening of any considerable size to go unrepaired, not only on account of the danger of infection of the peritonæum, but on account of the danger of the intestine escaping through the opening in the uterus and becoming strangulated, as actually occurred in several cases."

5. **Myiasis.**—Adams calls attention to cutaneous myiasis in man, a disease which he believes is destined to assume some importance when the construction of the Isthmian canal is begun. The affection is characterized by cutaneous boils due to the presence of the larva of a fly. The chief characteristics of the disease are thus summarized: (1) Cutaneous myiasis in Darien is usually due to the *Dermatobia noxialis.* (2) Man and dog are hosts by preference. The *Dermatobia noxialis*, though not confining its attacks to man alone, cannot be called an occasional parasite of man, as it attacks all who are properly exposed. (3) White-skinned races are more susceptible to the disease than the darker races. (4) The period of incubation is from sixteen to twenty-three days, from exposure to the development of the first symptoms. (5) Larvæ differ in shape according to anatomic location. (6) Grub or larva, if left alone, will not produce injurious results. Abscess and ulceration are the results of attempted expulsion without proper preliminary treatment.

8. **Laryngectomy.** — Germain asserts that there can be no doubt that partial laryngectomy is the operation of choice. Yet the past decade has robbed total laryngectomy of many of its terrors. The mortality has been reduced by more than fifty per cent., and the probability of recurrences, in malignant disease, is about one-third of what it used to be. With regard to technics, the best method of procedure is to operate in two steps: (1) Preliminary tracheotomy. (2) After a few days or weeks laryngectomy in the Trendelenburg-Rose position. Cocainization of the superior laryngeal nerve is to be remembered. Primary suture of the pharyngeal

and œsophageal wounds saves the patient weeks in convalescence, while turning the tracheal stump forward and sewing it in the lower wound angle obviates the necessity of a permanent cannula, and in a great measure prevents aspiration pneumonia.

MEDICAL RECORD.

April 9, 1904.

1. Joseph O'Dwyer, M. D., By W. P. NORTHRUP.
2. What Shall We Do with the Nervous Woman? By WILLIAM C. SEBRING.
3. The Rectal Segment of the Ureter, By BYRON ROBINSON.
4. The Technics of the Removal of One Half of the Thyreoid Gland, By JOHN G. SHELDON.
5. Two Cases of Splenomedullary Leucæmia; Treatment and Recovery, By BERTRAM L. BRYANT, and HAROLD H. CRANE.

2. **The Nervous Woman.**—Sebring confines himself exclusively to the treatment of "the nervous woman" by means of drugs. This is not because he believes that such a method is necessarily the best method, but because he believes that it is the only practical method that can be pursued by the general practitioner. He reports at length five cases from actual practice which illustrate the five different types of nervous case most often seen by the ordinary physician. Such cases cannot be treated by rule of thumb, therefore no abstract can be given of the author's methods.

3. **The Rectal Segment of the Ureters.**—Robinson publishes the results of an anatomical study of the relations of the lower ends of the ureters to the rectum. The paper is fully illustrated and without the cuts it is not possible to give an idea of the author's results.

4. **Partial Thyreoidectomy.**—Sheldon asserts that the best method for excising one half of the thyreoid gland is the one devised by Gould. This method is not described in the books. The author performs the operation as follows: "The gland is exposed by dividing the skin, fascia, and muscles. The next step is to pass a Kocher's director or one blade of an artery forceps between the trachea and the isthmus. Usually, I remove the isthmus, and in these cases clamp the gland with a stomach clamp between the isthmus and the lobe that is to be left. When one clamp has been applied, a second one is placed close to the first and an incision made between the two clamps. I now turn the isthmus and the lobe to be removed outward and separate the under surface of the gland from the underlying structures with the finger covered with a piece of gauze. This can be easily and quickly done without injury to the gland or to the structures on which it lies. The thyreoid arteries are soon exposed as they enter the under surface of the gland. If a transverse incision has been made the inferior thyreoid is first exposed and clamped; if an angular incision has been used, it is easier to expose and clamp the superior thyreoid before dealing with the inferior vessel. After the arteries are clamped close to the gland and cut, the removal of the remainder of the lobe is easily accomplished by blunt dissection close to the gland. The veins of the thyreoid do not bleed after the arteries have been clamped; and the internal jugular vein, in the great majority of cases, gives no trouble." The author believes that tubular drainage should be used for ten or twelve hours after such operations, in order to carry away any of the glandular secretion that might have escaped at the time of poreation or which might be exuded immediately afterwards.

5. **Splenomedullary Leucæmia.**—Bryant and Crane report two cases of splenomedullary leucæmia, in both of which recovery took place under treatment. Both patients were treated with Fowler's solution. The case in which the most rapid recovery was made was also treated by the x ray.

MEDICAL NEWS.

April 9, 1904.

1. Tuberculosis of the Spinal Cord: with Reports of Cases of Tuberculous Myelitis and of Tuberculous Pachymeningitis, By CHARLES L. DANA, and J. RAMSAY HUNT.
2. The Outlook for a More Sanitary Street Car Service in New York, By GEORGE A. SOPER.
3. Early Diagnosis of General Paresis, By WILLIAM A. WHITE.
4. Pulmonary Tuberculosis as an Infectious Disease: Its Early Diagnosis, By JAMES J. WALSH.
5. Pathological Changes in Tissue Under the Influences of the X Ray, By WILLIAM S. NEWCOMET.
6. A Historical Sketch of Some of the So Called Cures for Consumption: with a Few Notes on Later Day Treatment (*To be continued*), By J. EDWARD STUBBERT.
7. Normal Labor Considered from a Surgical Standpoint, By A. M. POND.
8. Rubber Cushions for General Surgical, Gynæcological, and Obstetric Use, By HOWARD A. KELLY.

1. **Tuberculosis of the Spinal Cord.**—Dana and Ramsay report one case of tuberculous myelitis and softening of the spinal cord, and one case of tuberculous pachymeningitis. The clinical histories and the autopsy reports are given and discussed. Neither of the cases can profitably be abstracted.

3. **Paresis.**—White emphasizes the necessity of diagnosticating a case of paresis before the patient has had time either to disgrace or financially to ruin himself or his dependents. The author dwells upon the early symptoms of paresis and emphasizes the fact that the classic text book picture of the affection is only to be seen in advanced cases. The early symptoms may be summarized thus: Argyll Robertson pupil, abolished knee-jerk, slight speech defect, transient palsies, and paretic seizures accompanied by a gradually progressive mental enfeeblement. The only other early symptom that is diagnostically of importance is optic nerve atrophy, but although this is often of early onset it is from its very nature usually overlooked. The author discusses the diagnosis between the early stages of paresis and tabes, acquired neurasthenia, some of the pure psychoses, alcoholism, brain tumor, cerebral syphilis and disseminated sclerosis.

4. **Tuberculosis.**—Walsh lays stress on the fact that tuberculosis in its early stages is easily curable, while in its late stages it is practically beyond medical control. Hence the necessity of an early diagnosis. For practical purposes the

following symptoms and physical signs should lead to a positive diagnosis: Rapid pulse, daily variations of temperature of over one degree and a half Fahrenheit, loss of flesh, persistent cough, and localized areas of prolonged, slightly roughened expiration. More definite signs and symptoms than these can only be found when the disease is well advanced.

5. **Pathological Changes Due to the X Ray.**—Newcomet concludes: First, that no single form of degeneration is alone characteristic to the x ray, and that the form of degeneration observed depends entirely upon the tissue exposed and the method of x ray application; second, it would seem that the effect of the x ray was upon the cell elements in the exposed parts, but why certain normal cells, such as those in hair follicles, etc., should be more susceptible than other tissue is still a question of doubt, but in view of the vascular disturbance found by many observers it might be thought that this cause plays an active part.

7. **Normal Labor.**—Pond summarizes his advice thus: "(1) Success in obstetrics depends wholly upon your ability to secure and retain surgical cleanliness. (2) The same infective agents encountered in surgical practice are the causative agents in producing puerperal complications, and are only successfully combated by the employment of stringent aseptic and antiseptic technics. (3) Refrain from making numerous vaginal examinations, and when done, take great aseptic care. (4) Do not wait until you are called to the case to make the preparations for confinement. (5) The practice of carrying a confinement pad is dangerous. (6) Sunshine in itself is a valuable germicide; do not exclude it. (7) Unless the vaginal discharge is known to contain pyogenic bacteria the douche is contraindicated. (8) Exert the same surgical technics in dressing the umbilicus that would be demanded in any other fresh wound. (9) Be clean and be sure that you are clean. Take no chances. By so doing you will reap a liberal temporal reward, besides having the serene satisfaction of knowing that you are serving humanity faithfully and well."

AMERICAN MEDICINE.

April 9, 1904.

1. The Body Defenses and Synctioma Malignum, By Joseph McFarland.
2. The Nonoperative Relief of Eyestrain for the Possible Cure of Epilepsy as Tested in 68 Cases at the Craig Colony, by William P. Spratling. With Addendum, By George M. Gould.
3. The Preliminary Report of a Series of Metabolism Observations Made in Atrophic Arthritis, Hypertrophic Arthritis, Osteitis Deformans and the Normal (*Concluded*), By Joel E. Goldthwait, and Charles F. Painter, and Robert B. Osgood.
4. Nervous Complications of Typhoid Fever, By Herbert A. Black.
5. Cholecystectomy vs. Cholecystostomy. A Plea for the Plaintiff, By Maurice Kahn.
6. Corneal Ulceration Due to Nasal Infection, By S. Lewis Ziegler.

2. **Eyestrain and Epilepsy.**—Spratling is the medical superintendent at the Craig Colony of Epileptics. He gives in great detail the results which followed the attempt made by Gould and Bennett to cure 68 epileptics by fitting them with proper glasses. The results, according to Spratling, were not specially brilliant. In his own words: "Personally, I deeply regret that the experiment so carefully and scientifically made by Dr. Gould and Dr. Bennett did not yield better results. At the same time, it strengthened my convictions that epilepsy is not a 'single prescription disease,' so to speak—that the correction of the abnormalities of the eye alone is not any more likely to cure it than are surgical measures directed against the brain, from which so much was at one time hoped for, but from which we now expect so little." Gould in an addendum to Spratling's paper gives his views of the experiment as follows: "Two mistakes were made in conducting the experiment: 1. Young patients, and those only with less injured nervous systems should have been chosen. 2. Resident or frequently visiting opticians and oculists should have been insured to make the retestings, readjustments, etc., most necessary. Despite these faults, together with incomplete statistics, etc., 19 out of 57 patients, for the only comparable terms given of 3 months, showed a reduction of the number of seizures of 382 (44 per cent.), and 1 in 57 was cured against 1 in 80 by all other methods of treatment that have been tried at the Colony. From the result of the experiment at Craig Colony I judge that the permanent residence at such institutions of an expert ophthalmologist would result in great monetary saving on the part of the State. Spectacles would certainly lessen the special disease, and the number of seizures. Even if they would not do so they would tremendously lessen headache, digestional troubles, etc. For mere humanity's sake they should be ordered. The habit of depreciation and ignoring the eyestrain factor is both cruel and unscientific."

4. **The Nervous Complications of Typhoid Fever.**—Black discusses in succession the following complications of typhoid fever: Cephalalgia, convulsions, delirium, meningitis, cerebral abscess, hemiplegia, neuritis, paralysis, and typhoid spine. A couple of illustrative cases are briefly reported.

5. **Cholecystectomy.**—Kahn is unqualifiedly in favor of cholecystectomy, even in that class of cases in which drainage is usually advised. That is in cases of stone in the common duct and empyema of the gallbladder. He reports in great detail one case in which he performed cholecystectomy for the relief of stone complicated by empyema.

6. **Corneal Ulceration.**—Ziegler summarizes what he believes to be the best treatment for corneal ulceration due to nasal infection, thus: (1) The nose should have antiseptic irrigation and local treatment applied. (2) The lacrymonasal duct should be disinfected or dilated. (3) The eye should have a soothing lotion, a mydriatic instilled, and a cauterant applied to the ulcer, if necessary. (4) The diet should be regulated, tonic and antiphlogistic treatment given, and the hygiene generally improved.

BRITISH MEDICAL JOURNAL.

March 26, 1904.

1. The Coagulation Time of the Blood in Pregnant and Puerperal Women Suffering from Albuminuria and Eclampsia. (Report No. LXXXI to the Scientific Grants Committee of the B. M. A.), By C. Douglas.
2. Two Cases Involving the Question of the Site of Impregnation, By H. Cripps, and H. Williamson.
3. On Ventrofixation of the Uterus, By W. J. Sinclair.
4. A Warning Sign of Danger to the Child During Labor, By F. E. Daniel.
5. Clinical Notes on the Use of Bossi's Dilator, By W. B. Armstrong.
6. A Case of Tubal Gestation: Primary Intraperitoneal Rupture: Operation: Recovery, By B. Dyball.
7. Treatment of Puerperal Eclampsia by a Combined Method, By J. Lithgow.
8. The Pathology and Surgery of Certain Diseases of the Pancreas. (Abstract of Hunterian Lectures: II), By A. W. M. Robson.

1. **Blood Coagulation in Pregnant Women.**—Douglas has studied the coagulation time of the blood in pregnant and puerperal women suffering from albuminuria and eclampsia, with a view to proving the truth or falsity of Groves's theory as to the ætiology of eclampsia. Groves holds that the essential lesion consists in the formation of minute capillary thrombi, with hæmorrhagic infarcts and necrosis of the surrounding cells; this increased tendency to thrombus formation in eclampsia is supposed to be due to an increased coagulability of the blood, this alleged increase in its turn being due to the presence of toxines which originate in the placenta, the fœtus, and the alimentary canal. The instrument used was the latest form of Wright's coagulometer. He found but little difference in the coagulation time of healthy pregnant and puerperal women and of eclampsia before and after delivery—which, of course, entirely fails to support Groves's contention.

2. **Tubal Gestation.**—Cripps and Williamson report two cases of pregnancy involving the question of the site of impregnation of the ovum. As we are in ignorance of the site at which impregnation normally occurs and of all details of the journey of the ovum from the ovary to the uterus, the cases are worthy of being placed on record. In the first case, one of exophthalmic goître, the mother's condition became increasingly serious with each pregnancy, and the Falloppian tubes were ligatured. She again became pregnant, however, so that the tubes were again tied, a knuckle of each being first removed. Nevertheless, pregnancy occurred again. The second case was one of migration of the ovum across the uterus to the opposite tube, where impregnation and tubal pregnancy occurred, the ovary on that side having been previously removed by operation.

4. **A Danger Sign in Labor.**—Daniel states that during the second stage of labor in an instrumental case with the head presenting, when from any cause the placental circulation is interrupted, the child attempts to breathe. This movement is communicated through the handles of the forceps, and can readily be recognized by one familiar with it. These first diaphragmatic contractions have a characteristic peculiarity in being duplicated; they are sudden and spasmodic and easily communicated to the head of the child, and through it to the forceps. The main indication is to deliver the child as speedily as possible, even at the risk of a moderate amount of perineal rupture.

7. **Eclampsia.**—Lithgow reports a very severe case of puerperal eclampsia occurring in a woman aged nineteen years, which he puts on record for the following reasons: 1. The survival of the patient after an extraordinary number of eclamptic fits; the patient had sixty-nine severe seizures. 2. The ready manual dilatation of the rigid cervix, by means of the previous application of a solution of cocaine on lint to the cervix. 3. The intracellular injection of two pints of salt solution. 4. The presence of urea in the blood—two grains and a half to the ounce. The patient recovered rapidly and entirely.

LANCET.

March 26, 1904.

1. The Pathology and Surgery of Certain Diseases of the Pancreas. (Hunterian Lectures: II), By A. W. M. Robson.
2. On Treatment with Antituberculous Serum, By A. Marmorek.
3. Intravesical Separation of the Urines Coming from the Two Ureters as an Aid to Diagnosis in Surgical Diseases of the Kidneys, By R. A. Bickersteth.
4. Training of the Feeble-Minded, By F. Warner.
5. Two Cases of Hypertrophied Breasts in the Male (Gynæcomastia), By A. W. Jones, and J. B. Christopherson.
6. A Case of Acute Yellow Atrophy of the Liver, By J. Edwards, and M. H. Smith.
7. A Case of Hysterectomy for Cancer of the Uterus, Coexisting with Pregnancy, By I. Macdonald, and W. A. Mackay.
8. Hyperchlorhydria, By W. Broadbent.
9. A Case of a Large Uterine Fibromyoma Removed from a Patient Post Mortem, By A. Brown.

1. **Disease of the Pancreas.**—Robson classifies inflammatory affections of the pancreas as follows: 1. Catarrhal, where the inflammation is in the ducts. 2. Parenchymatous, where the substance of the pancreas is involved. 1. *Catarrhal.*—*(a)* Simple catarrh, acute and chronic; and *(b)* suppurative catarrh. 2. *Parenchymatous.*—Acute. *(a)* Hæmorrhagic pancreatitis: (1) Ultraacute, in which the hæmorrhage precedes the inflammation, the bleeding being profuse and both within and without the gland; and (2) acute, in which the inflammation precedes the hæmorrhage, the latter being less profuse, and distributed in patches throughout the gland. *(b)* Gangrenous pancreatitis. *(c)* Suppurative pancreatitis (diffuse suppuration). Subacute: Abscess of the pancreas (not diffuse suppuration). Chronic: *(a)* Interstitial pancreatitis: (1) interlobular; and (2) interacinar, *(b)* Cirrhosis of the pancreas.

The ætiology of pancreatitis is classified under (1) predisposing and (2) exciting causes. 1. *Predisposing.*—*(a)* Obstruction in the ducts from gallstones, duodenal catarrh, pancreatic calculi, cancer of the papilla or of the head of the pancreas, ulcer of the duodenum, ascarides, and lumbrici. *(b)* Injury from a bruise, a crush, a wound, or manipulation in operation. *(c)* Hæmorrhage into the gland. *(d)* General ailments, such as typhoid fever, influenza, and mumps. *(e)* Anatomical peculiarities of the pancreas or its ducts. *(f)* Atheroma or fatty degeneration of the blood vessels. 2. *Exciting:* *(a)* Infections conveyed from the blood, as in syphilis or pyæmia; from the duodenum, as in gallstone obstruction or intestinal catarrh; and by extension inwards from adjoining organs, as in gastric ulcer or cancer eroding the pancreas. *(b)* Irritation as in alcoholism.

The author holds that catarrh of the pancreas is as worthy of recognition as a distinct disease as is catarrhal jaundice. Chronic interstitial pancreatitis is, in many cases, simply a sequence of pancreatic catarrh. If it fails to yield to medical treatment an exploratory operation is indicated, for the removal of the cause if possible; if not, drainage of the bile ducts will nearly always afford relief. The infected bile is removed, and the pancreas is relieved of the pressure of pent-up bile. In some cases mere manipulation has been followed by recovery. Gross lesions are rare in simple catarrhal pancreatitis.

Suppurative catarrh of the pancreas corresponds to suppurative cholangeitis, with which it is usually combined, and is a very serious and frequently fatal disease. Gallstones are the common cause, and death is due to septicæmia or pyæmia. Four illustrative cases are reported.

Acute pancreatitis usually begins with sudden pain in the epigastrium, faintness, and vomiting. Epigastric swelling and tenderness are usually present. Constipation is the rule, and the cases are often mistaken for intestinal obstruction. The pain is soon followed by abdominal distention and slight jaundice, which last may become very intense. The temperature is variable, but the pulse is very rapid. Delirium comes on in the later stages, and death occurs from the second to the fifth day from collapse, probably due to absorption of virulent matter. The foregoing description applies to the hæmorrhagic, gangrenous, or suppurative varieties of acute pancreatitis.

The diagnosis is at first obscure, but later presents no serious difficulties. The urinary test for pancreatic crystals is of great value. Glycosuria is usually absent. Morphine is necessary at the onset to relieve the intense pain, and the abdomen should be opened as soon as the diagnosis is made. If fat necrosis is found the diagnosis is established; a posterior incision in the left costovertebral angle permits of free examination of the diseased organ. The tense, inflamed organ should be incised and drainage established. If signs of gallstone obstruction are found the gallbladder should be drained. Of four cases operated on, two recovered. In many instances operative cases prove fatal from a prolonged search for a suspected (but non-existent) intestinal obstruction.

No hard and fast line can be drawn between acute and subacute pancreatitis; in the latter the onset is less acute, the course longer, and the suppurative process is limited by lymph barriers. There is usually a history of preceding attacks of gallstones, fever of a septic type, and leucocytosis. An abscess forms, which may reach the surface in a number of ways. It is more amenable to treatment than the acute form. Chronic pancreatitis may be either interlobular or interacinar; if the latter, there is destruction of the islands of Langerhans, and glycosuria is present. Surgical treatment varies according to the cause and the symptoms. There have been sixty-two operations for chronic pancreatitis, after which eight patients died.

2. **Serum Treatment of Tuberculosis.**—Marmorek in this paper discusses his serum treatment of tuberculosis. He believes that he has succeeded in preparing the real tuberculous toxine *in vitro*, and with this an efficient antitoxine. His treatment differs from that by tuberculin in that his is a passive immunization, while the latter is an active immunization. As a rule, the more acute the illness the sooner may good results be expected from the serum. Yet in the most acute form—meningitis—cure has not been obtained, probably because the remedy has always been applied too late. As regards pulmonary tuberculosis the too severe cases with extensive cavity formation, and the old fibroid cases are not benefited by the serum. But in the great mass of cases of phthisis the results have been most satisfactory. Recently infiltrated portions of the lung clear up, the hectic fever disappears, the amount of expectoration diminishes, and hæmoptysis becomes exceedingly rare. But it must constantly be borne in mind that a disease so advanced as tuberculosis of the lungs demands a long period of treatment for an absolute cure. In cavity cases benefit is often obtained by the administration of antistreptococcic serum along with the antituberculous serum.

3. **Intravesical Urinary Separation.**—Bickersteth describes and discusses the various methods for the separation of the urines coming from the two ureters, and strongly recommends the instrument of Luys as a great aid to diagnosis in surgical diseases of the kidneys. By its means the cavity of the bladder is separated vertically at the middle line, and the urine from each kidney flows off through a separate catheter. It causes but little pain, and no anæsthetic is necessary. The instrument is passed as an ordinary metal sound; on reaching the bladder the thin rubber partition is raised into place by simply turning a screw.

8. **Hyperchlorhydria.**—Broadbent states that hyperchlorhydria is difficult of diagnosis owing to the objection to the use of a stomach tube. But in 24 cases he was able to use the tube but twice, and yet was certain of his diagnosis. The condition occurs principally in men. As regards medicinal treatment, the best results were obtained with a mixture of magnesia, bismuth subnitrate, and mucilage, to which tincture of belladonna was added as a powerful suppressor of secretion. As regards diet Pawlow's conclusions must be borne in mind: 1. The more rapidly gastric juice is secreted the greater its activity. 2. Flesh produces more gastric juice, and that more rapidly, than bread; and bread more rapidly than an equivalent proteid value of milk. 3. Milk produces no appetite secretion of gastric juice. 4. Cream and fat delay the secretion of gastric juice though promoting that of pancreatic juice. The diet ordered by the author was at first milk and cream only; then bread and milk and soft milk puddings; later bread and butter, and buttered eggs. Soup and beef tea were entirely excluded.

Letter to the Editor.

DR. MURPHY'S SUBSTITUTE FOR RUBBER GLOVES.

RICHMOND, VA., *April 2, 1904.*

To the Editor,

Sir: Having read Dr. Murphy's paper, A Method of Dispensing with Rubber Gloves and the Adhesive Rubber Dam, in the *Journal of the American Medical Association,* March 19, 1904 (abstracted in the *New York Medical Journal and Philadelphia Medical Journal,* March 26th, p. 613), and after trying his method of substituting for them a 4, 6, or 8 per cent. solution of guttapercha in benzin, I wish to say that I have found in its use several disadvantages, the principal being the explosive nature of benzin, and also its disagreeable and penetrating odor.

These disadvantages can be overcome by using as a solvent for the guttapercha chloroform instead of benzin. It is quicker, safer, less disagreeable, and non-explosive. I have found by experimenting that a solution of guttapercha in chloroform answers every purpose for which the rubber gloves and the adhesive rubber dam are used, and in many respects is far superior. My method (if I may so call it) is identical with that of Murphy—the only difference is in the use of chloroform as a solvent instead of benzin as recommended by Murphy. The solution can be prepared and used at night or near a flame, if necessary, with perfect safety.

The only objection to the use of chloroform, as far as I can see, is the price. Commercial chloroform can be used, and this is comparatively cheap. WILLIAM FLEGENHEIMER.

⁂A solution of guttapercha in chloroform was official in the U. S. P. of 1880, and is still given in the *National Formulary.* Carbon tetrachloride is a cheap noninflammable solvent, which might with economy be substituted for chloroform. It is not generally obtainable under this name at the drug stores, but has been put up under various trade names, such as carbona, pyranzine, eradeline, etc., for use as a cleansing agent.

Proceedings of Societies.

THE OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, December 3, 1903.

The president, Dr. JOHN M. FISHER, in the chair.

Puerperal Sepsis.—Dr. WILLIAM R. PRYOR, of the New York Polyclinic Medical School, read by invitation a paper upon this subject and quoted extensively from recent investigators regarding the bacteriology of the various forms. He began by stating that of all forms of puerperal fever but 25 per cent. were truly septic, and commented adversely upon the continued indifference of even those who should be better informed, to precision in diagnosis. As long as such ignorance remained acceptable to the profession, we might expect to hear of new and startling discoveries in treatment which were entirely irrational.

He showed that upon the vulva pyogenic bacteria were present in 70 per cent. of cases; in the vagina in about 30 per cent., and in the uterus even in an appreciable percentage of normal cases.

He therefore insisted that in making a diagnosis of puerperal fever the contents of the uterus as secured by Döderlein's method was the only accurate basis.

When present in the uterus, pyogenic cocci might act as saprophytes as well as producers of sèpsis, but they might change their rôle under the influence of trauma. Therefore, he condemned intrauterine irrigations and curettage in all cases where streptococci were present in the uterus. The author expressed his belief in technical autoinfection, but thought it very rare.

He concluded his paper with a full statement of his method of procedure should the examination show the case to be one of sepsis. The uterus was washed out with Thiersch's solution and packed full of iodoform gauze, 10 per cent., or even 20 per cent., strength. If the case was saprophytic, the temperature rapidly dropped and remained down. If it dropped and rose it was an indication that the pathogenic germs had passed deeply into the substance of the uterus and parametric tissues.

The author then fully described his method of preparing his dressings, and the technics of his operation. By this operation he sought to secure local and general iodism.

It was his belief that in every case of true puerperal sepsis, sepsis which did not yield to simple local cleanliness, peritonitis or annexal lesions were always produced, except in those rapidly fatal cases in which death occurred from septicæmia before local lesions could occur. We were also to consider the disease as a cause of destructive changes in remote organs, the heart, lungs, and kidneys. Two considerations influenced us in our selections of a method of treatment; we must not only combat the disease within the pelvis, but must also counteract the general infection. The author sought to secure this result by isolating the infected uterus between the masses of iodoform gauze, and by local and systemic iodism to destroy the cocci, locally and systemically.

The Operation.—Most of his material was brought to him after other measures had failed to relieve. In not a single instance had he failed to find albumin in the urine, and many of the cases presented grave changes in the kidneys. He had, therefore, been compelled to aid the kidneys in their eliminative functions. This was accomplished in the milder cases by high colon enemata of saline solution, and in the gravely ill by intravenous infusion. The latter might be given before operation under local anæsthesia, during the operation or after. He was in the habit of using rather large quantities of fluid, the minimum being five pints and the maximum amount eight pints.

The cervix was thoroughly dilated and the uterus curetted. A specimen of the detritus removed was saved for examination. The uterus was then irrigated with saline solution, to remove the débris, and was packed full of iodoform gauze of 10 per cent. strength. The posterior cul-de-sac was opened by a broad incision. In all instances a considerable quantity of fluid escaped. This might be serum, serolymph, seropus or almost pure pus. If there was much effusion of lymph the organs might be matted together, and if so, all adhesions were rapidly severed by the fingers. He now lifted up the uterus with the towel and depressed the posterior vaginal wall. Generally the rectum would prolapse into the wound or a knuckle of intestine present. From the surface of either he picked off a bit of lymph or wiped some fluid and kept it for examination.

The pelvis was now packed full of iodoform gauze of 5 per cent. strength. As this folded dressing was withdrawn from the jar it would be of one yard width. Pieces were cut off of an average length of eight inches, so that each piece inserted into the pelvis would be, if unfolded, one yard long and eight inches wide. They were inserted, however, folded as shown. From ten to fifteen of such pieces were used. The first was passed well to one side of the pelvis over the iliac vessels and extending to the pelvic brim. It was held in place by this long retractor. Other pieces were placed alongside this, so as completely to fill the pelvis from side to side, to be in apposition with the posterior layers of the broad ligaments and uterus and in contact with all that portion of the pelvic peritonæum which overlies those lymphatics and veins that carry the infection. The gauze should not project from the vulva. A self-retaining catheter was inserted and such cardiac stimulants employed as the heart muscle demanded. He employed nitroglycerin, digitalis and *moderate* doses of strychnine. He wished to speak against those massive doses of strychnine given by some, as they induced contraction of the arterioles, a condition most undesirable in streptococcic infection.

Frequently, in two hours and on an average in five hours, he had secured a marked reaction of iodine. In order to keep up the function of the kidneys and assist them to eliminate the iodine he gave saline enemata in eight ounce quantities every four hours. The posture of the patient was a matter of indifference.

All dressings were saved and examined bacteriologically.

As already stated, the first result of the operation was a free outpouring of serum by the peritonæum. This, of course, had a strong iodine reaction. The general surgeon had probably noted the same result from his Mikulicz abdominal packs. It was but natural that, having found streptococci in the fluid collected from the pelvic opening, he should have studied the effect of the operation upon the infected field. Not only were the dressings from the uterine cavity examined, but those from the cul-de-sac as well. He had observed that the uterine cavity was rendered sterile with more difficulty than the pelvic. In every instance, save one, the pelvis was free from cocci at the second dressing. In this case, streptococci persisted until the third dressing. The anatomical conformation of the cervix in this case was such that he deemed it advisable to repack the uterus at each dressing, to keep the cervix open. In this instance he found streptococci on the uterine gauze of the fourth dressing, but not of the fifth. However, in this woman the drop in temperature after the operation was particularly sharp and abrupt; so that he had been led to consider the sterilization of the pelvis as of more importance than that of the uterine cavity. Anyhow, although he had found streptococci in both uterine and pelvic dressings he had not failed to note the subsidence of symptoms in all cases not having complications.

He has never been able to separate his septic cases into the post-partum and post-abortum. He once showed six uteri removed by the coroner from women who had died from the most virulent septicæmia after clinical abortion before the fourth month. He could, therefore, scarcely leave such cases out of the class of puerperal sepsis, and they were classified here as puerperal.

So many factors governed the degree and progress of an infection that he had established a purely arbitrary classification, and included as puerperal all infections occurring after the tenth week of pregnancy. He had operated upon 37 women. In 36, streptococci were found in the uterine scrapings, and in 37 they were secured from the cul-de-sac. Torrens had operated in 6 cases, in all of which streptococci were found in the uterus and cul-de-sac. Killebrew (Mobile) had operated in 2 cases. Brooks H. Wells had performed 8 operations. In ten instances a previous curettage had been done and three patients had died, a 33 per cent. mortality. In 43 cases not previously operated upon, 1 patient had died, a mortality of 2 per cent. The deaths had been due in 1 case to bilateral bronchopneumonia, and in three to endocarditis with pneumonia.

As to the morbidity, they had found that six women had subsequently conceived, five going to full term, one inducing abortion at the fifth month. Contrast this treatment with that of curettage alone with a mortality of 22 per cent.; with that by antistreptococcus serum, mortality 33 per cent.; by hysterectomy, mortality 55 per cent., and the let-alone treatment, mortality 7 per cent. to 25 per cent.; and they had nothing for which to apologize. But there was another phase to the subject. All the women they had operated on and who had lived, had kept their uteri, and six that they knew of had had a restoration to physiological function, as evidenced by the fact that they had subsequently conceived.

Dr. **Edward P. Davis** said that, in speaking of cases of puerperal septic infection, we must include cases of early abortion as well as those which arose after the birth of a viable fœtus. The anatomical changes produced in the uterus by pregnancy made possible the lesions of septic infection at any time during pregnancy. Hence, cases of sepsis after abortion and cases of sepsis after childbirth had the same pathology and required the same treatment.

Dr. Pryor's statement that septic infection in these cases rapidly passed from the uterus was fully confirmed by others. In a recent report, Treub, of Amsterdam, in 724 cases, found but six in which the infection was in the uterus, and of these six there were but two which were appropriate cases for hysterectomy. In these two cases in which hysterectomy was performed, evidences existed that the infection had spread beyond the uterine cavity. Treatment, then, based upon the belief that the uterus was the site of the infection must be unsuccessful.

It was a matter of experience that a sudden drop in temperature might follow prolonged irrigation of a septic uterus or abdominal section with irrigation of the pelvic or peritoneal cavity. This result could not be ascribed entirely to the application of iodine.

In comparison with the results of hysterectomy, Dr. Pryor's statistics were highly favorable. The total mortality of Treub's 724 cases of puerperal septic infection was 4½ per cent. without operation. At the International Congress at Rome, Fehling and Leopold discussed hysterectomy extensively, and Fehling reported 61 cases of hysterectomy for puerperal septic infection with a mortality of 55.7 per cent. Leopold placed such limitations upon the selection of hysterectomy in septic cases as to render the operation an exceedingly rare one.

Some of the benefit which Dr. Pryor reported in his cases might have resulted from the curetting to which they were subjected. When the operator was prepared to drain the pelvic cavity antiseptically, he believed the operation of curetting should precede the operation for drainage. In skilful hands, it was possible thoroughly to empty a septic uterus of necrotic contents without breaking down the zone of resistance and without imperilling the interests of the patient.

In his experience good results had followed in some cases preliminary emptying of the septic womb followed by opening the abdomen, examining the pelvic organs thoroughly, and if pyosalpinx was not present, separating adhesions, then opening the posterior cul-de-sac freely, packing gauze behind the uterus and carrying the end of the gauze through the opening into the vagina. The abdominal wall was then completely closed. The gauze was gradually removed from below.

He did not share Dr. Pryor's prejudice against calomel, as it was the best drug in his experience in septic cases to increase the elimination of solids by both bowel and kidneys. The use of salines almost invariably produced a temporary rise in temperature, which subsided after the intestines were freely emptied. Iodine as an antiseptic had long been employed, especially by English obstetricians, who practised intrauterine injections of dilute iodine mixtures and had also used iodine by intravenous injection.

In view of the fact that bacteriology showed us that the birth canal frequently contained bacteria, we must consider the uterus in all cases of prolonged labor in which interference had been practised without strict antisepsis as already infected. When we are called upon to deliver these cases, as in craniotomies where forceps have been tried unsuccessfully, we should drain the puerperal uterus after it was emptied by a packing of iodoform gauze. In this way we not only prevented hæmorrhage, but we anticipated the development of infection and did something to prevent its spread. A patient recently delivered by craniotomy, who had been subjected to ether twice with attempts at forceps before admission to hospital, made an uninterrupted convalescence with a temperature not exceeding 100° F. The course of this case was not unusual in patients treated by the method described.

Dr. E. E. **Montgomery** said that there was no class of cases which should interest the general practitioner more than those under consideration. A few years ago the large hospitals furnished the greater mortality in the delivery of women. Today the woman, confined in a well arranged hospital, was safer than the one confined in private practice. In other words, the greater care afforded by the larger hospital saved the woman from the danger of infection. He fully agreed as to the extension of the inflammation through the uterine walls into the peritonæum, and in those cases with evidences of infection we found that, though there might be no indication of exudate or infiltrate about the uterus on opening the retrouterine pouch, we should find that the peritonæum was covered with not only a serous exudate, but a seropurulent fluid. Such a case recently came under his observation at St. Joseph's Hospital. He agreed also with Dr. Pryor as to the wisdom of intravenous injection of normal salt solution. In many cases of high temperature, defective action of kidney, and defective elimination, this procedure afforded the best chance of elimination of the poison.

Dr. **John B. Deaver** was not able to take exception to any of Dr. Pryor's statements to-night. He was particularly glad to hear him laud iodoform gauze. The speaker used iodoform gauze very extensively. He still used it in bad septic cases—that is, bad appendicular cases. He saw a fair number of the class of cases to which Pryor's paper referred, in his service at the German Hospital, and he certainly had seen most excellent results following the opening of the cul-de-sac and thorough packing with iodoform gauze. He was particularly pleased to hear of the amount of gauze Dr. Pryor used. He had used 125 pieces in appendicular operations. The transfusion of saline solution we all approved of in certain cases. Large hypodermics of strychnine he had for a long time opposed. He frequently had trouble with his hospital residents in that respect, and had at last forbidden the use of strychnine, excepting under his dictation.

The importance of bacteriological examinations in puerperal cases was established against all question, just as much as in any other portion of the body. He was sorry that Dr. Pryor's confrères in New York were not all as progressive in his line of work as he was.

Dr. **Richard C. Norris** felt that Dr. Pryor's paper was a distinct advance in the investigation of the surgical treatment of puerperal septicæmia, and he welcomed it as a new feature in that treatment. Heretofore even aggressive surgeons in operating in grave cases of puerperal sepsis had not achieved brilliant results. The element of doubtful diagnosis and prognosis which limited the performance of hysterectomy, and oftentimes the use of the uterine curette, he believed, unfortunately, would be found to exist in cases treated by Dr. Pryor's method. In maternity hospitals grave cases of septicæmia had almost disappeared, and to estimate the practical value of this treatment it must be judged by what the general practitioner could do with it. While it was true that we should make our standards of the highest, it was likewise true that any plan of treatment should not be measured by the standard of what the most capable men in the profession could and would do with it. The teachings of the paper presented to-night might be applied by the general practitioner, and in his judgment they must be tempered with a certain amount of caution as to the dangers that might attach thereto.

Bacteriological examinations in puerperal septicæmia, of the vaginal secretions, of the uterine contents, and even of the blood, had practically not accomplished anything in the treatment or prognosis of individual cases of grave puerperal septicæmia. We had one woman with streptococci in her uterus or blood, and hysterectomy was done and she died; and we had another and she got well—not always because of hysterectomy, but because of some resistance in her body to the infection. Bacteriological investigations advanced our knowledge, but the progressive surgeon, in puerperal septic cases, must be governed by other factors. Such investigations had accomplished nothing in his hands to determine the treatment or prognosis of puerperal septicæmia. If the general practitioner, in handling private cases, opened the cul-de-sac in the presence of less serious type of infection (which Dr. Pryor or any gynæcologist with a knowledge of the dangers of such an operation would not do) and packed with gauze in the presence of infection which might not have spread to the pelvic cavity, there was added a distinct and by no means theoretical danger. Witness the indiscriminate use of the curette! His remarks were based solely upon the possible danger of this measure of Dr. Pryor falling into inexperienced hands. The practical value of this or any method of treatment must be measured largely by its value to the general practitioner, and therefore the inability of such men to make bacteriological examinations would render Dr. Pryor's plan a dangerous plan of treatment in their hands. Bacteriology had, as yet, not determined for us the necessity or the contraindication for the surgical treatment of puerperal septicæmia. That was true, he believed, of the curette, of hysterectomy, of excision of thrombosed pelvic veins, as recommended recently by Trendelenburg, of this operation of Dr. Pryor, or of any surgical treatment ever advocated.

Until we learned from the bacteriologist, as the result of his examination, more than an anatomical diagnosis of the kind of microorganism, we could look for little aid from that quarter. The mere diagnosis of a streptococcus under the microscope would not tell us the virulence of that particular germ; it must be subjected to animal inoculation to determine its pathogenic potentialities. We could not, because we have diagnosticated anatomically a streptococcus, affirm that our treatment, because apparently successful, had really saved life. The difference in power of resistance in the organisms of individuals to streptococci, the difference in the virulence of streptococci (he believed bacteriologists described 25 or 30 varieties), the difference in the channels through which streptococci might invade the system—when bacteriology should tell us those important factors in every case, then bacteriological examination would be of value. Up to this time we simply made an anatomical diagnosis. He was sure that men of large clinical experience with the streptococcus found that in one case it was not so virulent as the streptococcus in another case, and yet there was no difference between them under the microscope. He had, therefore, practically discarded bacteriological examination of the uterine secretions and of the blood of a septic case. He considered it of no practical value in the management or prognosis of that case. The clinical diagnosis of the channels through which infection was spreading was of far greater value, both for treatment and for prognosis. Determine by bacteriology, by surgery or by clinical signs, if possible, *where* the infection was spreading or was localized, and then your treatment might avail, or its hopelessness be disclosed. In the very rare cases of peritonitis yet localized in the pelvis, due to microbe invasion through the tubes or uterine wall, drainage of the cul-de-sac by Dr. Pryor's treatment would doubtless be ideal, but such cases were rare and practically defied diagnosis at the time when that treatment would avail. He recorded three cases in which, in spite of his attempt to localize the infection in the pelvis, death occurred from systemic infection. What, then, was the practical value of attempting to localize the disease in the pelvis and drain the pelvic cavity free from germs, if we were to have our patients die of streptococcic endocarditis or pneumonia? If iodine was the agent we employed to destroy streptococci, why introduce it into the pelvic cavity when it was not going to reach the infection which had passed beyond the pelvic cavity? Why not attempt intravenous injection at once as had been followed by failure with formalin? The use of iodoform gauze in the uterine cavity was familiar to all of us. Dr. Pryor curetted every case he so operated on. Might it not be that the curette and uterine drainage were responsible for a part of the good results obtained? If virulent streptococcic infection had passed beyond the uterine cavity, and Dr. Pryor rightly stated that this was a question of minutes in some cases, it had gone beyond the possibility of localizing it to the pelvis, and this treatment would fail as every other surgical treatment had failed. We must, however, recognize a limited value for this treatment in skilled hands. He believed that at a meeting of this kind we should not lose sight of drilling into the general practitioner's mind the means of preventing these grave cases. It could be done. Pryor's method might find its place among the methods of preventing grave cases, when he taught us to distinguish the class of cases that drainage of the cul-de-sac would save by preventing a local peritonitis from becoming a general and fatal peritonitis. For the prevention or cure of the rapidly fatal systemic infections, through either the venous or lymphatic channels, he could not see its value.

(*To be concluded.*)

Book Notices.

Adeno-Myome des Uterus. Von Thomas S. Cullen, Hülfsprofessor der Gynäkologie an der Johns Hopkins Universität, gynäkologischen Assistenten am Johns Hopkins Hospital in Baltimore, Maryland, U. S. A. Mit 45 Abbildungen im Text. Berlin: August Hirschwald, 1903. N. W. Unter den Linden, 68. Pp. 91.

In his contribution to the *Festschrift* to Professor Orth, Cullen describes a number of cases of adenomucous membrane of the uterus from Müller's Hospital. He brings out the fact that these neoplasms represent diffuse myomatous thickenings of the lower muscular layers, accompanied by a dipping in of the normal uterine mucosa. The growths may become subperitoneal, intraligamentous, or submucous, like myomata of the ordinary variety. Adenomyomata are benign in their nature, but may degenerate into carcinomata, and Cullen records one such case.

As to the origin of these growths, Cullen says that the glandular elements arise either from the mucous membrane of the uterus or from Müller's ducts, independently of the fact of whether the neoplasm is interstitial, subperitoneal, or intraligamentous. Speaking of the adenomyomatous growths of the round ligament, Cullen belives that they originate in displaced elements of the Müllerian ducts.

The monograph constitutes an important contribution to gynæcological pathology, and is representative of its source. It is beautifully illustrated by a large number of original drawings.

The Complete Medical Pocket Formulary and Physician's Vade-Mecum. Containing Upward of 2,500 Prescriptions. Collated for the Use of Practitioners by J. C. Wilson, A. M., M. D., Physician to the German Hospital, Philadelphia, etc. Third Revised Edition. Philadelphia: J. B. Lippincott Company. Pp. 267. (Price, $1.75; Thumb Indexed, $2.00.)

The third revised edition of this valuable little work comes to hand with an appendix containing a list of the newer remedies. The indications for some of these have been omitted, apparently through oversight. The book is especially helpful to the physician who will use it as mainly suggestive and not follow its formulæ slavishly.

The Treatment of Neurasthenia. By A. Proust, Professor à la Faculté de médecine de Paris, services sanitaires, etc. Translated by Peter Campbell Smith, L. R. C. P., L. R. C. S., Edin.; L. F. P. S., Glasg. New York: Edward R. Pelton, 1903. Pp. xiv-213.

Any discussion of neurasthenia, provided it is intelligent and clear and leads to a more widespread appreciation of the true symptoms and their alleviation, is always a welcome addition to our literature. Since the time of Beard neurasthenia has been regarded as an eminently American disease. But the fact that a French physician can write such an able treatise on the subject indicates the extent to which other lands are affected. The title of the work is a misnomer, for, besides the treatment, both the causes and clinical forms are most adequately discussed. Considerable space is devoted to prophylaxis, under which stress is justly laid upon the importance of both moral and physical education. The part which deals with treatment includes chapters on psychotherapy, which is to-day receiving more of the recognition it deserves, diet, hydrotherapeutics, climatic treatment, exercise and gymnastics, and finally the Weir Mitchell system. Drugs very properly receive no mention. There are, unfortunately, far too many pharmaceutical preparations which are especially designed for the "cure" of neurasthenia.

The Medical Epitome Series. Normal Histology. A Manual for Students and Practitioners. By John R. Wathen, A. B., M. D., Professor of Surgery and Gynæcology in the Kentucky School of Medicine, etc. Series Edited by V. C. Pedersen, A. M., M. D., Instructor in Surgery and Anæsthetist and Instructor in Anæsthesia at the New York Polyclinic Medical School and Hospital, etc. Illustrated with 114 Engravings. Philadelphia and New York: Lea Brothers & Co., 1903. Pp. 229. (Price, $1.00 net.)

This is a compact little volume for the use of students. It may conveniently be used for the purposes of quizzing, and the questions are grouped at the end of each chapter. A vast amount of important facts in histology is contained in this small book, and many references to embryological data are also given. A large number of well chosen illustrations enhances its value. At the end of the book is a chapter on histological technics, in which are given directions for preparing tissues and blood for microscopical examinations. These directions, however, are so meagre that the student will be obliged to consult larger works for their full elucidation. As a whole, this is a valuable little book, and fulfills the purpose for which it is intended.

A Manual of Bacteriology. By Herbert U. Williams, M. D., Professor of Pathology and Bacteriology, Medical Department, University of Buffalo. With 99 Illustrations. Third Edition, Revised and Enlarged. Philadelphia: P. Blakiston's Son & Co., 1903. Pp. xv-336. (Price, $1 75 net.)

The merits of this little work are well known, and we feel assured that the present edition will receive a very cordial welcome. The book is very readable and the different subjects are most thoroughly treated for so small a work. The text has been carefully revised, and with the new material added, is fully abreast of modern thought and teaching. The advisability, however, of introducing a chapter on the sterilization of the hands, preparation of instruments, ligatures, dressings, etc., for surgical purposes, in a manual of this size is questionable. The illustrations throughout are good, and those that are not original have been judiciously chosen. Small works of this kind are of the greatest value to the student, and we can heartily commend the one before us as complete, practical, and, above all, reliable.

BOOKS, PAMPHLETS, ETC., RECEIVED.

Dermatologische Vortrage für Praktiker. Von Dr. Jessner. Heft 1. Des Haarschwunds, Uraschen und Bedhandlung. Pp. 52. Heft 12. Die Syphilide (Syphilis der Haut und Schleimhaut). II. Teil, Therapie. A. Stuber's Verlag (C. Kabitzsch), Wurzburg. 1904. Pp. 72.

Weeds Used in Medicine. Farmer's Bulletin No. 188. By Alice Henkel, Assistant in Drug and Medicinal Plant Investigations, Botanical Investigations and Experiments, Bureau of Plant Industry, U. S. Department of Agriculture. Government Printing Office, Washington, D. C. 1904.

On the Production and Suppression of Glycosuria in Rabbits Through Electrolytes. Physiology. Vol. I, No. 12, Pp. 87-113. February 15, 1904. (Second Communication). By Martin F. Fisher. The University Press, Berkeley.

Miscellany.

Unhappy Results of a Kindhearted Action.—According to the New York *Sun*, thirty children danced not long ago at a party given for them. Among the number were some small members of the wealthiest families in the city. A friend of the hostess arose from a sick bed to keep her promise to try to entertain them. At the end of the afternoon she was able to say with the consciousness of having done her duty:

"Feeling as badly as I did, I danced with twenty-seven of the little ones."

Then she went home to bed, and, as it ultimately proved, to measles. A day or two later reports began to come in from the party. At the end of a week twenty-seven cases had been reported from among the thirty children present. At least one of them had a fatal result, so the danger of children's parties, even under the most favorable circumstances, is impressed again on parents.

A Remarkable Case of Ectocardia.—Dr. J. Gates Goode, of Cheriton, Va., in the *Virginia Medical Semi-Monthly* for March 11, 1904, describes what seems to be a unique case of ectocardia.

"On the night of January 7, 1904," he writes, "I was called to attend Mrs. O. in labor. She was a white primipara, aged 27 years. Her labor was perfectly normal; gave birth to a girl baby the next morning at 7 o'clock. Weight of child, 5½ pounds. Upon examining the child I found that its heart was outside of its body. With the exception that the cord was attached higher up than usual, the child was perfectly normal otherwise. *The heart protruded from the chest* through a small opening just large enough to permit the vessels to enter the cavity, and corresponding in position with the second piece of the sternum (gladiolus). The integument at the lower part of this foramen was continuous with the covering of the blood vessels; not so above. The heart was perfectly normal in size and shape—the auricles, ventricles, and auricular appendices being very distinct and well defined. The cord was attached about one inch below the heart, corresponding in position with the ensiform appendix. The first piece of the sternum (manubrium) was intact; the other two (gladiolus and ensiform appendix) were either absent or divided in the centre and attached to the sternal extremities of the ribs on both sides of the heart. The child did well for some days, but the walls of the heart gradually got thicker and thicker, and at the end of sixteen days the child died.

"The following doctors besides myself saw the child in life: Dr. G. W. Holland, of Eastville, Va.; Dr. G. P. Moore, and Dr. B. Kellam, of Cape Charles, Va."

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from April 1 to April 9, 1904:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
Florida—Jacksonville	Mar. 26-Apr. 2	1	
Illinois—Chicago	Mar. 26-Apr. 2	5	
Illinois—Danville	Mar. 26-Apr. 2	6	
Indiana—South Bend	Mar. 26-Apr. 2	1	
Kentucky—Covington	Mar. 26-Apr. 2	2	
Louisiana—New Orleans	Mar. 26-Apr. 2	4	
		2 imported.	
Maryland—Baltimore	Mar. 26-Apr. 2	4	
Massachusetts—Lowell	Mar. 26-Apr. 2	1	
Michigan—At 75 localities	Mar. 19-26	Present.	
Missouri—St. Louis	Mar. 26-Apr. 2	15	
New York—Buffalo	Mar. 26-Apr. 2	3	
New York—Niagara Falls	Mar. 26-Apr. 2	1	
Ohio—Cleveland	Mar. 25-Apr. 1	6	2
Ohio—Dayton	Mar. 26-Apr. 2	5	
Pennsylvania—Carbondale	Mar. 24-31	1	
Pennsylvania—Erie	Mar. 26-Apr. 2	2	
Pennsylvania—Philadelphia	Mar. 26-Apr. 2	32	7
Pennsylvania—Pittsburgh	Mar. 26-Apr. 2	4	
		3 imported.	
Pennsylvania—Reading	Mar. 28-Apr. 4	1	
South Carolina—Charleston	Mar. 26-Apr. 2	2	
South Carolina—Greenville	Mar. 19-26	2	
Tennessee—Nashville	Mar. 26-Apr. 2	5	
Virginia—Pocahontas	Mar. 24-31	6	2
Wisconsin—Milwaukee	Mar. 26-Apr. 2	3	

Smallpox—Foreign.

Place.	Date.	Cases.	Deaths.
Austria—Prague	Mar. 6-12	2	
Belgium—Antwerp	Mar. 12-19	16	4
Brazil—Rio de Janeiro	Feb. 28-Mar. 6	45	3
Canada—Quebec	Mar. 12-19	1	
Colombia—Barranquilla	Mar. 7-20		3
Formosa	Jan. 1-31	9	
France—Paris	Mar. 12-19	15	1
Great Britain—Edinburgh	Mar. 12-19	8	1
Great Britain—Glasgow	Mar. 18-25	46	4
Great Britain—Hull	Mar. 12-19	6	
Great Britain—Leeds	Mar. 19-26	2	
Great Britain—Leith	Mar. 12-19	1	
Great Britain—London	Mar. 12-26	84	
Great Britain—Manchester	Mar. 12-19	3	
Gt. Britain—Newcastle-on-Tyne	Mar. 12-19	7	
Great Britain—Nottingham	Mar. 12-19	13	
Great Britain—Sheffield	Mar. 6-19	3	
Great Britain—South Shields	Mar. 12-19	1	
India—Bombay	Mar. 1-8		19
India—Calcutta	Feb. 20-Mar. 5		7
India—Karachi	Feb. 28-Mar. 6	16	2
Mexico—Mexico	Mar. 13-20	11	6
Mexico—Vera Cruz	Mar. 19-26	1	
Netherlands—Amsterdam	Mar. 19-26	3	
Russia—Moscow	Mar. 5-12	5	1
Russia—St. Petersburg	Mar. 5-12	10	1
Straits Settlements—Singapore	Feb. 20-27		1
Turkey—Constantinople	Mar. 13-20		5

Yellow Fever.

Place.	Date.	Cases.	Deaths.
Brazil—Rio de Janeiro	Feb. 28-Mar. 6	9	
Mexico—Merida	Mar. 13-19	1	
Mexico—Tehuantepec	Mar. 19-26	3	1

Cholera.

Place.	Date.	Cases.	Deaths.
India—Bombay	Mar. 1-8		1
India—Calcutta	Feb. 20-Mar. 5		77
India—Madras	Feb. 13-Mar. 4		7
Turkey in Asia—Bassorah	Feb. 9-12	6	4

Plague.

Place.	Date.	Cases.	Deaths.
Africa—Port Elizabeth	Feb. 27-Mar. 5	8	4
Australia—Brisbane	Feb. 6-20	5	
Australia—Sydney	Mar. 10	1	
Brazil—Rio de Janeiro	Feb. 28-Mar. 6	1	
India—Bombay	Mar. 1-8		968
India—Calcutta	Feb 20-Mar. 5		294
India—Karachi	Feb. 28-Mar. 6	106	90
India—Madras	Feb 27-Mar. 4		1
Peru—Lima	Mar. 23-30	23	4

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending April 7, 1904:

Anderson, J. F., Passed Assistant Surgeon. Relieved from duty as recorder of board of examiners that met at Washington, D. C., April 4, 1904, for the examination of candidates for appointment as assistant surgeon.

Foster, M. H., Passed Assistant Surgeon. Bureau letter of March 19th granting Passed Assistant Surgeon Foster leave of absence for ten days from March 30th, amended so that said leave shall be effective April 29th.

Glover, M. W., Assistant Surgeon. To proceed to Vancouver, B. C., for special temporary duty. April 3, 1904.

McClintic, T. B., Assistant Surgeon. Relieved from duty in the Hygienic Laboratory, Washington, D. C., and directed to proceed to Tampico, Mexico, for duty in the office of the United States Consul. April 2, 1904.

Moncure, J. A., Acting Assistant Surgeon. Department letter granting Acting Assistant Surgeon Moncure leave of absence for thirty days from April 1, 1904, amended so that said leave shall be effective from April 10th.

Von Ezdorf, R. H., Passed Assistant Surgeon. Detailed as recorder of board of examiners that met at Washington, D. C., April 4, 1904, for the examination of candidates for appointment as assistant surgeon.

Warren, B. S., Assistant Surgeon. Granted leave of absence for six days from April 10th.

Board Convened.

Board convened to meet at Stapleton, N. Y., April 4, 1904, for the physical examination of officers of the Revenue Cutter Service. Detail for the board—Passed Assistant Surgeon A. C. Smith, chairman. Assistant Surgeon T. W. Salmon, recorder.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending April 9, 1904:

Bishop, L. W., Assistant Surgeon. Detached from treatment at the Naval Hospital, Mare Island, Cal., ordered home, and granted sick leave for two months.

Campbell, F. E., Assistant Surgeon. Detached from the Naval Museum of Hygiene and Medical School, Washington, D. C., and ordered to the *Constellation.*

Manchester, J. D., Assistant Surgeon. Ordered to the *Columbia* on April 11th.

Pease, T. N., Assistant Surgeon. Ordered to the *Hartford* on April 14th.

Reeves, I. S. K., Assistant Surgeon. Ordered to the *Minneapolis* on April 14th.

Taylor, E. C., Assistant Surgeon. Detached from the Naval Museum of Hygiene and Medical School, Washington, D. C., and ordered to the naval hospital, naval station, San Juan, Puerto Rico, sailing from New York about April 9th.

Wentworth, A. R., Surgeon. Granted leave for one month from April 5th.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending April 9, 1904:

De Loffre, Samuel M., First Lieutenant and Assistant Surgeon. Granted fourteen days' leave of absence, to take effect about March 31, 1904.

De Witt, Wallace, First Lieutenant and Assistant Surgeon. On completion of special duty at New Haven, Conn., will proceed to St. Louis, Mo., and report for duty as assistant to Richard W. Johnson, Major and Surgeon, in charge of the Medical Department of the Exhibit.

Raymond, Thomas U., Major and Surgeon. Relieved from duty at Jefferson Barracks, Mo., and ordered to proceed to the Louisiana Purchase Exposition, St. Louis, Mo., for duty.

Siler, Joseph F., First Lieutenant and Assistant Surgeon. Granted leave of absence for fourteen days, to take effect April 6, 1904.

Van Poole, Gideon McD., First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence, to take effect about April 6, 1904.

Williamson, L. P., First Lieutenant and Assistant Surgeon. Assignment to duty as assistant to Richard W. Johnson, Major and Surgeon, in charge of Medical Department of the Louisiana Purchase Exposition, is revoked, and he will proceed at once from Jefferson Barracks, Mo., to St. Louis, Mo., and report to Dr. W. P. Wilson, chairman of the Philippine Exhibit Board, to supervise sanitary matters in the Philippine village and the care of the sick connected with the Philippine exhibit.

Births, Marriages, and Deaths.

Born.

Freeman.—In Boston, Massachusetts, on Wednesday, April 6th, to Dr. G. F. Freeman, U. S. N., and Mrs. Freeman, a daughter

Married.

De Loffre—Heard.—In Columbus, Georgia, on Wednesday, April 6th, Dr. Samuel M. De Loffre and Miss Ethel T. Heard.

Ferguson—Wilhite.—In Washington, D. C., on Thursday, March 31st, Dr. Charles Emory Ferguson and Miss Adah Elizabeth Wilhite.

Mitchell—Griggs.—In New York, on Monday, April 4th, Dr. Edgar O. Mitchell and Miss Elsie Griggs.

Powell—Gober.—In Washington, D. C., on Wednesday, April 6th, Dr. William Aden Powell, U. S. A., and Miss Julia Eva Gober, daughter of Dr. N. N. Gober.

Died.

Arnold.—In San Francisco, California, on Monday, March 28th, Dr. A. B. Arnold, in the eighty-sixth year of his age.

Austin.—In Jamestown, Indiana, on Saturday, March 26th, Dr. F. H. Austin.

Baker.—In Philadelphia, Pennsylvania, on Friday, April 1st, Dr. Washington Hopkins Baker, in the fifty-third year of his age.

Burrows.—In Elizabeth, New Jersey, on Saturday, April 2nd, Dr. Walter Burrows, in the seventy-sixth year of his age.

Crowell.—In Philadelphia, Pennsylvania, on Wednesday, April 6th, Dr. Elisha Crowell.

Cyr.—In Negaunee, Michigan, on Tuesday, March 29th, Dr. Louis D. Cyr, in the sixty-ninth year of his age.

Denton.—In Rivera, California, on Saturday, April 2nd, Dr. Lyman W. Denton.

Dohrmann.—In Santa Barbara, California, on Saturday, March 26th, Dr. W. F. Dohrmann, in the thirty-sixth year of his age.

Fritts.—In Hudson, N. Y., on Wednesday, April 6th, Dr. Crawford E. Fritts, in the fifty-fourth year of his age.

Goold.—In Chicago, Illinois, on Tuesday, March 29th, Dr. Birney R. Goold.

Groves.—In Marietta, Georgia, on Saturday, April 2nd, Dr. John T. Groves, in the seventy-seventh year of his age.

Ivins.—In San José, California, on Thursday, March 24th, Dr. George Ivins, in the sixty-sixth year of his age.

Nash.—In Pheba, Mississippi, on Monday, March 28th, Dr. W. W. Nash.

Noel.—In Phœnix, Arizona, on Tuesday, March 29th, Dr. E. P. Noel, of Chicago, in the fortieth year of his age.

Lyman.—In Chicago, Illinois, on Tuesday, March 29th, Dr. John Chester Lyman, in the fifty-fourth year of his age.

Parsons.—In Marcellus, N. Y., on Sunday, March 20th, Dr. Israel Parsons, in the eighty-third year of his age.

Schottenfels.—In Chicago, Illinois, on Thursday, March 31st, Dr. Emil Schottenfels, in the seventy-sixth year of his age.

Wadsworth.—In Malden, Massachusetts, on Saturday, April 2nd, Dr. Peleg Wadsworth, in the seventy-first year of his age.

New York Medical Journal
AND
Philadelphia Medical Journal.
CONSOLIDATED.

A Weekly Review of Medicine

VOL. LXXIX, NO. 17. SATURDAY, APRIL 23, 1904 WHOLE NO. 1325.

Original Communications.

SCLEROSIS AND OSSIFICATION OF VEINS.*

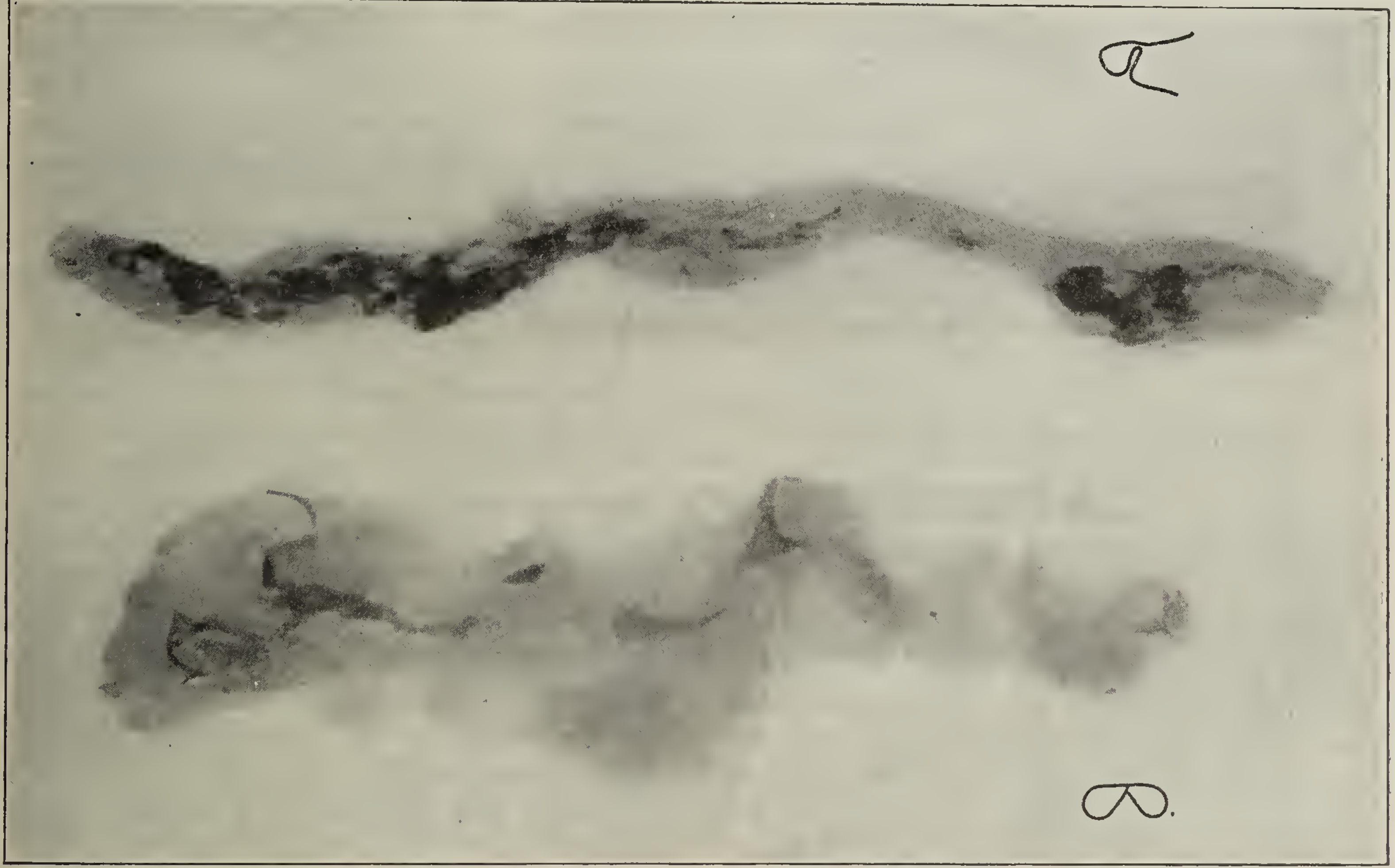
By CARL BECK, M. D.,

NEW YORK,

PROFESSOR OF SURGERY IN THE POSTGRADUATE MEDICAL SCHOOL AND HOSPITAL, VISITING SURGEON TO THE ST. MARK'S HOSPITAL AND THE GERMAN POLIKLINIK.

In an essay on arteriosclerosis, published in the *New York Medical Journal* on January 17, 1898, I called attention to the Röntgen rays as a valuable diagnostic means, illustrating at the same time sclerosis of the radial artery.

As is well known, the pathological changes in the veins are similar to those observed in the arteries. Phlebosclerosis (fibrous degeneration of the tunica intima) is nearly as frequent as arteriosclerosis, but is of a lesser extent as a rule. Calcareous deposits in veins are sometimes reported as " vein-stones " or phleboliths. But that there is a degeneration of the venous walls, which show real osseous structures, is a fact which does not seem to have received any attention. The illustration shows the presence of perfect osseous texture in the saphenous vein as well as in the beginning of its ramifications in a lady aged fifty-six years. Dr. Ludwig Weiss, of New York, to whom I am indebted for observing the case, found that the patient had suffered from varicose veins of both lower extremities for thirty years. There were frequent attacks of thrombophlebitis followed by dilatation, as well as by cicatrization, the latter causing the signs of phlebitis obliterans in various portions. There was also a large ulcer, from which profuse hæmorrhage had several times taken place.



The illustration shows the presence of perfect osseous texture in the saphenous vein and in the beginning of its ramifications.

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* Demonstrated to the Surgical Section of the Academy of Medicine, December 4, 1903.

The patient suffering continuously from more or less pronounced inflammatory conditions, and consequently from œdema and induration, Dr. Weiss advised extirpation of the varicose areas. On removing them I found a number of thrombi in the dilated veins, which, on some portions, resembled aneurysmal sacs. The hard consistency of the thickened portions induced me to make them the object of skiagraphic exposure. The anatomical information obtained from such skiagraphic examinations seems to me to be of practical value. Whenever the Röntgen rays show the presence of osseous degeneration, it is obvious that the much favored methods of using laced stockings, elastic bandages, injections into the circumvascular tissues, or ignipuncture, are not only futile, but directly dangerous efforts; the only procedure which guarantees recovery being extirpation. If performed under strict aseptic precautions the risks of the operation are practically nil. The diagnosis of the presence of osseous degeneration cannot be made by palpation, the indurated areas not appearing different from simple fibrous convolutions. Thus the Röntgen rays are the only means to give anatomical evidence before operation.

THE TREATMENT FOLLOWING THE BLOODLESS REDUCTION OF CONGENITAL HIP DISLOCATION.

By DEXTER D. ASHLEY, M. D.,
NEW YORK,
ATTENDING ORTHOPÆDIC SURGEON ST. MARK'S HOSPITAL;
CHIEF SURGEON ORTHOPÆDIC DEPARTMENT,
GERMAN POLIKLINIK,
and
FREDERICH MUELLER, M. D.,
CHICAGO,
PROFESSOR ORTHOPÆDIC SURGERY, MILWAUKEE, WIS.; ATTENDING ORTHOPÆDIC SURGEON, ST. LUKE'S HOSPITAL,
CHICAGO, ILL.

In recent months quite a number of articles have been published dealing with the bloodless reduction of congenital hip dislocation, after Lorenz. These publications have naturally been confined mostly to the details of the operation proper and to the description of the effects immediately following the operation, while the postoperative, or after treatment, has been considered only in a few passing remarks.

The paper which we now present is intended to deal exclusively with the after treatment, and may be considered a supplement to the above mentioned publications.

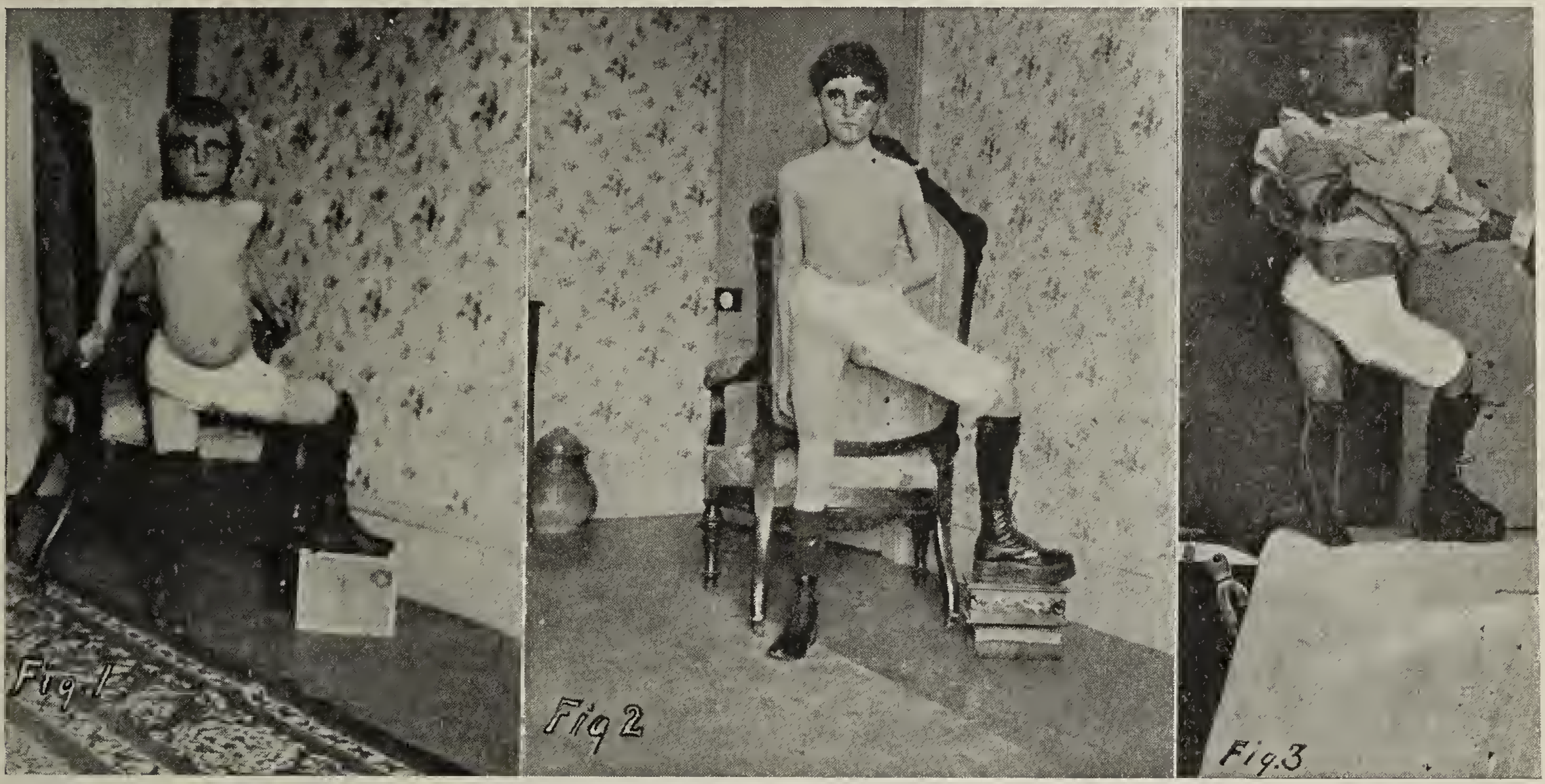
The bloodless treatment of congenital hip dislocation, after Lorenz, may be easily divided into several consecutive stages, of which the first is the reduction—that is, the act of placing the femoral head into the more or less developed acetabulum, or the fixation of the head in the position of the acetabulum; the second is the application of the cast; and the third stage is represented by the after treatment. We might characterize the first stage as the placing of the thigh, flexed to a right angle, into maximal abduction, with simultaneous reposition (Figs. 1 and 2). The second stage may be characterized as the securing of results achieved by the first. The third stage consists in the compensation of the changes produced by the first two interventions, without jeopardizing the stability of the replaced femoral head.

The operative details used in stages one and two are alike, whether we have to deal with stable or very unstable joints; but in the period of the after treatment, where the aim is to redress the extremely abducted thigh into the normal position, all the differences as to stability are bound to become very marked; for example, looseness of the joint, increase or decrease of the angle of inclination of the femoral neck, epiphyseal separation of the femoral head, and so on, all factors which interfere considerably with the plan of the after treatment and are apt to frustrate the already accomplished reposition. It is, therefore, necessary that the after treatment be strictly individualized, in order to accomplish the best possible results. In this way only may we succeed, even in cases which present unfavorable conditions. It should, furthermore, be considered that, in a certain number of cases, anatomically perfect results are not produced, and very probably never can be produced, because the constituent parts of the articulation are too much deformed. Under such conditions the reposition proper can only partly accomplish its task by bringing the femoral head to the anterior aspect of the pelvis (subspinal position). These are the cases in which the after treatment will celebrate its greatest triumphs, in bringing about complete, or at least satisfactory, functional results.

It is, therefore, quite right that Lorenz and others emphasize the importance of the after treatment, and consider it absolutely indispensable in obtaining the best possible results. Exceptions to this rule are only formed by the very rare cases in which the replaced joint shows, immediately following the reposition, a stability similar to that in a traumatic dislocation. In such cases we may make certain concessions during the after treatment. That these concessions are justifiable, becomes apparent from the favorable results accomplished in these cases without systematic after treatment; yet it will always be safer not entirely to lose sight of the patient before a definite cure has been ascertained.

That these concessions are only permissible during the after treatment and cannot be extended to the position of the limb in the first cast, is shown by cases in which complete posterior redisplacement took place, although the greatest possible stability was shown in normal position of the limb, but in which cases the thighs were fixed in abduction of only 45°, although for five months.

The after treatment, especially if it is looked upon, as indicated above, as the treatment of changes accomplished by the operation, begins immediately after the reduction. A part of it, the stretching of the flexors which have been rendered too short by the reduction and the extreme abduction, is best performed while the patient is still under the influence of the anæsthetic. In this way, not only is the task of the following weeks facilitated, but we spare the patient a great amount of pain, which would be caused by the maximal tension of the long head of the biceps, the semimembranosus, and the semitendinosus. If this tension is annihilated by overstretching these muscles, the main cause for the pain following the operation is removed.



Primary position.
Fig. 1.—Limb at right angles to body, 90° abduction. Fig. 2.—Depressed primary position, adopted in cases of marked anterior twisting of knee. Fig. 3.—Walking position, with tilted pelvis and high shoe.

The overstretching is accomplished by grasping the heel with one hand while fixing the knee with the other, stretching slowly and steadily, by alternate flexion and extension, until the longitudinal axes of the thigh and calf form one straight line. Brisk manipulation may occasionally lead to a paresis or paralysis of the peroneal nerve, which accident will be discussed later.

The attendants and nurses of the little patient realize very well the advantage of having overcome this tension of the muscles, even in the first hour after operation, especially when it becomes necessary to let the child sit up or turn over on the abdomen, movements which mean simply torture if the above mentioned muscles have not been overstretched.

As the child naturally holds the knee flexed almost to a right angle most of the time when in the cast, it will be necessary to repeat the stretching of the flexors several times each day, beginning from the second or third day after the operation, until the child is able to perform this act voluntarily. Unless this is faithfully performed, the muscles will resume their shortened relation, causing a permanent contracture, which will necessitate an operation later, in order to straighten the limb.

Immediately following the operation the child is put to bed and the pelvis is kept elevated by a pillow placed under the hips, since in this position the pressure of the borders of the cast against the abdomen and against the inner condyle of the knee is reduced to insignificance. This latter point calls for special attention, because decubitis is very likely to develop at the knee if the cast is not abundantly padded and its borders very well everted.

The child, as a rule, does not feel much pain during the first twenty-four hours after the operation, because the influence of the anæsthetic is still more or less in evidence. The patient always feels better during the day than during the night, and the second night is always the worst, although there may have been entirely painless periods during the preceding day. The symptoms of pain are very similar to those of acute coxitis. The child, apparently in deep slumber, suddenly gives a jerk and wakes up crying with pain. Being quieted, he again falls asleep, to wake suddenly again, continuing this during the night. This may in some cases be observed up to two weeks after the operation. In the latter part of the second week the child will start in his slumber without waking.

In older cases, where there has been considerable trauma, it may be found necessary to administer some form of opium during the first three nights, although it is always preferable to refrain from doing so, if possible.

The heart's action, in cases where no special obstacle to the reposition has been found, will generally be normal, but if the operation was prolonged, and especially if unusual force was exerted, the heart's action will be depressed. A small and frequent pulse furnishes the indication for administering a stimulant, such as strychnine or black coffee sufficiently sweetened. An actual collapse will scarcely be observed, if one confines himself to the limitations of the operation, not undertaking to force old cases.

The temperature in the majority of cases does not deviate to any alarming extent from the normal. Slight increases around 100° F. are frequently observed, and generally disappear inside of twenty-four hours. Greater elevations, to 103° F. or 104° F., always have special significance, and it is very important to find out the cause, as in most cases we are able to furnish relief quickly. The most frequent cause for increase of temperature is retention of fæces or urine. The evacuation of the digestive tract before operation is a rule which does not permit of any exceptions. A semifluid diet must be given for the first three or four days, after which time a regular diet may be permitted, with careful regulation of the bowel movements. Fever due to retention of fæces subsides quickly after the bowels are evacuated; the same holds good in case of fever due to retention of urine. As many individuals suffer with retention of urine after any surgical interference, special care should be exercised in this direction. Such a retention should be promptly relieved, using the catheter if other means fail.

Subcutaneous injuries to the tissues are another source of fever during the first day after the operation. Being of no significance in easy cases they may reach a considerable degree in atypical cases—that is, beyond the age limit, cases in which the shortening admits of only a transposition, and so on. The attempts to force the head into the acetabulum are bound to crush tissue to a greater or lesser extent. These injuries, as a rule, do not call for special attention, as large blood vessels are not torn. There will always be, however, a considerable hæmorrhage into the tissues. The absorption of this blood may lead to an elevation of temperature, which disappears after a few days.

The subcutaneous injuries of the tissues give rise to the appearance of another phenomenon, on the second or third day. This is a swelling in that region where the myorrhexis of the adductors was performed. This swelling is partially œdematous, and extends down the thigh and over the perinæum toward the pelvis. Occasionally, even great swelling of the labia or the scrotum may be observed. The color of the skin, at first of a waxy tinge, changes very soon to a reddish blue, caused by the dissolved blood corpuscles. Later the color will change, passing through all the hues of retrogressive metamorphosis after the swelling has disappeared, which requires about two weeks. In case of great swelling, cold compresses may be applied, and, in order not to interfere with the venous reflux, the border of the femoral part of the cast, which faces the perinæum, should be cut out.

In some patients, usually where an overextension in primary position was necessary, an œdema of the whole lower part of the leg may develop, due to an interference with the venous circulation. This œdema may disappear readily if the leg is bandaged with a flannel binder, beginning from the toes. It is very probable that by the extreme stretching and tension of the skin and fascia at the inner surface of the thigh, both the major and minor vena saphena are compressed by being flattened out. If, after a few weeks, these structures have adjusted themselves to the new conditions, then, as a rule, the tendency for the formation of a new œdema will subside. If the swelling persists, it is well to look to the spica, with an idea that it may be too tightly applied as a whole, or may contain some constricting band.

During the first days, it is very important to pay special attention to the cast, to keep it in proper condition, particularly during the time the patient is kept in bed. We have mentioned that it is very necessary repeatedly to inspect the cast, in order to avoid pressure by its borders.

The preservation of the cast is a point to which special attention must be paid by the nurse. Wetting of the cast must be avoided under all circumstances. This is best accomplished by means of a cloth drawn under the posterior bridge, the ends including a small folded towel, placed upon and covering this bridge. These cloths must be changed immediately, in case they should become wet. Wetting of the cast with urine not only retards the hardening of the plaster, but the salt contained in the urine combines with the plaster, softening it by making it hygroscopic. This would be followed by an ammoniacal decomposition, with its well known offensive odor, and its irritation of the skin. The cast, rendered crumbling and brittle by these chemical changes, would break down entirely under the demands put upon it during the first attempts to walk, and the whole operative results might become annihilated.

Covering the cast with varnish or waterproof fabrics while still moist, is not commendable. The drying out of the plaster is prevented, and quite often the growth of mold on the inside is the consequence.

The best way to prevent wetting of the cast is to bring the child to a sitting posture regularly, twice a day, to perform the bodily functions, since, through fear of pain in the first days after the operation the patient may refuse to call attention to these needs, and soil the cast.

The skin, suffering from the impossibilities of bathing, may be given a dry rub every day by moving the strips of cloth, which are always placed under the cast, all over the covered surface of the body. The superficial cuticle, ready for desquamation, is thus removed, and the skin may be kept clean indefinitely while wearing the cast. When the child perspires freely, as in the summer, it is also possible to apply rice powder freely underneath the cast, by the aid of these rubbing bands. If a sore spot or an eczema should develop under the cast, its location will be easily detected by pulling these rubbing bands back and forth. The diseased spot can either be laid bare by fenestrating the cast in this region, or, if the lesion should appear too extensive for that, the entire cast must be changed. It then becomes necessary to construct a new cast with regard to the unusually large openings which must be cut in it. The connecting bridges must be especially reinforced or strengthened by inserting splints.

As to the length of time the child must stay in bed, this varies greatly according to the individual. As a rule, six to ten days are sufficient to render the child quite free from pain. On the fourth or fifth day it is possible to take the patient out of bed, and allow him to spend a few hours in a sitting posture. In a unilateral dislocation the walking exercises may be started at the same time. In simultaneous bilateral reductions the patient is not able to walk until later, and then generally requires support while wearing the first cast.

The fixing of the thigh and pelvis by the cast alters considerably the usual mode of locomotion, in which one limb supports while the other limb swings forward as a pendulum. When the healthy limb is used as the support, the forward movement of the limb in the cast is executed, not by a pendulum motion, but by the rotation of the pelvis around a vertical axis. The encased thigh, by means of the tilting of the pelvis, inclines about 45° to the horizon, the knee being slightly flexed, and moves forward around the vertical axis about 60°. A striking feature of this mode of locomotion is that the child holds the leg behind the frontal plane, and is able in this position to give the body a certain forward impulse by slight extension of the knee and ankle. This should be considered in devising the shoe (Fig. 3).

As the leg inclines to the horizontal plane, it is advisable to put into the shoe an insole, which at the outer border is elevated to a sufficient degree to compensate for the inclination. It is further necessary to thicken the sole because the difference in the length of the limbs cannot be entirely compensated by a unilateral lowering of the pelvis. This additional thickness varies from three to twelve centimetres. The increased height of the sole impairs the stability, hence the thickness of the sole should diminish toward the toe. At this point the thickness should be from one half to one third the thickness at the heel. The plane of the sole of the foot will thus be inclined from behind and outside to the front and inside.

At first the walking exercises consist in placing the child in the upright position and teaching him to maintain his equilibrium. After two or three days of these exercises, attempts at walking are begun, in which the patient is assisted by two persons, one on each side. In a few weeks the child walks around without any aid and appears only slightly hampered by the cast.

It is very important not to allow the use of crutches or canes. The use of support relieves the limb of work which it should do, and which is necessary for the development of the bones and muscles.

While still wearing the cast, the development may be still further facilitated and the child and parents instructed in the rudiments of those exercises which will follow the removal of the plaster, by means of gymnastics, consisting of active, passive, and resisted motions, and by deep massage to exposed parts, as partly illustrated in Figs. 5 to 9, inclusive.

Fig. 4.—The child lies on his back on a table. The limb is given deep massage to the anterior exposed muscles.

The limb is placed at right angles to the body, the tilting of the pelvis being eliminated. The leg is passively extended, obliterating all contractions at the knee. The child flexes the knee, being slightly resisted by the operator. These motions are repeated several times, followed by active extension and flexion.

Fig. 5.—The child lies on his sound side, the limbs approaching a parallel by tilting of the pelvis. The gluteal muscles are massaged, the operator reaching well under the cast. The limb is then actively elevated to the perpendicular position several times. Some assistance may be necessary.

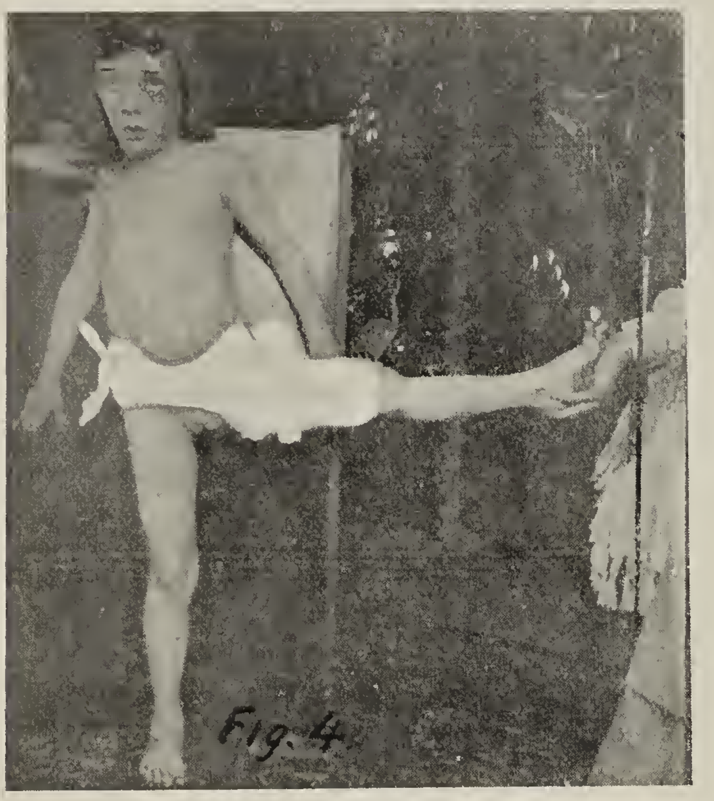


FIG. 4.—Passive extension, eliminating knee contraction, and tilting of the pelvis in the walking position.

Fig. 6.—The child lies prone. The posterior exposed muscles are massaged, after which the lower extremities are actively elevated by balancing upon the thorax, over extending the spine and thigh.

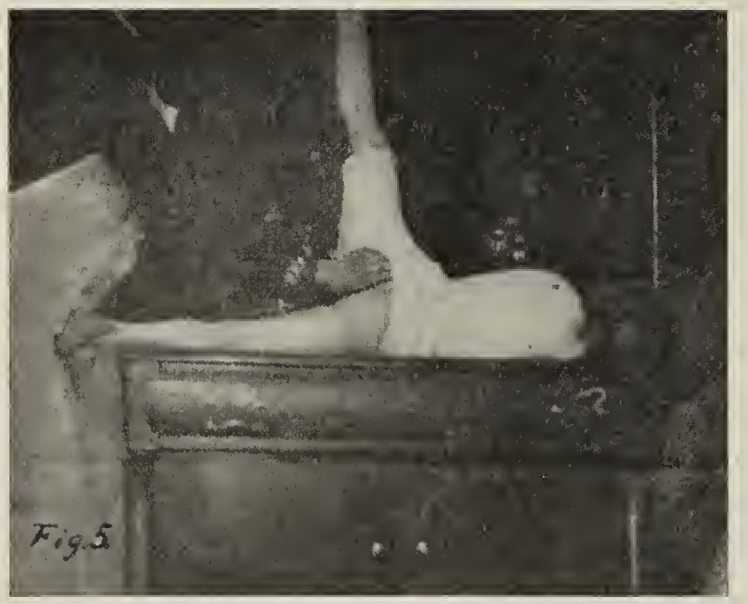


FIG. 5.—Massage of gluteal muscles, leg actively extended to the perpendicular.

Figs. 7 and 8.—The child stands on the sound limb by a chair or table, and apparently abducts the limb in the cast by overcoming the tilting of the pelvis, both knees being held straight and moving in the frontal plane or behind it.

Figs. 9 and 10.—The same exercises are performed standing upon the reduced limb.

Unless the limb is in the depressed primary position, which will be referred to later, or in the secondary position, the above exercises will be performed in the frontal plane or behind it.

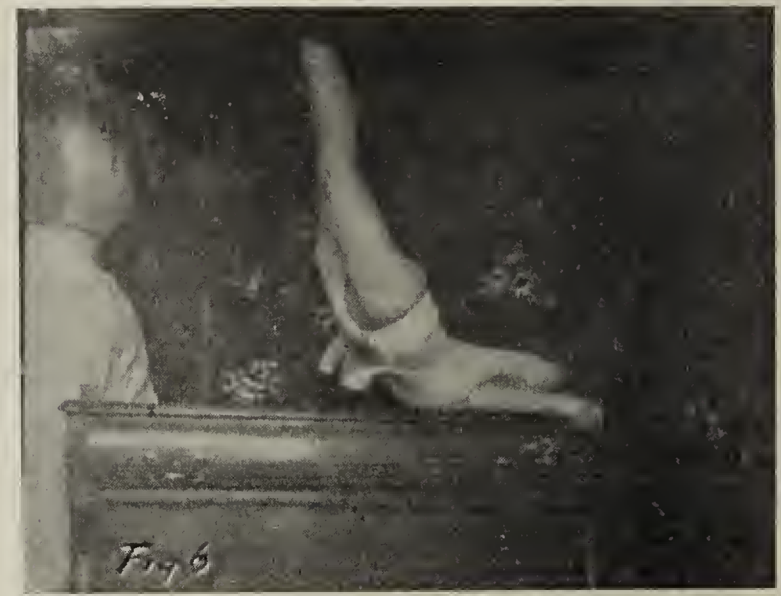


FIG. 6.—Superextension of back and thigh muscles, balancing on thorax.

By the foregoing measures, extensive atrophy of the muscles of the thigh is prevented, since the majority of the muscles controlling the hip and knee are kept sufficiently in activity.

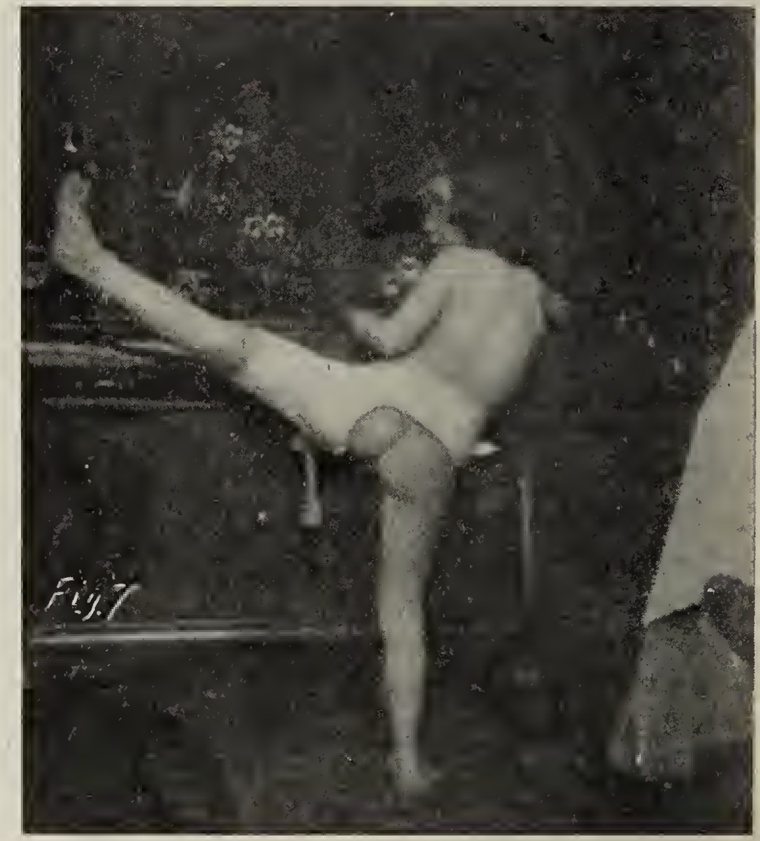


FIG. 7.—Tilting of pelvis eliminated by high kick.

The attitude of the parents and nurses will greatly influence the activity and consequent condition of the child. The little patient should be treated as a normal child, and not encouraged to think that he is ill. The activity which the child may attain is well illustrated in the reports of the parents of two patients. The first, a boy aged six years, successfully competed in a foot race. The second, a girl of eight years, succeeded in climbing trees.

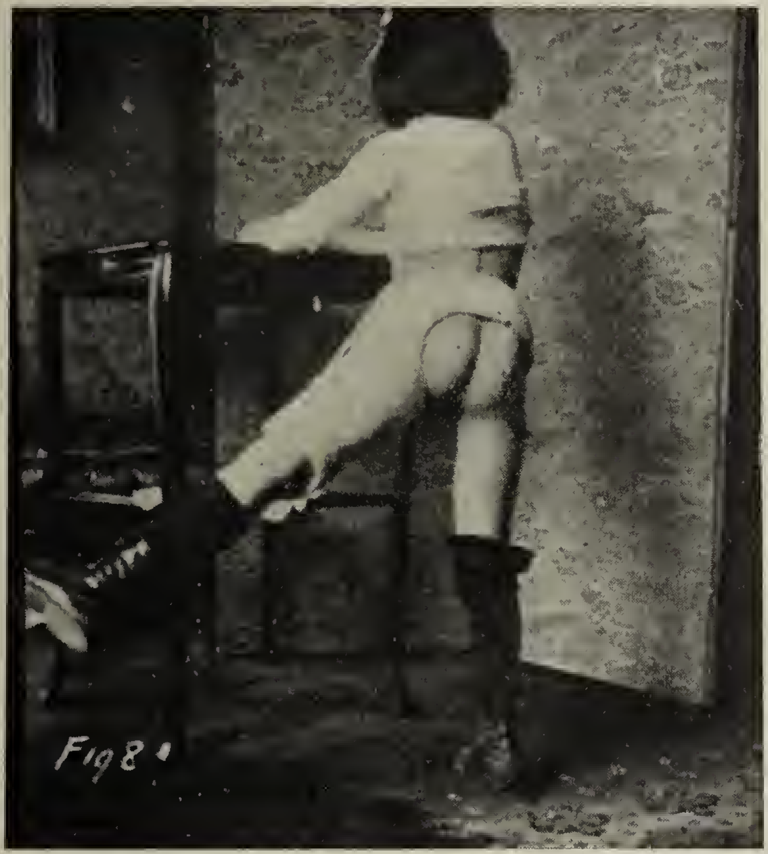


FIG. 8.—Secondary plaster, same exercise as Fig. 7.

The most important proceedings under consideration are those connected with and following the removal of the first plaster. (This does not refer to a necessitated change of plaster because of a breaking cast due to excessive wetting, or because it no longer fits the patient or holds the head in the proper position.) It is not a question of months which defines when the first plaster shall be removed, but a condition of contraction of the capsular ligaments and fibres, and of the iliotrochanteric muscles, which have been stretched by the dislocation and reposition; and the time will vary, with the individual, from about six to eight months, and will be determined by the stability. This stability is approximately ascertained by introducing the fingers under the cast, and examining the femoral head in its position while rotating the limb.

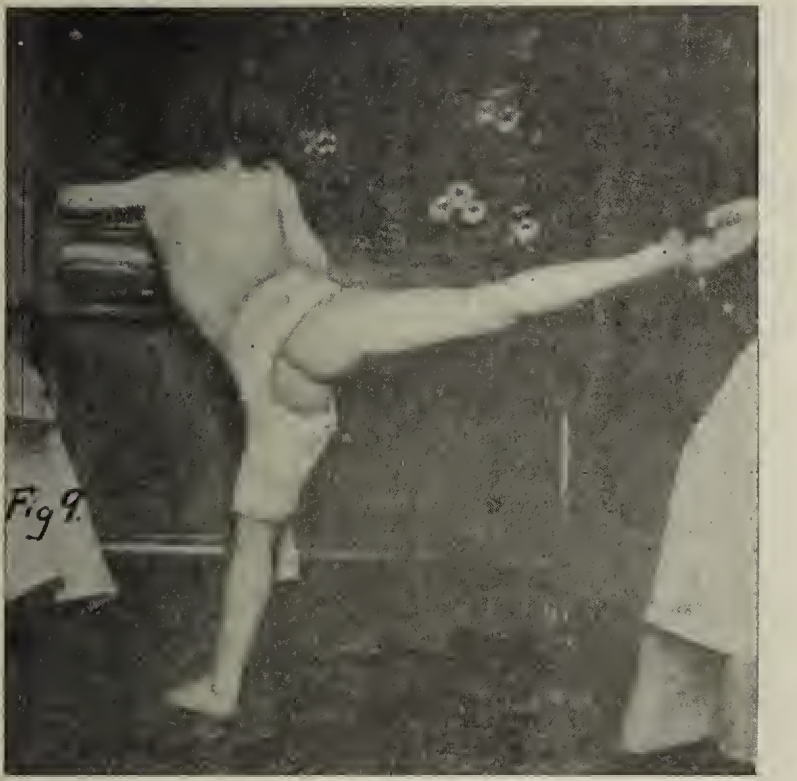


FIG. 9.—Standing on reduced limb while elevating sound side.

After the removal of the cast the skin is well anointed with lanolin, and then rubbed with sterilized cotton, removing the desquemated epidermis. This is followed by a warm bath, and the skin is well dried and rubbed with rice powder. A very effective, but harsher, process is to cleanse the skin thoroughly with pure alcohol, followed by the application of some soothing baby powder.

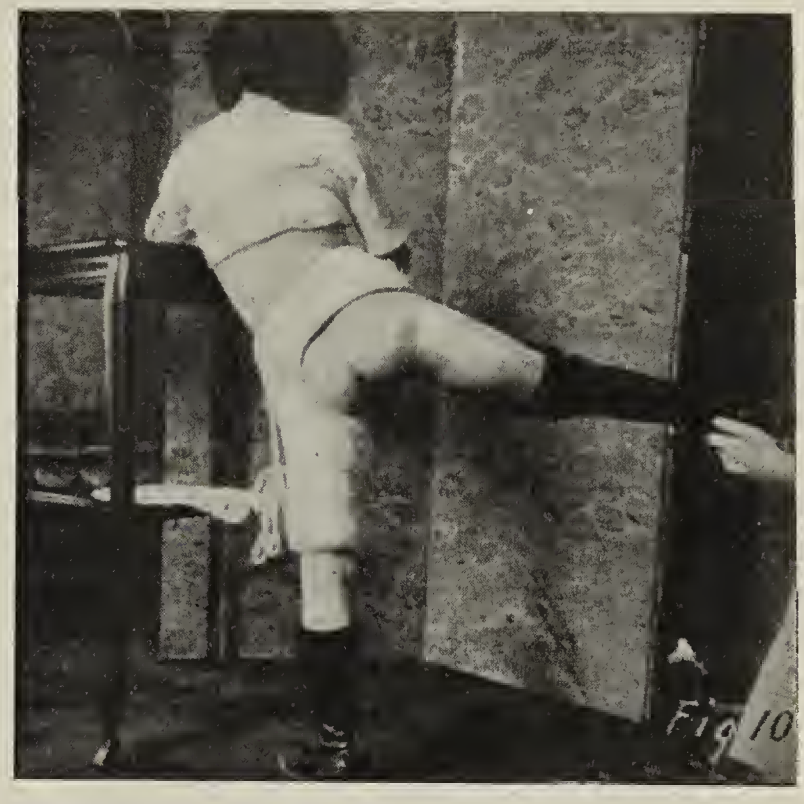


FIG. 10.—Secondary plaster, same exercise as Fig. 9.

Schematically, the examination following the removal of the cast may reveal some of the following conditions:

Group A. Normal position; femoral head resting within the acetabulum:

1. Satisfactory and secure station of the head; moderate resistance felt in attempts to correct position. If the history of the operation shows a satisfactory finding as to stability of the head and the development of the margin of the acetabulum, we may begin immediately with the after treatment.

2. The head resting within the acetabulum, but easily dislocated. A second cast in primary or modified primary position must be applied.

3. Normal position, but considerable rigidity. Attempt the usual after treatment. If progress is unsatisfactory, correction is made in cast.

Group B. Abnormal position of the head:

4. The head rests upon the horizontal branch of the pubic bone—the suprapubic position. Depression is here indicated.
5. The head rests above the acetabulum, underneath the anterior superior spine—subspinal position.
6. The head is located behind the acetabulum—a reluxation.

It is easily apparent that these different conditions must be met by a varied after treatment. Even secondary operations with anæsthesia may become necessary.

In the next paper this scheme will be amplified with greater detail.

THE LIMITATIONS OF CHEMISTRY IN INFANT FEEDING.*

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The past few years have been noted by an attempt to put artificial infant feeding on a scientific basis, which is a thing greatly to be desired. The European method of determining the number of calories used by an animal and then giving a quantity of food which, when burned, yields the same number of calories, has been tried in infant feeding, leaving the baby to get the calories if it could. This method of animal nutrition is not looked upon favorably for adult feeding by modern investigators of the problems of nutrition, who have found that much better results attend viewing an animal as an organism endowed with food preferences, than as viewing it as a mere machine in which any food is transformed into heat and energy. In practical infant feeding such a basis of feeding has no place, as the range of food that infants can appropriate is limited.

In America there has been a tendency, or rather an attempt, to place artificial infant feeding on a purely chemical basis. Analysis of breast milk and cow's milk showed them both to contain fat, proteids, carbohydrates, mineral matter, and water. On paper, both milks contained the same ingredients, and it seemed rational to think that by adjusting quantities of the ingredients of cow's milk a mixture of the same composition as breast milk could be obtained.

For many years it was taught that breast milk contained one per cent. of proteid, and cow's milk about four per cent. of proteid. Now it is known that the proteid content of milk is not fixed, but variable, and that breast milk contains almost always between one and one half and two per cent. of proteid, while cow's milk seldom contains as high as four per cent. of proteid.

This scheme of food preparation, based exclusively on percentage composition of milk, is now known to have been based on incorrect data.

It may still be said: As milk does contain fat, proteids, carbohydrates, mineral matter and water, let us adjust the percentages of them to suit the infant. The question naturally arises, What constitutes suiting the infant? Is it to suit its digestion or its general nutrition and development?

When it is said that two foods contain the same amount of fat, apparently there is nothing more to be considered, but the average adult would not tamely submit if his bread was spread with lard. He would say that while lard was fat, yet there was a choice of fats, and if both were the same and it made no difference, he would take butter. From the purely chemical standpoint, this adult would be unreasonable, as the lard being a fat would supply all the heat and energy needed, as well as the butter.

Modern investigators into the problems of nutrition have come to the conclusion that this preference for certain forms of food elements is a very important factor in feeding, and cannot be ignored if the best results are to be obtained. It is a matter of common knowledge that there are different forms of fats. There are also different forms of proteid. Lean ham, steak, and white of egg are all proteids. Lean flesh of all kinds is proteid. Milk contains other forms of proteid. The only feature that all forms of proteid have in common is they contain nitrogen in fairly uniform quantity, 15 to 18 per cent. Some forms of proteid contain more, other forms less, nitrogen. The only practical method of determining proteid in a mixture is to estimate the amount of nitrogen present and then multiply this quantity by some factor. Chemists are not agreed as to what factors should be employed, and the range of factors is from 5.70 to 6.38. A chemical analysis of the proteid of milk consists of converting the casein, albumin, albumoses, peptones, and amido acids, etc., into ammonia, then determining the amount of nitrogen in the ammonia, and finally multiplying this quantity by some factor.

The Association of Official Agricultural Chemists of America uses the factor 6.25, assuming that the proteid contains 16 per cent. of nitrogen ($16 \times 6.25 = 100$). In England 6.38 is the factor used, so in comparing milk analyses the first question is, Were the methods of analysis the same?

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* Read before the Pædiatric Section of the New York Academy of Medicine, March 10, 1904.

It is now known that in food there are many bodies present that contain nitrogen, but which are not proteid bodies, so a comparison of the amount of nitrogen in different foods is not necessarily a comparison of their food value or similarity.

About ten years ago Van Slyke, whose name stands high among investigators of milk proteids, began a systematic study of these proteids after finding that his analyses did not correspond with those of European authorities, which had been and are to-day accepted by many pædiatricians. Van Slyke contended that there should be some uniform nomenclature and that all the nitrogenous bodies of milk should not be classed under the one heading of proteid. He reports: "The old method of comparing two products by the results of ultimate analysis, in order to establish their likeness or unlikeness, is now recognized as faulty, especially in the case of proteid bodies. Only by cleavage and by quantitative estimation of certain end-products can a reliable basis be found for determining the question of similarity of structure in different compounds" *(Bulletin 214*, New York Agricultural Experimental Station).

Babcock, the inventor of the Babcock milk test, and his coworkers, discovered in milk a proteolytic ferment, and in studying its occurrence and effects some remarkable examinations of the proteids of the milk of many animals were made.

A system of separating the proteids of fresh milk was worked out and the nitrogen in each of the groups, so separated, was determined. In one year over four thousand nitrogen determinations were made, which will give a chemist or any one familiar with the tediousness of estimating nitrogen an idea of the immense amount of work performed.

It was found that the separation of the nitrogenous bodies of milk into casein and albumin was not a complete separation, and it is a very simple matter now that we know how, to rapidly separate from milk, casein, albumin, albumoses, and peptones, all nitrogenous bodies. There are other nitrogenous bodies in milk which are not easily separated. When this separation is made with human milk and cow's milk the fact that the casein of human milk differs widely from the casein of cow's milk is apparent to the merest novice.

Van Slyke, also, with his coworkers have not been idle, and their efforts were crowned with a brilliant discovery of some of the chemical processes that take place in the formation and digestion of the curds formed from casein. In brief, these processes are that the rennet of the stomach converts the casein of milk into a curd or paracasein, which then forms a definite chemical compound with hydrochloric acid, as chloride or bichloride of paracasein, and then, but not until then, will pepsin attack the paracasein.

Not only has the knowledge of the chemistry of milk greatly advanced, but with the advance has come an insight into the physiological properties of milk. It was formerly taught that one of the fundamental differences between human milk and cow's milk was that human milk was alkaline and cow's milk acid in reaction.

With modern methods of testing alkalies and acids this difference disappears, and it can be readily demonstrated that breast milk will take considerable quantities of lime water before it is alkaline. In the old methods of testing the reaction of milk, reagents that are suitable with strong alkalies and acids were used. It is now known that these reagents are not sensitive to many organic acids and alkalies, and that their use gives misleading and erroneous results in physiological work. It has recently been demonstrated that alkalies in milk retard the action of certain digestive secretions, and the indications for alkalies are, therefore, better understood.

It is only a few years ago that water was affirmed to be the best diluent for milk, because milk to which diluted acetic acid was added gave finer curds when diluted with water than when diluted with gruels. This may be a chemical fact, but its relevancy to infant feeding is not apparent, for it is not on record that infants, or even adults, have a supply of acetic acid in their stomachs. Nor has it been thought that in any stage of the digestion of milk by infants, is the milk precipitated by dilute acetic acid. On the contrary, it has been known for ages that the curds of milk are produced by rennet secreted by the stomach.

It has been widely taught that gravity cream contains 16 per cent. of fat, and whole milk 4 per cent. of fat and 4 per cent. of proteid. More modern analyses by many analysts have shown gravity cream to contain from 10 per cent. to 26 per cent. of fat, and that very little milk contains 4 per cent. of proteid, and varies in fat from 3 per cent. to 5 per cent. With this present knowledge the query must suggest itself to many, Of what value was the painful and laborious calculation of infinitesimal quantities of cream and milk in feeding mixtures, when the chances were that the result in the bottle would not be the same as that on paper?

Some have contended that there is no difference between centrifugal and gravity cream, and that the emulsion is not affected by the centrifuge. Babcock and Russell, several years ago, showed that not only was the emulsion of the fat affected, but that the character of the proteids present in the cream was not entirely the same as that of the proteids in the remaining milk; and every dealer in cream knows that there are practical differences between centrifugal and gravity cream, and that for some purposes centrifugal cream cannot be substituted for gravity cream.

When there was no better way of examining and comparing milks for food than finding how much ammonia or nitrogen could be obtained from them, it was necessary to be contented. In view of our present knowledge, it seems strange to make a chemical comparison of breast milk and cow's milk, which, in plain English, means a comparison of their ammonia productiveness. A baby does not primarily utilize food for making ammonia, so the ammonia value of a food is not a safe or logical standard to set for estimating the suitability of an infant's food.

The most expert investigators into the problems of animal nutrition have found that the peculiarities of the species and individual must be carefully considered, or good results in feeding cannot be obtained. After finding what kind of food is best suited to the animal's appetite and digestion, chemistry steps in and aids in determining the quantities necessary to maintain the animal or enable proper growth to be made. Such investigations have shown that there are minimum quantities of different kinds of foods, which are absolutely necessary for the well being of any particular animal or species of animal, and a chemical analysis, which shows the general composition of an animal's food and what ingredient is deficient in quantity, will often be of great value in explaining lack of proper development or failure to do well. In practice there is little call for frequent analysis of food; after the minimum food quantities have been determined for a particular species of animal, a general knowledge of the composition of foods and a rough method of calculating the nutritive value of the food that is being eaten is about all that is necessary. Each animal must be fed according to its peculiarities.

In infant feeding it has been found by experience that milk must be the basis of the food, as milk develops the digestive tract. It has also been found that cow's milk, diluted more than three times (1 + 2), is not a safe food for continuous use for infants, as it does not contain enough proteid or tissue-building material. Diluted sweetened condensed milk has the same defect. It has also been found by experience that infants require from 2 to 4 per cent. of fat and 4 to 6 per cent. of carbohydrates, along with tissue-builders, to ensure proper growth. As no absolutely exact amounts are necessary, chemical analyses of food are only of general value in establishing the range of safety in feeding. It is well known that some animals and persons thrive on a quantity of food that other persons or animals would starve on. In other words, some persons or animals appropriate their food to better advantage than others. The successful feeder is the one who gets the infant to taking some suitable food and then adjusts the ingredients so that they are in sufficient quantity to carry on the normal chemical changes that take place in the body and allow storage of tissue other than fat, and at the same time produce proper functional development.

In a few words, the object of this paper is not to disparage chemical analysis of foods, which is of great importance, but rather to show that food chemistry has limitations in practical feeding; also that the chemical teachings of a few years ago are not the same as those of to-day. If the whole basis of the teaching of infant feeding should be chemical, then the principles taught have frequently been wrong, as it is now known that some of these principles have been erroneous. Cow's milk and human milk have been analyzed many times, but the advances in infant feeding have come, not so much from these analyses, as from clinical and physiological experiments with cow's milk, altered or modified in other ways than by simple quantitative adjustment of the component parts. The advances made have been greater along the line of physiological adaptations of various milks to the feeding requirements than from exclusive chemical studies. If chemical composition alone is to be considered, cellulose (paper), $C_6H_{10}O_5$ should be as good a food as starch, $C_6H_{10}O_5$; cane sugar, $C_{12}H_{22}O_{11}$ always interchangeable with milk sugar, $C_{12}H_{22}O_{11}$; and all caseins should act exactly alike. Jordan well states the problem when he says: "A ration may be chemically right, but practically wrong, but, at the same time, it is worth much to the feeder to be assured that the nutrients which he supplies to his animals will meet their physiological needs." This principle applies to infants as well as to the lower animals.

51 WEST FIFTY-FIRST STREET.

Wilkinson County, La., Medical Association.—This association was organized at Woodville, on March 24th, with the following officers: President, Dr. R. L. Hagaman; vice-president, Dr. L. W. Magruder; secretary and treasurer, Dr. C. E. Catchings; delegate to Mississippi Medical Association, Dr. T. J. Ray.

SOME GENERAL CONSIDERATIONS ON THE TREATMENT OF TYPHOID FEVER.*

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Before a society of this kind any elaborate discussion of so broad a subject as the treatment of typhoid fever would be absolutely out of place. Instead, I shall take up a few of the more important points in the treatment of typhoid fever and shall give my own practical experience therein. In passing, I may say that this is largely based upon my eleven years' service in Mt. Sinai Hospital, where the typhoid fever service is a very active one.

In considering the efficacy of any plan of treatment or its relation to any individual symptoms of typhoid fever, certain fundamental facts ought to be clearly borne in mind. One is, the great variations which occur in typhoid fever from year to years; these variations apply to everything, and include severity, predominance of certain symptoms, and especially mortality. Thus, in one year, of the 120 patients treated in Mt. Sinai Hospital, only six died, a mortality of 5 per cent. We were proud of the records and were pleased with the methods of treatment. However, when during the following year, out of 110 cases 12 patients died, a mortality of 11 per cent., we were less proud and possibly a little wiser.[1]

Another important peculiarity of the disease is that a certain number of patients will die, no matter what is done. These are usually the cases of severe typhoid sepsis, which pursue their horrible course uninfluenced by anything that can be done for them. In another class of cases, happily much larger than the preceding, the patients get well in spite of everything which is done for them, and in spite of all complications. The literature is full of striking examples of this type; thus, patients have survived starvation and water and grape juice régimes, eliminative treatment with Epsom salts, etc., claim their successes; striking cases of the harmlessness of full diet and routine feeding with ham sandwiches, etc., sufficiently attest the truth of these statements.

How foolish is it, then, to speak of any special plan of treatment of this ever changing and Protean disease! To treat this disease on a specified plan is to court failure.

Finally, my own experience warrants me in saying that in spite of all that may be said to the contrary, few diseases are more amenable to rational methods; few yield more brilliant results (provided we eliminate the melancholy cases of typhoid sepsis, uncontrollable hæmorrhage, etc.).

Intelligent observation and knowledge of the disease will enable the watchful physician to anticipate, nay, even to prevent, many of the severe features of the disease. Typhoid fever is an enemy that fights fair in the majority of cases; it is like a rattlesnake, it gives its warning before it strikes. The secret of success in treating typhoid fever lies in individualization, anticipation of coming complications, and intelligent supervision of details.

Among these details, probably the most vital is the regulation of the diet. It is true that all the textbooks discuss this question at greater or lesser length, but not one of them lays sufficient stress upon the condition of the mouth into which the food is placed. A dry, beefy tongue, lips covered with sordes, a pharynx baked and glazed, would be a torture to any otherwise normal being. To ask one of us to take nourishment under such conditions would seem absurd. What, then, shall we expect from the apathetic, somnolent, or delirious typhoid patient, to whom milk is mechanically doled out with painful regularity for a period varying from three to six weeks or more?

In the hundreds of cases I have seen, the classic typhoid mouth is of so rare occurrence in patients who are properly nursed that its presence must be regarded as so exceptional as to warrant investigation as to its cause. In other words, I maintain that the first and most important thing in the regulation of the diet of these cases is to give proper directions to the nurse, that the mouth shall be kept moist and the tongue and fauces clean. Each visit should include a thorough inspection of these parts. Possible obstruction of the nasal passages should always be suspected and remedied if it exists. Furthermore, the care of the mouth and nose is of importance in preventing possible pulmonic complications.

Too little stress is laid upon the systematic drinking of large quantities of water. If, while studying the nurse's notes, the physician would inquire with as much regularity about the administration of water as he does about the giving of his drugs, much good would accrue to the patient. This is one of the "little details" which is usually left to the nurse. Any pure water may be given. Charged waters are contraindicated, since the charged gases may increase the tympany; and, moreover, it is difficult for any one to drink large quantities of charged waters—they are usually taken only in sips, while patients readily and gladly toss off large quantities of pure water, if only to relieve their thirst.

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* Read before the New York Medico-Surgical Society, December 3, 1903.

[1] Fr. Mueller's report on the treatment of typhoid fever, which has since appeared in the January and February, 1904, numbers of the *Therapie der Gegenwart*. also directs attention to the great variations in mortality which have been observed in Basel, these differences ranging from 2.9 per cent. to 31.2 per cent. in various years from 1878 to 1899, the average being 10.4 per cent. mortality in 2,796 cases treated at Immermann's clinic.

A full discussion of the diet is impossible now, since time forbids. That milk should be the most important part of the diet is eminently proper, *provided that milk agrees with patient.* I make it an invariable rule to inquire of the patient and his family whether milk agrees. If it disagrees—and what is more annoying to so many patients who are not suffering from typhoid fever than the bloated, uncomfortable, full abdomen and the unceasing discharge of offensive flatus?—then routine administration of milk will inevitably cause trouble. Furthermore, the occurrence of abdominal distention early in the disease does not mean that a bombardment with intestinal antiseptics shall be begun, since far better results will be obtained from a proper dilution of the milk, either with plain water or albumen water or rice water or barley water; if this fails to arrest the distention, then it is wiser to suspend the use of milk for a longer or shorter time. I would also direct attention to the recent observations of Wright on the possible relations of a milk diet to the occurrence of thrombosis. Wright asserts that the large quantities of lime salts contained in the milk may have some influence in increasing the coagulability of the blood, and thus favoring the occurrence of thrombosis.

For a full discussion of this most important subject I would refer you to a paper entitled The Diet in Typhoid Fever, which I read in 1899 (*Medical Record,* January 6, 1900), in which this entire question and the foods allowed are discussed in detail. The rule I follow may be briefly summed up as follows: A delirious or somnolent patient can only be fed on liquids (not necessarily milk alone); if he is only apathetic or perfectly rational, I ask if he is hungry and desires something more than liquids. If he answers in the affirmative, I do not hesitate to add carefully prepared semisolids. Patients are often very grateful for being allowed to make their own beef juice by chewing pieces of soft, juicy steak, the nurse standing by and not giving another piece until the patient has returned the piece he had been chewing. This not alone keeps the mouth clean, but the free flow of saliva both directly and reflexly stimulates the secretion in the stomach.

That I have never seen any disagreeable effects from a more liberal feeding would not be a truthful statement, for I have seen rises of temperature follow apparently as a direct result. Taken all in all, the general results of the more liberal feeding have more than warranted its use. Serious consequences I have never encountered; furthermore I am no longer compelled to listen to the piteous appeals of typhoid fever patients for something to eat.

It is pleasing to note that many physicians are already taking more liberal views and are allowing their patients (whose condition permits it) to indulge in foods which are less trying than an uninterrupted ordeal of milk. For the present status of this most important question I would refer the reader to two important reports which have appeared since this paper was read, one by Lefevre, in the *Medical News* for January 2, 1904, and one by Fr. Mueller, in *Therapie der Gegenwart,* January, 1904, p. 26. Their views and results coincide fully with my own.

Before leaving this topic I may add that obstinate vomiting during the course of this disease is always a most disquieting symptom, for reasons which are so obvious as not to require any special mention. Medication is most unsatisfactory. A far better plan is to suspend all nourishment and medication for six to eight hours. Should this prove unavailing, use rectal alimentation until the stomach becomes tolerant. In some of these cases washing the stomach may turn the tide. Too little use is made of the stomach tube in typhoid fever, as most practitioners believe its employment to be contraindicated. But why should there be any more danger here than there is in a strangulated hernia or similar conditions where the tube proves so useful? At all events I have never yet regretted its use in typhoid fever.

Another use of the tube must also be mentioned. I refer to its aid in the feeding of delirious patients who stand in such crying need of food and whose very delirium may simply be a result of starvation. I have seen such cases of maniacal patients who could be tubed with difficulty in spite of being held down by four people; the introduction of a pint of peptonized milk through the tube wrought a magical change, the raving delirium being replaced by a quiet sleep from which the patient awoke a rational being.

In considering what ought to be done in the treatment of the fever I would say that many physicians lay undue stress upon the readings of the thermometer and too little upon the condition of the patient. The latter should be our guide. A certain amount of fever is as integral a part of the disease as are the rose spots, tympany, etc. For aught we know, the fever may play an important rôle in Nature's protective reaction against the disease, just as it does in pneumonia. Routine orders for this or that treatment if the temperature reaches a certain height cannot be too strongly condemned. Unduly high temperatures or badly borne "normal temperatures" demand treatment. The use of the tub or other hydriatic measures will always stand high in the estimation of those who have used them properly. The original barbaric procedures are no longer needed, since the bath of 90° F., reduced to 80° or 78° and accompanied with proper friction, will be found ample. The drop in the temperature is in my opinion the least important result of the tub. Too little stress is laid upon the increased elimination, the effects on the nervous system, the resultant leucocytosis, etc.

In the use of the antipyretics the pendulum has swung too far, since the judicious use of the coal tar products yields happy results. So also do many physicians fail to get benefits from quinine which, when used in the old fashioned method of Liebermeister and recently revived by Erb, Binz, and other German clinicians (*Therapie der Gegenwart,* 1901, pp. 1, 49, and 293), yields admirable results in many cases. This consists in using it every evening, giving 10 grains at 6 p. m. and 5 grains at 7 p. m., either in solution or in wafers, followed by some acid (either dilute hydrochloric or aromatic sulphuric acid). No immediate effect is noted, but the general course on the following day is distinctly better. Possibly its good effects may also result from the leucocytosis which quinine causes, which may thus counteract the leucopenia which is so characteristic of typhoid fever. Be the explanation what it may, from a two years' use of this method I am warranted in believing that this procedure is of decided value. In passing I may add that when quinine cannot be given by mouth, the subcutaneous use of the quinine and urea bichloride in eight grain doses offers a very reliable substitute.

There is a form of fever which, at times, is even more trying than hyperpyrexia. I refer to the persistence of moderate or low febrile rises in the fourth or fifth week. In this class of cases are the prolonged primary attacks, where there is a persistence of fever in spite of the fact that no complications can be discovered. These are the cases which try one's soul, when the patient becomes discouraged, his relations and friends eye you with increasing suspicion and distrust, as each additional day carries them further and further beyond the classical twenty-one days which, to them, must constitute the exact duration of the disease. In these prolonged cases, after having absolutely ruled out the possibility of some complication, one must remember that some cases run a long, primary course—the longest case of this kind I have seen, was that of a young woman, in whom the primary attack lasted forty-five days. Other cases, however, have definite causes for the prolongation of the fever; of these, the two most important are constipation with its resultant toxæmia from absorption, and the other,—inanition,—i. e., it may be an inanition temperature.

Each of these three classes demands a different line of treatment. We must first suspect constipation; that this should exist is by no means surprising, since everything (milk diet, etc.) conspires to that end. Henry (*Amer. Jour. Med. Sciences,* July, 1902) has recently published a paper which corroborates this view. Four years ago my attention was forcibly attracted to the importance of constipation, late in the disease, by a very severe and complicated case of an adult, whose fever ran an unduly prolonged course, in spite of the absence of any discoverable cause which could explain its existence. One day, however, while palpating the abdomen, what seemed like a full colon could be felt. The administration of a large, high, oil enema brought down what is probably the largest stool I have ever seen; it almost filled a chamber pot; the temperature at once fell and never returned. Since then, in such cases, I have not hesitated to give castor oil late in the disease, when I was not satisfied that the bowel had been properly cleared by the high oil enemata, provided, of course, there was no contraindications to its use.

Another method of arresting these prolonged temperatures, is the administration of large doses of quinine—20 to 25 grains every afternoon for two or three days. The effect of these massive doses is often very prompt.

That persistence of fever may be due to inanition is another fact which experience has convinced me is a reality. This I have not infrequently observed in cases which I have seen in consultation with other physicians, in which the stereotyped starvation with milk alone had been carried out. In these cases increase of the diet was soon followed by a gratifying return of normal temperature.

With the class of cases recently described by Delafield (*Medical Record,* October, 1903), in which the unduly prolonged fever is only cured by putting the patients on a full diet and out of bed, I have had no personal experience, since such cases are impossible under a more liberal plan of feeding.

No discussion of the treatment of typhoid fever would be complete without some reference to intestinal antisepsis, that golden calf so devoutly worshipped by all the manufacturing chemists. It is to be doubted whether practitioners will ever give up their hopes in this direction, since all the varied publications on the futility of even attempting a partial disinfection of the intestinal tract, in health—to say nothing of attempting this in typhoid fever—have made so little impression. The best result that can be hoped for from any of the so called intestinal antiseptics, is a moderate antifermentative action;[2] if used in moderation, and, if too much is not expected from them, there is no objection to the rational use of salol, the various bismuth salts, etc.

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[2] The data upon which this assertion is based may be found in a paper which I published in the *Medical News,* November 14, 1896—The Antitoxic and the Antiseptic Methods in the Treatment of Typhoid Fever.

Beyond all question, however, far better results are obtained by simpler means; these include the early use of calomel, one or more times; secondly, the systematic use of hydrochloric acid; thirdly, daily enemata to wash out the lower bowel; and finally, *the prevention of undue intestinal distention.* Of the use of calomel, early in the disease, I need say nothing, since its value is so well established. Of hydrochloric acid, I may say that if there is any one drug that ought to be used in every case of typhoid fever, that drug is hydrochloric acid. Its usefulness is based upon the fact that the secretion of hydrochloric acid in the stomach is very much reduced in all febile conditions; its routine administration, therefore, aids in securing a more complete digestion of the food in the stomach than would be possible, if we depended upon the scanty amount which is secreted in cases of typhoid fever. It is self-evident that the more complete the digestion in the stomach, the greater the absorption of peptones in the stomach, and the less the chances of subsequent putrefaction changes in the intestines. Ten drops of the diluted acid in a gobletful of water ought to be given every three or four hours throughout the course of the disease.

Equally useful is the routine washing out of the lower bowel, with a quart of saline solution. Stagnation in the lower bowel is prevented, and the expulsion of gas is favored. Where there is much tympany they should be used twice daily, and the aromatics, like peppermint, fennel, or chamomile should be added to the irrigating solution.

The prevention of undue distention means so much in the successful outcome of a case that no stress which is laid upon its attainment can be misplaced. In the undue distention of the gut lies the great danger from the typhoid ulcer, the liability to perforation and hæmorrhage resulting directly therefrom. Furthermore, the distention of the gut interferes with the normal peristalsis and the putrefaction and stagnation of the intestinal contents favor increased absorption of these resultant products and the typhoid toxines.

I may be pardoned if I remind you of the fact that is so often overlooked, that the absorption of the typhoid toxines from the intestinal tract and contents plays a less important rôle than does the general production of typhoid toxines in the blood, spleen, etc. Typhoid fever is a general infection, as much so as pneumonia and other infectious diseases. The finding of the typhoid bacilli in the spleen, in the blood, early in the disease, the occurrence of the Widal reaction, etc., all attest the correctness of the above statement that typhoid fever is a general infection, and emphasize the folly of measures directed solely to control intestinal infection. These statements should not be construed as meaning that efforts should not be directed to prevent putrefactive changes in the intestinal tract. They are meant to explain the real object of preventing distention, namely, to prevent the mechanical effects of distention, to control the mixed infection in the intestinal tract which constitutes the later phases of the disease, rather than to prevent the general typhoid toxæmia which, it is to be regretted, is beyond the reach of any measures acting through the intestinal tract.

I would next direct your attention to the important subject of stimulation. Here, too, there is entirely too much routine, too little individualization. The early and free use of alcohol is demanded by many on the plea of the food value of the alcohol. Under a rigid milk diet this is absolutely true; but when we have supplied the much needed calories in the fats, carbohydrates, and proteids, which are provided in a more liberal diet, this argument loses much of its force. Personally, I only use alcohol when it is needed as a stimulant.

In the early period of a case of typhoid fever no stimulants are needed. As the pulse rate rises and as the patient becomes more apathetic and somnolent, then the need for them is more apparent. The rational use of hydriatic measures is a most powerful stimulant, and when the bath or pack is preceded by whisky and followed by hot food they leave little to be desired. Should more powerful measures be needed, then caffeine in proper doses should be employed; its combined stimulating effects upon the cerebrum and the circulation are not sufficiently appreciated by most physicians. A sinking of the blood pressure and failing circulation demand in addition that strophanthus or sparteine or camphor shall be used hypodermically in full doses and *at short intervals.* To give them by mouth is to drown these fractions of a grain in the quarts of liquid which are stagnating in these non-absorbing and atonic stomachs; they might as well be given by absent treatment. There is an art in the successful use of stimulants in these desperate cases; the practical rule is: Do not give stimulants of this type until they are actually needed, and when you do use them, give them in such a way that they are actually absorbed, and give them at frequent intervals and in such rotation that a constant and prolonged effect be obtained. The intelligent and ever alert members of the house staffs of our hospitals, who have these cases under constant supervision, could give points to many a much older practitioner. I have derived no little pleasure from watching the successive house physicians at the Mt. Sinai Hospital save case after case by judicious and proper stimulation. Many a pauper in the hospital ward has received treatment which the millionaire in his palace has hoped to secure in vain. The objection may be raised that overstimulation might occur. This objection is perfectly valid, and must be borne in mind. Practically, however, I have not often seen it.

Surprise may possibly be experienced that no mention has been made of strychnine or digitalis. As a routine drug I consider strychnine a danger in typhoid fever. Some years ago I had the exceptional experience of seeing a very severe case of a young man in the late stages of his typhoid develop the arched back, the trismus, etc., which are so characteristic of tetanus. This ordeal he survived only to die of a perforation. As strychnine had been very sparingly used in this case, I naturally had to look for some other cause. This was not hard to find, since the early exaltation of the deep reflexes, the subsultus, etc., only too plainly indicate that in many cases the action of the typhoid toxine on the nervous system is closely allied to that of strychnine. Why, then, use a drug whose physiological action is such that it must intensify some of the effects of the toxines which are produced by the disease-germs in question? I do not apply this restriction of its use to all cases, since, as is well known, the effects of the typhotoxines on the nervous system are not the same in all cases. The rule which I follow is very simple, namely, when the patellar reflexes are exaggerated in typhoid fever, never use strychnine. If they are normal or diminished, as sometimes occurs, I do not hesitate to use it, if other stimulants have not been satisfactory.

For analogous reasons I rarely use digitalis, since the slow inhibited pulse which is so characteristic of the disease has seemed to indicate that better results might be obtained from other sources. Then, too, the grave myocardial changes which occur in typhoid fever hardly offer a good indication for the free use of digitalis.

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McCormick Memorial Hospital, Chicago, Ill.—The memorial hospital for the cure of infectious diseases, to be founded by Harold McCormick, and which, it is understood, has been made a part of the University of Chicago, will be located in the area lying west of Washington Park and south of Fifty-third Street. Part of the land to comprise the site has been purchased, while negotiations are in progress for the acquirement of the remainder. The property purchased includes 376 feet frontage on South Park Avenue and Fifty-third Street, which was sold by John A. Markley for $40,000. It comprises one fourth of the block. It is estimated that about $500,000 will be expended in the construction of the buildings.

THE CONTAGIOUSNESS OF PNEUMONIA.*

By ROBERT N. WILLSON, M. D.,

PHILADELPHIA.

The following series of three cases of acute croupous pneumonia is reported, both because it undoubtedly presents an instance of direct contagion, and because the contagious nature of pneumonia does not yet seem to be generally recognized.

In spite of all modern teaching with regard to the acute infectious form of the disease, the old idea still seems to dominate the minds of the profession as well as of the laity, that pneumonia is an inflammation of the lungs due to exposure to cold and wet, and that it occurs, except in rare instances, in damp and cold weather; also that in different cases recovery or death occurs without reference to one another. No one attempts to deny the fact that pneumonia is an infection of the general system in which the lungs primarily suffer; but many fail to keep this fact in mind for long at one time. Very few seem also to remember that a fatality in pneumonia is not due to the involvement of the lungs, so much as to the general systemic infection, and to the crippled cardiac action, which may finally give way altogether. Attention has been drawn more and more closely in the past two years to a feature in the transmission of the disease that would appear to stamp it as certainly one of the typical, though not one of the highly, contagious diseases.

Of the following cases two occurred in brothers, living in the same house, but not in the same room; while the third was that of a college mate who boarded with them. All were in the same room during my first visit to the subject of Case I, and the latter was waited upon for two days by his brother. In Case III the patient was simply in and out of the sick room during the two days before the subject of Case I was transferred to the hospital, and had nothing to do with the nursing or handling of the latter.

The clinical histories were in brief as follows:

CASE I.—F. H., a medical student, at the University of Pennsylvania. Aged twenty years, born in Puerto Rico, but had been in this country two years. Had had pneumonia once, about two years before. Had had amygdalitis five times. Was seen by me on November 2, 1901, in a severe attack of unilateral (rightsided) amygdalitis (the sixth in his life), from which he recovered clinically in a few days. Nineteen days later (November 21st) I again saw him, and learned that he had been well about two weeks, and at his work. He had not been exposed to cold or wet at any time since his amygdalitis. The night previous he had had a severe chill, then active muscular and bone pains all over the body; also cough, and considerable expectoration. There was no blood in the sputum, which gave, however, a pure culture of the *Diplococcus pneumoniæ*.

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* Read at a meeting of the Philadelphia County Medical Society, September 9, 1903.

When examined by me he was found to be generally "sore" to the touch, and, on movement, over the entire body. He was mentally rather stupid and dull, except when roused, when he would answer questions clearly, but drowsily. His lungs showed moist râles over both bases, but no crepitation, no tubular breathing, and no dulness on percussion at any point. Expiration and inspiration were free and caused no pain. There was no appreciable increase of tactile fremitus. The further physical examination was negative. His temperature was 104.8° F., respirations 40, and pulse 148. On the next day (November 22nd) his temperature was 102.4° F., pulse 118, respirations 24. He was much more comfortable, had less pain in the muscles and bones, but now complained of a sharp, though not severe, pain over the right shoulder and likewise over the right pulmonary apex. The sputum contained bright red blood. Over the lower lobe of the right lung posteriorly there was loud tubular breathing, and the percussion note was flat. No râles could be heard. Over the left base a few moist râles. Both sides anteriorly were negative. He was then transferred to the University hospital, where he ran an ordinary course of croupous pneumonia, with the crisis on the eighth day. Complete recovery followed.

CASE II occurred in a brother of the subject of Case I. V. H., also born in Puerto Rico, and also a student in the University of Pennsylvania. He had nursed his brother for the first two days of his illness and had seen him occasionally in the hospital after that time. He had always been active and well. Had never had pneumonia or amygdalitis. On November 27, 1901 (several days after his brother), he had a severe chill at 3 a. m. The day before, he had a headache and anorexia. There had been no exposure to cold and wet. Following his chill he had pain in his right side, and cough. There was very slight expectoration. He was sent to the University hospital by Dr. Swan with the diagnosis of pneumonia on November 29th, and at that time showed rusty sputum, slight stupor, face flushed, breathing labored, and a temperature of 104° F. The chest showed impaired resonance on the left side in the axillary line as high as a line corresponding to the nipple. There was typical bronchial breathing, but no crepitant râles could be discovered. The patient complained of sharp pain in the left side in the axillary line. This case also ran a typical course of pneumonia. He was bled sixteen ounces on December 2nd to relieve cardiac distress, and from then on progressed favorably, though there was no decided crisis. The temperature remained between 102° and 100° F., with a fall of one to three degrees after each injection of antipneumococcic serum.

On December 12th it became certain that an effusion was present in the chest, a quantity of bloody serum being removed by aspiration. On December 18th he was again aspirated, pus being suspected and its presence determined by this procedure. On December 19th he was operated on by Dr. Frazier, and the pyothorax drained. He was discharged cured about a month later. I am indebted for the notes of this case to Dr. Tyson, in whose care he was at the hospital.

CASE III occurred in another student, R. F., aged nineteen years, also a Puerto Rican, who was boarding with the family of the preceding subjects. He had always been strong and well, and there had been no exposure to cold and wet, or injury of any kind. Two days after Case I, on November 22nd, he had a severe chill, and was taken to the Medico-Chirurgical Hospital, where he experienced a typical case of acute croupous pneumonia, from which he also recovered after the ordinary period. He was in bed three weeks, his crisis occurring on the seventh day of the disease.

It would admit of little doubt in the minds of any one that if three cases of any infectious disease occurred within a few days in a household which had been previously healthy and free from ailment, there must either be a common infecting source, or each case must depend upon one preceding it. In the instance of Case II there existed the possibility that some of the sputa of Case I might have been carried to the mouth of the former by means of his hands, although he was strictly warned against this and knew the danger. He was also told not to confine himself to the sick room, as the case was thought in the beginning to be one of influenza. This means of transmission and infection was, therefore, an unlikely one. In Case III it could be absolutely excluded, as the patient had not had any part in the nursing in Case I, and had merely visited in the sick room during the first two days of the illness. The fact that no other cases developed in the house subsequently is easily explained on the ground that no one else was allowed in the room except the mother of the two brothers. In Cases II and III, therefore, infections would seem to have been by direct contagion from Case I, unless some other more likely source of infection can be suggested; and it would certainly appear that the contagion was transmitted by air borne means.

Several interesting questions arise as the result of such an occurrence.

1. What influence had the preceding amygdalitis (probably, as is very often the case, a diplococcus infection) upon the pneumonia in Case I?

2. What influence had the original attack of amygdalitis in Case I upon the pneumonia in Cases II and III?

3. What relation was there between the pneumonias in Cases I, II, and III?

4. Could all three cases have been instances of independent infection?

In answer to Question 1 it must be admitted that amygdalitis is frequently a pneumococcus infection.

The writer studied, with the late Dr. Frederick A. Packard, a long series of cases of amygdalitis during the winters of 1901-2, which appeared to have been caused solely by the *Diplococcus pneumoniæ*. Even when other organisms were present, they usually appeared in much smaller numbers, so that it seemed probable that the cases of streptococcus and staphylococcus infection were the exception rather than the rule. It is no new assertion that amygdalitis is a highly contagious condition, and that the contagion seems far more active in certain instances than in others. If this is true, and if we grant that this contagious affection is often, if not always, due to the pneumococcus alone or in combination with some other organism, it would follow that there are certain occasions when the harmless pneumococcus, which is found at all times in the mouth and on the tonsils, may become virulent, and may be transmitted through the air, just as is the contagious principle of measles and scarlatina and other diseases of this class. This is entirely apart from the known fact that when the vitality of an organ is lowered, as in the case of the tonsil or the bronchus or the lung, the pneumococcus, which is ordinarily innocuous, finds a suitable ground for development and attack. It assumes a new ground, that the microorganism can of itself take on a virulent nature, and be transmitted as a contagious principle. Once the truth of this is demonstrated, we must admit the possibility of the contagion from amygdalitis resulting in bronchitis and pneumonia. Clinical facts indeed indicate the probability of this very thing.

Kerr has recently reported twenty-three cases of acute bronchitis in children, which terminated in bronchopneumonia. Nine of these cases of bronchopneumonia followed exposure to cases of bronchitis, not pneumonia, a similar infection to that from the tonsil, and from a locality slightly more remote.

No one will question the fact that a simple "cold" often passes from member to member of an entire household, without other ground of explanation than one of contagion. Occasionally these "colds" result in bronchitis, and even in pneumonia. Of course such a pneumonia is, in most instances, the result of the extension of the infection and inflammatory process along the bronchi, and thence to the pulmonary tissues. When, however, it is of the acute croupous type, this is not true, and we have before us a different type of infection. When this acute croupous pneumonia occurs without the preceding catarrhal symptoms suspicion is directed at once to the cause of the "colds" in other members of the family.

In considering Question 2, "What influence had the original amygdalitis in Case I upon the pneumonias in Cases II and III?" we must admit at once the possibility of a pneumonic contagion directly, in Cases II and III, and even in Case I, from an amygdalitis, and of a pneumonic contagion from a pneumonia in Cases II and III. Thus in Case I the patient experienced his initial symptoms of pneumonia on November 20th, nineteen days after the acme of his amygdalitis, but only one week subsequent to the disappearance of his "sore throat," i. e., the disappearance of the amygdalitis. In Case III the patient experienced his chill and pneumonic onset on November 22nd, two days after that in Case I, and only nine days after the complete convalescence of the latter from amygdalitis, to which the patient in Case III was frequently exposed. This would admit of an incubation period of seven days in Case I and nine days in Case III, provided the origin of the contagion was the tonsillar infection in Case I.

The patient in Case III was attacked on November 27th, or fourteen days after the last sign of amygdalitis in Case I. These possible periods of incubation would average about the time occupied by the dormant stages of most infectious and contagious diseases, and the occurrence is certainly suggestive. The possibility of direct infection from the sputa must of course be considered in Case II, and renders the latter of less importance in the discussion. The same fact renders it more likely that the infection in Case II originated in the pneumonia in Case I, rather than in the amygdalitis.

Question 3, "What relation was there between the pneumonia in Cases I, II, and III?" is also of interest.

Between the initial symptoms (chill, pain, vomiting, etc.), in Cases I and III, two days only transpired, and between those in Cases I and II seven days, and in Cases III and II five days. It is, therefore, equally possible and probable that Cases II and III may have been instances of contagion from a pneumonia, either Case III from I, and II from III, or both III and II may have resulted from the contagion of I. The sputum in Case I (the only one of the three in which the record was preserved) contained a pure culture of the pneumococcus. No doubt need exist that all three were cases of pneumococcus infection, and with this probability becomes even more likely the dependence of each subsequent case, upon one or the other that preceded it.

Our final query, "Could all three cases have been instances of independent infection" (i. e., simple coincidences)? must be answered with a doubtful affirmative. While certainly possible, the occurrence is as certainly unlikely. Pneumonia was not epidemic at the time to any great extent in Philadelphia. Had the cases occurred at greater intervals, or in different households, the possibility must needs become more vigorous; but when three cases of identical infection occur within one week in the same house, and among three intimate associates, we must yield that the weight of probability balances the scale in favor of a sympathy, a contagion, by means of which the virulent pneumococcus passed from Case I to the other two.

During the present year, in the month of June, I saw two cases which strikingly evidenced the same probability, and in this instance almost a certainty, of pneumococcus contagion.

CASE IV was that of a lady seen in private practice, aged fifty-nine years. She was a sufferer from asthma and hay catarrh of long standing, and had also been treated by Dr. Packard during his last years for a severe chronic mucoenteritis, from the latter of which conditions she seemed to have largely recovered. I saw her on June 11, 1903, and found the lower lobe of the left lung intensely congested, with everywhere crepitant râles, and considerable impairment of percussion resonance, temperature 103.5° F., pulse 132, respirations 48, following a chill. Her condition gradually improved during the next two weeks, until the crepitant râles were succeeded by moist râles and the patient convalesced. The slight impairment of resonance over the left base persisted so long a time that there has always existed a doubt in my mind that there may have been a patch of consolidation within the lung, which did not present the usual physical signs. The sputum in this case was very scanty, never bloodtinged, but full of diplococci.

CASE V.—On June 22nd, eleven days after the chill in Case IV, her husband, a physician, aged eighty-two years, had a severe chill, and complained of pectoral pain. There was no exposure to cold or wet in either case. This patient had been slightly uræmic for some time, but was otherwise active in his enjoyment of daily life. He had a typical attack of croupous pneumonia with a crisis on the eighth day, and collapse during which he appeared moribund. Under hypodermic stimulation and oxygen he reacted, and to-day is in better health than in years.

Both of these cases occurred at a time when pneumonia is rather unusual than otherwise; no other cases were known in the vicinity at the time, and one followed the other so closely as to make the contagion from the former the probable source of infection in the latter. It is needless to say that Case V, an old man of eighty-two years, did not derive his infection by contact with the sputa of Case IV. He was, however, constantly in the room during the first few hours of his wife's illness and occasionally thereafter.

Many instances occur of a similar nature, and the present year has offered an unusual number for study. In the issue of Public Health Reports (Washington) dated May 29, 1903, thirteen cases of acute pneumonia are cited, all of which occurred in rapid succession in one business office. In the same volume, but of date May 15, 1903, it is stated that in Chicago, during two months, March and April, of this year, 1,186, or 22 per cent. of all deaths (5,341) occurred as the result of croupous pneumonia. Surgeon Banks states in this report that one consultant noted in a single family four consecutive deaths, and six more among the friends who attended the funeral.

Anders has recently compiled a table (*Journal of the American Medical Association,* May 9, 1903), which shows that, as he says, "pneumonia is more or less limited to centres, and these correspond in the main to the most densely populated areas, with their allied conditions of squalor and poverty."

The most likely reason that can be ascribed for such a state of affairs is, of course, the lack of care and cleanliness that prevail under such conditions, and the unparalleled inducements to contagion. It would seem as though, just as Reed and Carroll have compelled us to lower the mosquito net over malarial patients, we who formerly were told to avoid swampy districts and the night air, must also isolate our cases of amygdalitis, bronchitis, and pneumonia, and nurse them after the manner of other contagious disease. Certainly all sputa should at once be destroyed, and perhaps all secretions and excretions; and if in cases in which this is promptly done (as in Cases I and IV) the contagion is still passed on, we must then make our quarantine a rigid one until the danger has passed by.

It might have been more appropriate to entitle this paper The Contagiousness of Pneumococcus Affections, including in the term rhinitis, bronchitis, amygdalitis, and pneumonia,—or in short, any involvement of part or all of the respiratory tract that depended upon the pneumococcus of Fraenkel. The subject of pneumonia is to-day such a vital one, however, that it seemed to the writer more salutary to direct attention to it alone, as a stimulus to the study of the entire subject. Certainly we need to find some stay to the ravages of this affliction, which has of late years outrun even the "white plague."

350 SOUTH FIFTEENTH STREET.

Association of Assistant Physicians of Ohio State Hospitals.—The third semiannual meeting of this association occurred April 6th and 7th at the Ohio Hospital for Epileptics, Gallipolis. Representatives were in attendance from the Columbus State Hospital, Toledo State Hospital, Massillon State Hospital, Dayton State Hospital, and the Ohio Hospital for Epileptics. The following officers were elected: Dr. William H. Pritchard, of Gallipolis, president; Dr. Paul W. Tappan, of Dayton, vice-president; Dr. Walter H. Buhlig, of Gallipolis, secretary, and Dr. F. E. Ferneau, of Toledo, treasurer.

THE TENDENCY TO TUBERCULOSIS.*

By JOHN B. HUBER, A. M., M. D.,

NEW YORK.

We must conclude, from the reports of necropsists, that practically all of humankind are, in greater or less degree, tuberculous. It is likely, moreover, that this disease has been coæval with man, and that his primordial ancestors suffered from it in remote and nebulous ages. At any rate, Hippocrates had to contend with it as we have to do to-day.

In any comprehensive consideration of tuberculosis one must take into account much more than the life period of the individual affected. A tendency may have been developing through several antecedent generations. Certain hereditary manifestations are therefore to be observed, if we are to pursue a rational therapeusis. Such are: Various thoracic malformations, defective development of the circulatory system, deficient ossification, and the like. Besides such anatomical stigmata there are many functional aberrations from the normal; these latter are more important than those of an anatomical sort, and are, of course, much more amenable to treatment. Many children are born with a scrofulous temperament, the symptomatology of which need not be enumerated here. In the light of present day research, however, certain aspects of struma are very suggestive. There are tedious inflammations of mucous membranes, such as blepharitis, coryza, congested and unhealthy throats and bronchi, and gastrointestinal catarrhs; there is persistent adenitis and periadenitis, particularly in the cervical region, in the nasopharynx, and in and about the mesentery; and there is a markedly sluggish and torpid metabolism. Such conditions as these are surely ideal for the implantation of the Koch bacillus; so that well developed tuberculosis cannot but result, either in a short period or after years of latency.

A number of investigators declare that by far the most important avenue through which the tubercle bacillus invades the organism is the alimentary canal, the course being through the lacteals, the thoracic duct, the vena cava, the right heart, and the pulmonary circulation. The prevalence of tuberculosis in the lung above that in all other organs and tissues is due to sevaral factors, principally to the lungs having to act as a strainer, purifying the blood before its admission into the arterial circulation.

If this view is correct it is manifestly of transcendent importance that bacillus-laden excreta from the nasopharynx should not be ingested; that the food and drink consumed should be bacillus-free, of wholesome quality, and above all, that it should be thoroughly digested. A normal and well balanced metabolism must be maintained, so that no excess of nitrogenous matters may be allowed to accumulate, to serve as a pabulum for the development of the bacillus and its allied microorganisms and their toxines.

And in considering metabolism certain factors are not to be lost sight of, as: The condition of the excretory organs; the interdependence of the heart and the lungs upon one another; respiration (which term includes, not only the organic capacity of the lungs, but also the conveyance of oxygen to the furthermost tissues); the possibility of capillary stasis, and the relation of these phenomena to psychic and nervous states; the influence of the ductless glands, especially of the adrenals; the blood alkalinity; the power of regeneration of epithelium and connective tissue; and like considerations.

Next in importance to the digestive tract in the propagation of tuberculosis are the bronchial glands and the lymphatics of the upper air passages, the course here being through the vena cava, the right heart, and the pulmonary artery.

Tuberculosis by means of inhalation of the bacillus directly into the air vesicles is a phenomenon probably very rare indeed. Baumgarten, Ribbert, Sinclair, Thompson, Hanshalter, Fruhlingsholz, Wright, Flick, Behring, and others (Behring most emphatically), declare such a course to be utterly impossible. However, from the viewpoint of practical sanitation, it cannot matter much whether the microorganism is taken up by the lymphatics of the upper air passages and the bronchi, or whether there is alveolar inhalation.

In addition to these factors, the economy has oftentimes to combat vicious environment influences which may still further prepare it for microbic invasion. Among such the most potent are alcoholism and poverty and all the various conditions which these two factors connote, as: Unsanitary habits, starvation, or bad food and impure milk and water, illy ventilated living rooms, overcrowding, uncleanliness, bad drainage, and the like. Of all these conditions, perhaps the most grievous is the loss of the tidal strength, which should be used in coping with the ordinary affairs of life, and the dependence of the poverty stricken consumptive upon only his reserve strength, being thus in the position of the camel to whom the last straw is fatal. It is such predisposing factors as these that stamp tuberculosis as a disease indicative of civilization's submerged strata. Other factors inducing a tendency to tuberculosis are: Unhealthful trades, shock-producing traumatisms, aberrations occurring during adolescence, lowered tissue resistance following upon fevers and such affections as chloranæmia, diabetes, syphilis, and migraine, the predisposing effects of "colds," pneumonia, and pleurisy, and the tendency to the establishment of foci induced by lymph nodes, skin affections, adenoids, hypertrophied tonsils, affected mastoids, genitourinary lesions, and bone and joint diseases.

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* Read in a symposium before the Medical Society of the County of New York.

Among all the various material elements which are combined in the human organism there is not one which is foreign to the universe outside that organism. What is called a healthy body is but a subtle and wholesome selection from among these external elements made under the control of the mysterious and inexplicable force, thus far comprehended only by the dogmatist, which we vaguely term the vital principle, the breath of life, and the like. The present day philosopher understands the first cause no better than it has ever been understood; nevertheless, with this limitation, he has achieved a very comprehensive grasp upon life, and one most helpful to us as physicians and altogether adequate for our purposes. He has not explained for us *why* cosmic phenomena exist; but he has explained in great measure *how* these phenomena react upon one another, and particularly how external phenomena react upon the human organism. He has abundantly justified the scientific measures which are in vogue and are now being more and more developed. It is certain, as the monist teaches, that life is the constant adjustment of internal relations to external relations, that the body, in the various correlated activities of its organs and tissues, is constantly being affected by, and must respond to, influences from without, either physical or chemical in their nature. If these influences are wholesome, health may be expected; if they are not, disease must be inevitable. We have here, then, an altogether satisfying basis for the hygienic and prophylactic measures which medical science has instituted for the eradication of a disease which is by far the most prevalent and the most deadly of all diseases. Such measures as these will receive exposition during this evening.

44 EAST SIXTY-FOURTH STREET.

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The Macon, Ga., Hospital.—The directors of the Macon Hospital Association have decided to construct another building in connection with that great and growing institution. Eighteen private rooms will be built, extending over the private alley which connects Oak Street with Pine Street. When this additional wing is completed the alley in that direction will be closed and ambulance wagons will have to approach the hospital from the alley, which opens on New Street. When the eighteen new rooms are completed the building will be one of the finest hospitals in the State.

MY EXPERIENCE WITH PHOTOTHERAPY, A PRELIMINARY REPORT.

By JULIUS ROSENBERG, M. D.,

NEW YORK.

Although the possibilities of the curative action of light are still unknown, it is evident that in light we possess a remedy of no mean order and one which in the near future will occupy a most exalted position as a therapeutic agent.

This being a preliminary report, I will refrain from discussing the literature of phototherapeutics or detailing the various methods and their advantages or shortcomings, but will briefly relate my personal experience and the results obtained. I now use the ultraviolet rays of a fifty-five ampère iron-carbon arc. To obtain good results a high ampèrage is necessary; so are specially prepared carbons, as those in common use emit comparatively few chemical rays. The rays emanating from an arc are divergent; my apparatus, therefore, contains mirrors which collect the rays and enable me to throw and concentrate the light upon a given point. Experience has also taught me that to obtain results an exposure must last from 55 to 75 minutes; a shorter application is not of lasting benefit. This, in a sensitive skin, may result in a temporary erythema, but with ordinary care it causes neither blisters nor other permanent injuries. The treatment, far from unpleasant, is even enjoyable to many, and as pain, no matter what its source, usually disappears under its influence, is gratifying to both the patient and physician. The appended report speaks for itself:

CASE I.—Mrs. C. K. had neuralgia in right breast for seven weeks; the usual remedies were tried without much benefit. Light was applied twice, duration of application fifty-five minutes. After the first application decided improvement; the second treatment resulted in a permanent cure.

CASE II.—Mrs. R. H., pregnant five months, had sharp neuralgic pains originating in left ovary. Walking difficult and painful. Examination showed nothing abnormal. Light was applied twice and the pain disappeared.

CASE III.—Mrs. P. W., intercostal neuralgia. Usual remedies afforded but temporary relief. Three applications of one hour's duration resulted in a permanent cure.

CASE IV.—Mrs. J. had had intercostal neuralgia for four years. Pain always present, but at times more severe. Was treated by me for years with but little relief. I applied the violet light two months ago, and the pain disappeared after the third treatment not to return.

CASE V.—Miss C. F. Coccydinia, the result of a traumatism. Was very miserable for over one year. Examination showed usual tenderness at sacrococcygeal articulation. No abnormities in rectum or genitals. The first application afforded considerable relief and now, after two weeks' treatment, the patient is free from pain.

Case VI.—Mrs. R. Neuralgia of left ovary for years. The organ is enlarged and tender. Was treated locally by tampons, etc., without much benefit. Patient felt better after the first treatment. She has had five exposures and apparently is cured. The ovary is smaller and no longer sensitive.

Case VII.—Mrs. J. C. had a fall upon her buttocks about five years ago. Since then, pain and tenderness in lumbar region, especially left side. Last summer patient was very miserable. Spasms of erector spinæ producing a temporary curvature of the spine. Massage and galvanism being of no benefit, Mrs. J. C. was seen in consultation by a nerve specialist, who advised the Paquelin cautery to be applied, and ordered rest in bed. Some improvement resulted, but the patient was never free from pain. Three weeks ago the pain became much worse. The spine was considerably distorted. She was unable to turn in bed, as the slightest exertion caused much agony. The first exposure (sixty-five minutes) produced an immediate improvement, and after five treatments the patient was free from pain and able to be about.

Case VIII.—Mrs. M. G. has been a sufferer from sciatica of left leg for years. Various resorts of America and Europe were visited without obtaining much if any relief. I have treated her off and on for three years without success. Three weeks ago I applied the light, giving her an exposure of ninety minutes. The patient, who was in agony before application, arose from couch free from pain. She has had nine applications and is apparently cured. Time will show whether this cure will be a lasting one.

Case IX.—Mr. F. M. has had neuritis of musculospinal nerve of left arm for four months. The patient, a drug merchant, had tried all known remedies, used in these cases, without result. When first seen at my office, he had to use morphine in half grain doses, and the rest and relief thus obtained were very transitory. The very first application of the ultraviolet light produced a most marvelous result; the pain disappeared for over eight hours, and for the first time in weeks the man went to sleep without opiates. Mr. M. has been under my care for three weeks; during this time he received twelve applications. He is able to attend to his business, no longer uses opiates, and, a slight rigidity excepted, has no pain or other discomfort. Knowing the tedious and obstinate course of these cases the result obtained is most surprising and gratifying.

Case X.—Miss A. R. is another case of neuritis of the left arm, which was cured with two applications of the ultraviolet light. The pain became less after the first exposure and after the second application she left my office free from pain. She has remained well.

Case XI.—Mrs. E. A., muscular pain and tenderness of neck and right shoulder. Hot applications, massage, and salicylates tried without benefit. The pain disappeared after an exposure of fifty minutes.

Case XII.—Mrs. R. Neuralgia of neck and arm for one week. The usual remedies afforded no relief. Cured with two applications of the ultraviolet light.

Case XIII.—Mrs. O. had facial neuritis for six years, during which time, as she told me, she had suffered untold agony. Most of her teeth have been removed, also a portion of the right lower jawbone. When seen about five weeks ago, she could barely speak, every movement of the jaw being painful. She had sharp shooting pains; in other words, she presented a typical picture of tic douloureux. The first application produced a most wonderful change in her condition. She left my office free from pain and a treatment every third day has kept her very comfortable. She sleeps without opiates and is able to receive the much needed attention of a dentist. I do not claim a cure in this case, but the ultraviolet light has certainly accomplished in weeks, even in days, what medicines and operations by competent physicians would not effect in years.

Case XIV.—Mrs. S. F. has suffered from tic douloureux for about ten years. Division of the nerve at various points afforded none, or only temporary, relief. She came to my office, on the advice of her family physician, in the greatest agony. The light brought temporary respite, but the pain returned with undiminished severity whenever the light rays were removed. The patient discontinued treatment after the third application on the advice of a nerve specialist, who stated (?) that this treatment, if continued, would cause burns and brain injuries.

As stated above, there is absolutely no danger connected with application of ultraviolet rays and as the outlook for these cases is so exceedingly gloomy and hopeless I regret that a more extensive trial was not permitted. Judging from experience in other cases, relief, if not a cure, could ultimately be expected.

Case XV.—Miss L. M., facial neuritis for one year. Teeth pulled, usual treatment; no improvement. The ultraviolet light gave instantaneous relief. After seven applications the patient slept without opiates and was free from pain.

Case XVI.—Mrs. M. injured knee joint eight months ago. Synovitis, massage and electricity caused some improvement. Three applications of the light reduced the size of the joint and freed the patient from all pain and discomfort.

Case XVII.—Mr. M. J. Pain in muscles of back and neck for almost two years; otherwise in good health. Had medicines, counter irritation, and electricity, without improvement. Very nervous about his condition, as a near relative was a helpless invalid from rheumatoid arthritis. Pain diminished after first application. Mr. J. has had six treatments and is cured.

Case XVIII.—H. J., a boy ten years of age—general health good. Twitching of facial muscles since infancy. Parents have tried everything without any result. I applied the light to the occiput, neither expecting nor promising cure or improvement. To my surprise the boy's condition improved after the first treatment and now, after seven applications, the spasms have almost ceased. I shall not, nor can I, explain how this change was brought about. If he had been an older subject the probability of hypnotic suggestion might be considered.

CASE XIX.—Mr. C. H. has had pain in the lumbar region for four years. Has tried everything without obtaining relief. General health fairly good. No lesion of rectum or genitals, except enlarged prostate. The light afforded temporary improvement. Pain disappeared during application, but returned within a few hours. Discontinued treatment after fifth application.

CASE XX.—Injured right hand eight months ago; since then has had diminished strength, pain and numbness, especially in middle finger. Massage, electricity, and the application of high tension current of no benefit. The first application of the ultraviolet light removed pain and numb feeling, and after the second treatment the patient (a trained nurse) stated that her hand felt the same as the other healthy hand.

I have also applied the ultraviolet light in cases of pulmonary disorders, such as pleuritic pains and bronchial irritations following influenza. The results obtained are very encouraging and I believe that the ultraviolet rays will be of much benefit in the early stages of pulmonary tuberculosis.

The investigations of Finsen and his assistants have proved the immense penetrating power and bactericidal action of these rays; their use in these cases is a rational one, and patients who cannot afford the benefit of climatic changes should certainly try the ultraviolet light.

772 PARK AVENUE.

THE SOULES HOSPITAL METHOD OF BURYING THE STUMPS OF THE APPENDIX AND MESOAPPENDIX IN APPENDICECTOMY.

By THOMAS E. SOULES, M. D.,

WESTFIELD, N. Y.

After the appendix has been brought up, the mesoappendix is tied off at or about its centre (Fig. 1) in sections varying from one to four, usually two or three, according to length; each succeeding ligature being made to include some fibres of the preceding. The mesoappendix is then cut down to its base, the adherent mesentery is carefully dissected from the appendix and removed, and a circular incision made through the peritoneal envelope down to the musculoconnective tissue, at or near its tip, and carefully peeled off throughout its entire length to, or very near, its colonic junction, where a fine silk ligature is thrown around the denuded base of the appendix (Fig. 2). Another ligature is applied about one quarter of an inch externally to this, and the cut made between the two; the appendix is then removed. The glove finger of peritonæum is then turned back again and slit along the line of former mesenteric attachment (Fig. 3), and spread out, making a flat membrane equal in extent to the circumference and length of the excised appendix; this is then made to cover the appendicular stump, together with the bare ends of the mesocæcal stumps; and with edges turned in, if great delicacy is desired, it is carefully stitched to either side (Fig. 4), where the peritonæum shades away over the mesoileum.

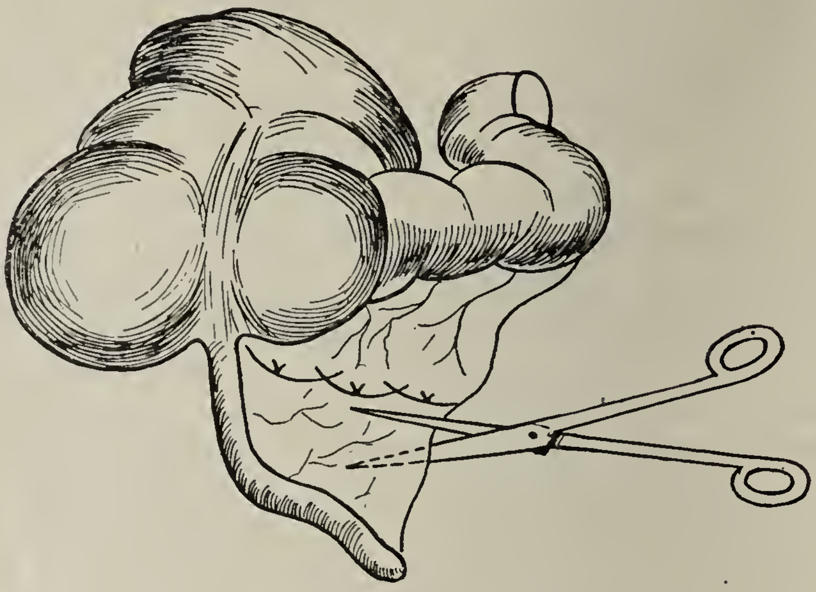

FIG. 1.—Mesoappendix with sutures applied.

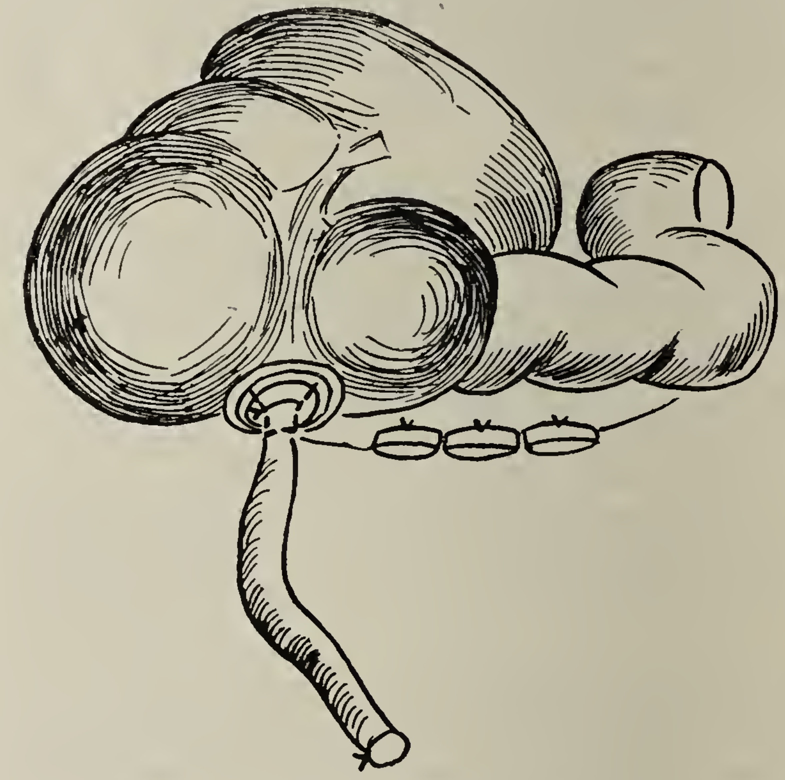

FIG. 2.—Mesocæcal stumps retracted and appendix with peritoneal envelope turned back.

The accompanying sketches are designed to make the procedure clearer.

It is not asserted, of course, that the method is

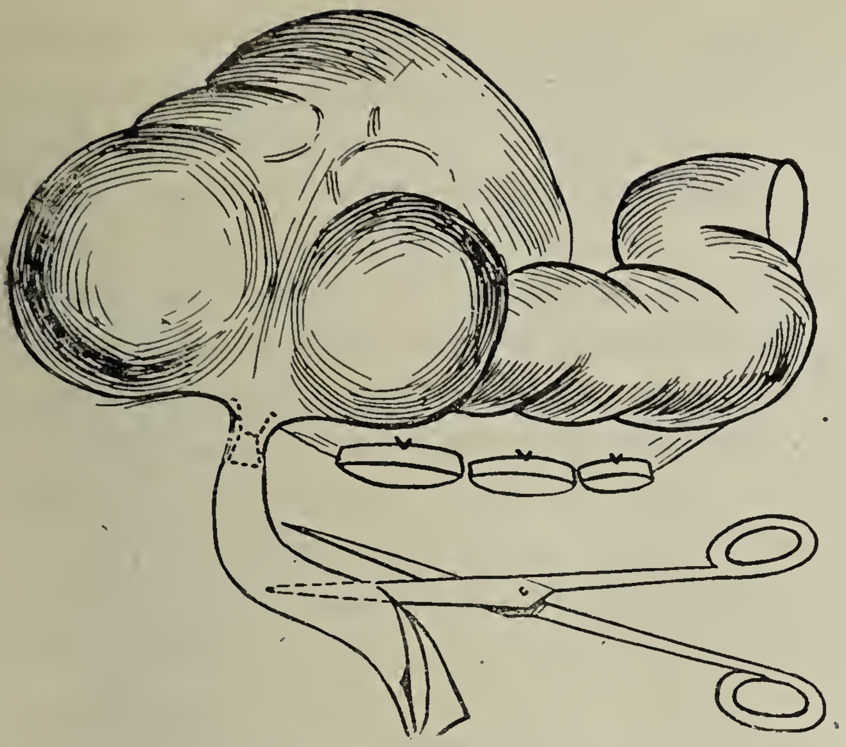

FIG. 3.—The empty finger of peritonæum returned and scissors applied for the purpose of slitting the same from tip to base.

applicable to all cases, but that it has been found entirely satisfactory in operations performed during the interval in recurrent appendicitis, or where, for protection only, the appendix is removed incidental to laparotomies for other causes and in a limited number of acute cases where the sloughing has not extended so far as to have practically destroyed the appendix and its annexa.

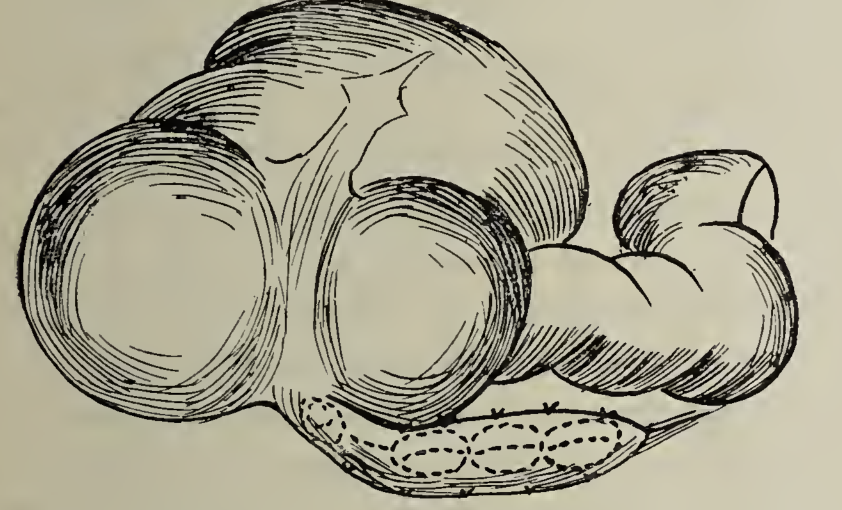

FIG. 4.—Stump of appendix, together with mesocæcal stumps covered with outstretched peritonæum from appendix.

Therapeutical Notes.

Infantile Gastritis.—The recipe for the vegetable bouillon, recommended by Méry as a substitute for milk in cases of gastritis in infants, is given in *Médecine moderne*, for March 30, 1904, as follows:

Carrots } of each.........60 grammes (2 ounces);
Potatoes }
Green beans } of each.....25 grammes (5/6 ounce);
Turnips }
Water ....1 litre (1 quart).

Boil for four hours and add 75 grains of salt; a teaspoonful of rice flour may be used to thicken.

Gastric Dilatation.—Soupault, according to *Journal de médecine de Paris*, for March 13, 1904, gives for the hyperchlorhydria:

℞ Sodium bicarbonate } of each.....50 centigrammes
Prepared chalk } (7½ grains);
Bismuth subnitrate }
Calcined magnesia...25 centigrammes (3¾ grains).

M. For one capsule. To be taken every three hours.

For the constipation:

℞ Sodium phosphate..........5 grammes (75 grains);
Sodium bicarbonate........4 grammes (60 grains);
Sodium sulphate............3 grammes (45 grains).

M. Dissolve in one quart of water, and take a glassful before breakfast, ten days in each month.

Non-toxic Preparation of Iodine.—Dr. Wyatt Wingrave, in *Medical Press*, for April 6, 1904, gives the following as non-toxic and palatable, and based on a French formula:

℞ Iodine ....2½ grammes (37½ grains);
Tannic acid................4 grammes (1 drachm);
Alcohol (90 per cent.)...38 grammes (10 drachms);
Syrup ....90 grammes (3 ounces).

M. Teaspoonful, diluted, before meals.

Dissolve the iodine in the alcohol, add the tannic acid and 30 grammes of the syrup; heat to just below boiling point until the solution affords no evidence of free iodine with the starch reaction (about twenty minutes). Cool and add the remainder of the syrup, with flavoring. Each drachm contains about 1 grain of iodine.

Acute Coryza.—Laffont, in *Journal de médecine de Paris*, for January 17, 1904, recommends:

℞ Sodium iodide.............5 grammes (75 grains);
Distilled water............150 grammes (5 ounces).

M. Tablespoonful every 3 hours, in milk.

For those who dislike the taste of the iodide:

℞ Sodium iodide.............5 grammes (75 grains);
Syrup of bitter orange peel } of each....30 grammes
Syrup of lemon } (1 ounce);
Distilled water, enough to make.......150 grammes
(5 ounces).

M. Tablespoonful every 3 hours.

To prevent sneezing, etc.:

℞ Sodium iodide } of each..3 grammes (45 grains);
Sodium bromide }
Petrolatum ....30 grammes (1 ounce).

M. Introduce into nostrils several times daily.

Traumatic Luxation of Teeth.—*Revue critique de médecine et de chirurgie*, for December 31, 1903, quotes from *Nouveau dictionnaire complet du médecin praticien* a treatment for incomplete luxation of the teeth from traumatism:

℞ Tincture of iodine } of each............20 grammes
Alcohol } (2/3 ounce);
Thymol ....1 gramme (15 grains);
Water ....1000 grammes (1 quart).

M. For irrigation, several times daily.

Small cotton tampons may be placed around the teeth between irrigations, soaked in a 10 per cent. solution of potassium chlorate. A gutta-percha splint may be required for serious cases, and even immobilization of the lower jaw.

Lumbago.—Capitan recommends in *Presse médicale*, for March 9, 1904, an intramuscular injection in the painful area of the following:

℞ Antipyrine ....5 grammes (75 grains);
Cocaine hydrochloride.............30 centigrammes
(4½ grains);
Distilled water......a sufficient quantity to make 10
grammes (1/3 ounce).

M. Inject 2 grammes.

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THE ENTERING WEDGE.

It is announced in press dispatches that an Ohio judge has recently ruled that the medical practice law of that State is unconstitutional, "because it limits the right to practise the healing art without the use of drugs or medicines to Osteopaths, and by the rule of exclusion Christian Scientists are prohibited from practising such pursuits." "It should be amended," he is reported as having gone on to say, "so as to allow for a reasonable examination for Christian Scientists and for their registration."

This is at least logical. If the Osteopathists are to be exempted from the ordinary examination on the ground that they do not employ drugs, we do not see that like exemption can justly be denied the Christian Scientists. Let pretenders of all kinds classify themselves according to their own inclinations and be licensed to practise medicine with the reservations that they may lay down for themselves. Let examining boards be multiplied accordingly. The *reductio ad absurdum* cannot come too soon.

While we are about it, would it not be well to apply the same liberal system to other pursuits than that of medicine? We know not that there may not shortly arise a coterie of untaught men professing themselves mariners, for example, acknowledging that they know nothing of the use of the sextant or of the *Nautical Almanac,* but pleading that in their navigation they do not avail themselves of those aids to the ordinary shipmaster, and on that ground seeking for a license on the strength of an examination in which those effete agencies are ignored. They need not know anything about the phenomena of circular storms or even be weather-wise after the manner of the oldest inhabitant; they may despise the patent log, the alidade, and the compass; they may even disdain to cast the lead. What of all that, provided they can convince a board of examiners, virtually of their own choosing, that they are well versed in the teachings of some oracle as untrammelled as Mrs. Eddy by the experience of mankind?

SALT AND DISEASE.

Remarkable differences are shown by individuals in the degree to which they make salt, sodium chloride, an ingredient of their diet. Thus, the present writer knows a man who never adds salt to any article of food, and he knows another who habitually mingles his butter with its own bulk of salt. Such decided variations must, it would seem, be the result of mere taste or habit. Although we cannot lose sight of the fact that sodium chloride is an important constituent of the solids and fluids of the body, and the inference that, since it is freely excreted, it should constantly be renewed in the ingesta, we may perhaps admit that the usual articles of human diet contain it in sufficient quantities to make its addition as a condiment unnecessary. There is some reason to believe, indeed, that under certain circumstances the amount of salt taken by the average human adult is injurious, or at least that it may prove an impediment to the action of some remedies. It has lately been thought, for example, to hamper the efficiency of the bromides in cases of epilepsy, and "dechlorinization" of the diet—to a moderate degree of course—has been resorted to on that account in the treatment of epileptics.

But epilepsy is not the only morbid condition in which it has occurred to our experimental therapeutists to limit the amount of sodium chloride in the diet. Such a course has been found to reduce ascites due to either hepatic or cardiac disease, and quite recently M. Nobécourt and M. Vitry (*Presse médicale,* March 26th) have reported certain observations—only two in number, it must be admitted—tending to show that "dechlorinization" is capable of diminishing the ascitic fluid in cases of tuberculous peritonitis. Both the patients were children. The observers mentioned do not, however, conclude that the reduction of sodium chloride in the diet is to be recommended as a means of treating peritoneal tuberculous disease. They even hint that some possible mechanical or antitoxic action of the ascitic fluid may contraindicate such reduction, and they suggest that ill timed dechlorinization may not be without danger in tuberculous subjects.

Inadequate elimination of sodium chloride has been held by some observers to give rise to a morbid state which they term chloræmia, and apparently it sometimes happens that this condition is relieved by the vicarious excretion of salt. Thus, M. Widal and M. Javal have recently reported (*Semaine médicale,* March 23d) the case of a man who was very œdematous from Bright's disease, whose kidneys were capable of eliminating only a drachm of sodium chloride in twenty-four hours. This man had frequent vomiting, and the fluid vomited was found, ten times out of thirteen, to contain more chlorine than the normal gastric juice removed after a test meal. It appears, then, that the stomach may come to the aid of the kidneys in the task of getting rid of superfluous salt.

MICROGASTRIA.

Dilatation of the stomach has been for some time a prominent subject of consideration by medical men, but it seems that an undersized stomach may occasionally prove a matter of concern. A Russian physician, Dr. Bendersky, has made a study of microgastria, meaning thereby a condition in which the stomach, from lack of development, is decidedly smaller than it should be, a state analogous to that of the infantile uterus. An interesting summary of Bendersky's observations is to be found in the *Semaine médicale* for March 23rd.

Microgastria appears to be commoner in women than in men. The greater curvature of the stomach is found to be separated from the umbilicus by an interval of from two to three inches or more, there being observable a groove similar to that occasioned by tight lacing. If the first of these appearances is found constantly, the diagnosis is certain. If it is only temporary, in which case it may be due to a transitory distention of an intestine, it does not indicate the morbid condition in question.

The unfortunate subjects of this developmental fault cannot take with impunity so much food or drink at a time as is habitual with the ordinary individual. The least error in this respect gives rise to more or less distress—a sensation of compression and weight at the pit of the stomach, eructations, etc. But the symptom most characteristic of the anomaly is vomiting repeated many times in the course of a day, unaccompanied by nausea or prostration, but rather comparable to what is known as "nervous vomiting." Sometimes hiccough is a result, and it generally proves very stubborn.

As regards the treatment of microgastria, the first thing to do is to regulate the meals; they should be small and frequent. To diminish the undue irritability of the gastric mucous membrane, systematic douching of the stomach may be employed, and this has yielded excellent results in the hands of Bendersky.

THE MENTAL DISEASES OF CHILDHOOD.

I.

Not very many years ago Burrows, an authority upon mental diseases, declared that "as a general maxim insanity cannot occur before the approach of puberty," while Spurzheim wrote that "it may be asked whether children suffer mania and insanity." To-day the psychoses of childhood constitute a most important branch of psychiatry, not merely because they are very real, but also because they are so far reaching in their ultimate effects upon the individual and the community. Parents, physicians, social economists, criminologists, and taxpayers are all vitally interested in the mental condition, growth, and development of children. Defective and insane children are, for obvious reasons, rarely sent away from home. This accounts in large measure for the inadequate study that has hitherto been given to this class of troubles. What little we do know about the psychoses of childhood has been gathered and reported largely by the general practitioner. He among all scientific investigators enters most intimately into the family circle. He has been unfortunately handicapped in the study of his little patients from the mental side by the multifarious character of his life work and the inadequate presentation of psychology in his college course. Too often he is unable to grasp the full significance of the first glimmerings of mental deficiency pointed out to him by an anxious and watchful mother in her child. Upon him rests, therefore, a tremendous responsibility in regard to both the diagnosis and the management of the insanities of childhood.

According to Wilmarth's careful statistics, after leaving out of consideration all the cases with a distinct heredity, all that are congenital or due to birth accidents, all that exhibit a lack of ordinary intelligence prior to six months of age, and finally all that are known to be caused by traumatism, except when spasms, paralysis, and other symptoms of nervous shock directly follow the accident, it has been found that 322 cases in 1,000 are the "direct result of disease which would ordinarily need and receive the physician's care." Such a responsibility, involving as it does the enlargement of our knowledge of the infantile psychoses and, what is more, the all important early recognition and treatment of them, ought certainly to stimulate to a high degree the general practitioner's interest in them. Especially ought this to be the case in this country, for there is a measure of truth in Fletcher's assertion that "insanity in children is almost confined to the United States, and would undoubtedly be classed, along with general paresis, as an American disease by foreign writers."

Insanity has been observed in every year of childhood. It has been supposed to afflict the fœtus in the womb (Crichton-Browne), although this seems scarcely credible in view of our present knowledge of cerebral development. It has been diagnosticated in the child immediately after birth (Greding). It is comparatively rare, however, before puberty, and the earlier the age the more infrequently is it met with. After excluding idiocy and imbecility, Spitzka found that in 3,244 recorded cases in adult private patients four per cent. had shown symptoms of insanity in childhood.

All forms of mental disease, even dementia paralytica (once observed in a boy of twelve), may occur in childhood. The clinical picture, however, is not the same, even for the same disease, as it is in the adult. It varies in accordance with the age of the child and in harmony with what would have been the normal mental state at that age. The presence and character of hallucinations, illusions, and delusions, for instance, will depend upon the presence and character of the underlying ideas. The deviations of memory, imagination, volition, and intellect, all processes developed at different periods of life, will obviously assume the complexion of the developmental stage in which they make their appearance. Delusions presuppose a substratum of advanced ideas, and therefore are not to be expected in early life. On the other hand, hallucinations, and especially illusions, which are always more common than hallucinations and are often mistaken for them, are particularly prominent. It is this that makes the psychoses of childhood so different, clinically, though often pathogenetically the same, from the psychoses of adult life. It is a fact which must never be lost sight of in both the diagnosis and treatment of infantile insanity.

As Hurd has well pointed out, the physical stage of the child's development, no less than the mental, determines somewhat the character of the disease. Up to the sixth month of age those troubles predominate that are almost entirely due to the disturbances of nutrition, such as congenital epilepsy and idiocy. From the sixth to the thirtieth month appear for the most part those that are to be attributed to inherited tendencies. After the third, and on to the seventh year, those that are dependent upon the epidemic diseases are prone to arise, such as acute delirium, acute and transitory mania, night terrors, and various convulsive affections. Between the seventh and tenth years there seems to be a comparative degree of immunity from all forms of nervous disease, except perhaps chorea. From the tenth to the fifteenth year, when cardiac, rheumatic, and all nervous affections are rife, melancholia, imperative conceptions, hysterical manifestations, marked emotional and moral aberrations, and even paranoia begin to declare themselves frankly.

In the modern discussion of the mental defects and psychoses of childhood, a classification of them under three general heads may be found to be both practical and suggestive. In the first class may be included the congenital idiots and imbeciles and all those whose mental weakness is associated with more or less gross and obvious physical defects. These usually exhibit many of the stigmata of degeneracy. They owe their condition very largely to inherited and prenatal influences. A careful distinction should always be made between idiocy and imbecility, for the former is practically hopeless, while the latter is often susceptible of much improvement. Indeed, the high grade imbeciles may be trained into being both useful and moral citizens. Fish says that many of the backward children of the public schools belong to the class of high grade imbeciles.

The recent statistics of Shuttleworth (*British Medical Journal,* October 3, 1903) afford a most instructive commentary upon the modern educational methods. In a three years' experience as examiner of children for admission into the special instruction schools of the London School Board he found that, of 470 epileptic subjects alone, 17 per cent. were fitted to continue in the ordinary elementary schools, 27.5 per cent. were so far mentally impaired as to need separate instruction in the special classes, 40 per cent. needed to be cared for in a resident institution for epileptics, while 15.5 per cent. were fit only for the hospital or asylum. Had these children not been promptly recognized and thus carefully guarded, many of them would have been put into school and under an unequal strain, with but one possible result—namely, an increase in the number of the adult insane.

In this first class are to be included the cretins, for whom the administration of thyreoid extracts sometimes acts so happily.

L. Harrison Mettler.

THE ARMY CONTRACT SURGEON.

It is to be hoped that the contract surgeons of the army, whose grievances are referred to in our news columns, will be able to prevail upon the war department to recognize their anomalous position and place them upon a more secure basis. Under existing circumstances the work done is valuable to the contract surgeon only as experience and does not lead to promotion. The plan of a reserve medical staff with brevet rank and other privileges of the regular medical army officers seems to us to be in every way preferable to the present system, which affords no security, either of prestige or tenure, to the incumbents. Everything tending to increase the respect of the medical man's fellow officers and of the enlisted men for him is his due.

LEGISLATION AND THE MEDICAL PROFESSION.

The legislature of the State of New York having adjourned without the enactment of either the optometry bill or the osteopathy bill, Dr. Frank Van Fleet, chairman of the committee on legislation of the Medical Society of the State of New York, remarks, in a letter to us, that the bill first mentioned was supported by unprecedented efforts on the part of its promoters, so that early in the session it threatened to pass, and he thanks the profession of all parts of the State for their aid in securing the actual result. He has no doubt that united action by the profession can always secure just legislation, for he has found the legislators for the most part quite willing to be guided by professional opinion.

CONVULSIVE DISEASES OF CHILDREN IN THE PHILIPPINES.

It appears from the November report of the Board of Health for the Philippine Islands that during the month 342 deaths from "convulsions of children" were reported, all in children under a year old, together with fifty-eight from nonpuerperal eclampsia, all in children under a year old, and seven from tetanus, of which four were in children under a year old. The acting commissioner of public health, Assistant Surgeon E. L. Munson, of the army, seems to think that some of the cases reported as convulsions and eclampsia were really cases of tetanus, the infection occurring mostly through the stump of the umbilical cord.

HYDROCHLORIC ACID IN THE TREATMENT OF LUPUS.

Notwithstanding the advantages to be derived from the use of tuberculin in cases of lupus, the local treatment is still a matter of importance. A method described by Dreuw *(Monatshefte für* *praktische Dermatologie*, xxxvii, 5; *Zentralblatt für Chirurgie*, April 9th) seems, while probably innocuous, to promise good results. In his hands it has acted well and quickly in nine cases. The patch is frozen stiff with ethyl chloride, and then crude hydrochloric acid is rubbed in copiously by means of a stick wrapped with cotton. A dusting powder is then applied. In a week or two the crusts fall off, and a portion of the lupous tissue comes away with them. Further applications of the acid are made if necessary.

Obituary.

SIR HENRY THOMPSON, BART., F. R. C. S.,

LONDON.

The death of Sir Henry Thompson took place in London on April 18th. Sir Henry was born at Framlingham, in Suffolk, on August 6, 1820, and was therefore in his eighty-fourth year. He was educated at University College, London, and in Paris, and graduated at the University of London as M. B., in 1851, taking the fellowship of the Royal College of Surgeons of England in 1853. He devoted himself to genitourinary diseases, in which subject he long was preeminent in England. He followed up the work of Civiale on lithotrity and improved on the methods of the inventor. His operation on the King of the Belgians, in 1863, was rewarded with a knighthood, and to this dignity in recent years was added a baronetcy, in which he is succeeded by his son. Sir Henry became full surgeon to University College Hospital in the sixties, and later emeritus professor of clinical surgery at the same institution. He was also formerly professor of pathology and surgery at the Royal College of Surgeons of England. His most important works were *Clinical Lectures on Diseases of the Urinary Organs*, which has gone through very many editions, and *Practical Lithotrity and Lithotomy;* but besides these his medical writings were numerous. He was also much interested in various problems of social economy, notably in cremation, and took his share in the controversies thereon in the *Contemporary Review*. He was preeminently "a social doctor," and his little dinners, limited to eight and facetiously called by him "octaves," were much esteemed, being both distinguished and recherché, even to the wines, though Sir Henry was himself a total abstainer. His versatility was remarkable. Great in his profession, he was an accomplished painter—a student of Elmore and Alma Tadema—and many of his paintings were hung at the Royal Academy. He published two novels, *Charley Kinston's Aunt*, under the pseudonym of "Pen Oliver," and more recently *All But*. He was a student of astronomy, and he possessed a fine collection of white Nanking china, of which a quarto catalogue has been published. He leaves behind him a world-wide reputation, as shown by the honorary memberships conferred on him by medical societies in Paris, Vienna, Naples, Florence, Sweden, and elsewhere, and a grateful memory.

News Items.

Society Meetings for the Coming Week:

Monday, *April 25th.*—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

Tuesday, *April 26th.*—Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynæcology); Richmond, Va., Academy of Medicine and Surgery; New York Medical Union (private); Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

Wednesday, *April 27th.*—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private); Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield) (annual meeting).

Thursday, *April 28th.*—New York Academy of Medicine (Section in Obstetrics and Gynæcology); New York Orthopædic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private) (annual meeting); Pathological Society of Philadelphia (conversational); Church Hill Medical Society of Richmond, Va.; New York Celtic Medical Society.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending April 16, 1904:

	Week end'g April 16.		Week end'g April 9.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	1,416	34	1,706	49
Diphtheria and croup	415	56	387	70
Scarlet fever	466	28	474	30
Smallpox	1	..	..	..
Chickenpox	73	..	101	..
Tuberculosis	481	210	417	200
Typhoid fever	16	6	22	8
Cerebrospinal meningitis	..	45	..	29
Totals	2,868	379	3,107	386

Academy of Medicine.—The section on Obstetrics and Gynæcology will meet on Thursday evening April 28th, at 8.15 o'clock. Order: Presentation of Patients and Specimens. Paper: Occiput Posterior Presentations, by Simon Marx, M. D., and J. O. Polak, M. D., of Brooklyn. Discussion by members of the section. A. Palmer Dudley, M. D., chairman. Charles F. Adams, M. D., secretary, 104 West Seventy-third Street.

Trained Nurses Graduated at St. Luke's Hospital.—The following twenty-six young women received their diplomas as trained nurses from St. Luke's Hospital, on the evening of April 12th:

Misses Edith Lysle Chambers, Vida Mary Barager, Helen Russell Priest, Dorothy Louise Peterson, I. Lillian Lawrence, Helen M. Bigelow, Helen Reid Troup, Elizabeth Barton, Savilla E. Bunker, May Farr, May Florence Allison Sanders, Louise Allen, Mary E. Dryer, Helen Louise Hardison, Elizabeth Lucas Whatley, Page Carter, Nannie Rowe Copeman, Lucy Joy, Eva G. E. Nesbitt, Wilma Felkner, Louise Burdette, Elizabeth Charlton Harmon, Louise Campbell Chesley, Helen Bancroft Goodwin, Florence E. Couse, and Alice Birchall King.

New Hospital Building in Brooklyn.—The handsome new building of the Norwegian Lutheran Deaconesses Home and Hospital, Fourth Avenue and Forty-sixth Street, Brooklyn, was formally dedicated and opened on the evening of April 19th. The dedication sermon was delivered by the Reverend C. S. Everson, and prayer was offered by the Reverend C. T. Tollefson. Hymns were sung by the assembly, and addresses were made by Dr. H. B. Delatour, President of the Medical Board, and Jens Skougaard, President, and Emil Ericksen, secretary of the institution.

To Assist Bushwick Hospital, Brooklyn.—The business men's auxiliary of the Bushwick Hospital was formally organized on April 14th, at a meeting of representative citizens of the Bushwick section, held in Hart's Hall, Gates Avenue and Broadway, with the object of raising a building fund of $100,000. It is not the purpose of the new organization at once to begin the construction of a new hospital building, but rather to provide for an addition to the present hospital building on Howard Avenue, near Broadway, to relieve the overcrowded condition which now exists. When a new hospital is built the present building will then be used as an administration building. By donations of $1 each the sum of $1,600 has been raised among the residents of the Bushwick and East New York sections of the borough as a starter for the building fund of $100,000. The Bushwick Central Hospital was incorporated in 1893, and opened its doors for the reception of patients in June, 1894.

New York Odontological Society.—At a meeting held at the New York Academy of Medicine, New York, on April 19th, Mr. E. H. Gane demonstrated the properties and dental applications of some new oxygen compounds. After a brief mention of the uses of hydrogen dioxide in dentistry, he called attention to several new compounds that readily liberated oxygen. Among these new oxygen compounds was calcium dioxide, which had been found available in the highest degree for the purposes of mouth sterilization, and which, thanks to the development of the electrical industries at Niagara, could now be produced on a commercial scale. The addition of this salt to a tooth powder base gave to the powder properties hitherto considered impossible of attainment. When in contact with the fluids of the mouth it liberated oxygen, with the formation of milk of lime, so that an antacid, as well as a germicidal, action was thus attained. Moreover, in incipient dental caries where there were local acid areas this acid decomposed the calcium dioxide, liberating hydrogen dioxide at exactly the point where its germicidal properties were most needed. It was thus now possible to give to the patient a simple means, not only of preserving the teeth from decay, but of closing a large area to the ingress of those pathogenic bacteria which frequently found a suitable field of development in the human mouth.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g April 16.		Week end'g April 9.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	25	5	20	5
Diphtheria	79	14	73	13
Scarlet fever	84	2	77	4
Typhoid fever	359	29	389	30
Consumption	..	71	...	74
Cerebrospinal fever	..	..	..	..

Dr. Edward J. Beardsley, formerly a resident physician of the Philadelphia Hospital, has associated himself with Dr. Philip Marvel, of Atlantic City.

Smallpox in Philadelphia is rapidly abating. Vigilance and vaccination are not being relaxed, notwithstanding that the epidemic is practically under control.

Measles Endemic at Lawndale.—Measles is prevalent in and about this settlement in the northeastern section of Philadelphia. The disease has not been of a virulent type.

University of Pennsylvania.—The medical department of the University of Pennsylvania will give a summer course in medicine for a period of six weeks, beginning May 9th.

A Case of Galactocele.—At the meeting of the Philadelphia Academy of Surgery, held on April 4th, Dr. W. W. Keen reported a case of galactocele, the growth consisting of one large and several small cysts filled with milk.

Typhoid Fever still continues to progress in Philadelphia, notwithstanding the slight decrease during the week ending April 16th. A speedy solution of the problem is soon expected, and the work connected with the filtration plants is being pushed.

Dr. J. L. Faure, the distinguished French surgeon, and Dr. Howard A. Kelly, of Baltimore, were the guests of the Woman's Hospital of Philadelphia on April 8th. Dr. Faure is making a tour of the country, investigating American surgery.

The Cumberland County, Pa., Medical Society has elected these officers for the ensuing year: President, Dr. Mary Dunlap, of Vineland; vice-president, Dr. W. P Glendon, of Cedarville; secretary, Dr. Ellsmore Stites, of Bridgeton; treasurer, Dr. Joseph Tomlinson, of Bridgeton.

Nurses' Home for Methodist Episcopal Hospital.—Estimates have been invited for the new three story and basement Mary T. Hunter Memorial Nurses' Home, to be erected on the grounds of the Methodist Episcopal Hospital, with fronts on Thirteenth and Wolf Streets. The building will measure 36.4 by 92.8 feet, and will provide accommodations for thirty-two nurses. The interior fittings will be of chestnut and the floors of maple.

Jefferson Medical College Hospital.—The trustees of the Jefferson Medical College Hospital of Philadelphia are said to have decided not to award a general contract for the erection of the new hospital, but to apportion the work among several subcontractors. The committee, consisting of the Honorable William Potter, president of the board, Dr. Joseph Neff, medical director of the hospital, and Alta B. Johnson, have charge of the erection of the building, which promises to be one of the finest of its kind in the world. The excavations, foundations, and structural steel work to the street level have been completed.

Additions to Municipal Hospital.—The plans for the buildings for the treatment of diphtheria and scarlet fever cases, in connection with the new Municipal Hospital, now being erected in the Thirty-third Ward, have been approved by Director Martin, and proposals for erecting the structures will be advertised for as soon as the big loan, which contains an item of $900,000 for the purpose, is negotiated. The plans, according to the department of health, represent entirely new methods in hospital construction. The buildings will consist of six wings, built on a semicircle. Each will be two stories high, and connected by a semicircular corridor. The corridor will be about eight feet wide, and the wards about eighty feet long and thirty feet wide. Dr. Martin proposes to have a separate corps of doctors, nurses, orderlies, cooks, and attendants for each of the three hospitals, in order to prevent the intermingling of the various contagions. There will also be a disinfecting section attached to each hospital.

GENERAL

Statement of Mortality in Chicago, Ill., for the Week Ending April 16, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on the United States Census Bureau's estimated midyear populations of 1,873,880 for 1903, and of 1,932,315 for 1904:

	April 16, 1904.	April 9, 1904.	April 18, 1903.
Total deaths, all causes	616	562	640
Important causes of death—			
Acute intestinal diseases	24	30	24
Apoplexy	17	15	12
Bright's disease	39	42	52
Bronchitis	28	21	39
Consumption	78	65	75
Cancer	23	14	17
Convulsions	16	12	9
Diphtheria	6	4	13
Heart disease	50	49	36
Influenza	3	3	4
Measles	1	1	14
Nervous diseases	29	17	26
Pneumonia	111	127	133
Scarlet fever	9	2	6
Smallpox	0	1	2
Suicide	7	6	13
Typhoid fever	10	5	6
Violence (other than suicide)	36	27	25
Whooping cough	1	1	10

With the exception of the acute intestinal diseases, Bright's disease and pneumonia, all the important causes of death show an increase in the returns for the week. The total 616 reported up to noon of the 16th is 54 more than the total for the previous week, but is 24 less than for the corresponding week a year ago. In proportion to population, this is 8 per cent. per thousand more and 7 per cent. per thousand less for the respective weeks. As compared with the average April death rate of the previous decade—17.31 per thousand—it is 4.8 per cent. less.

On the whole, the showing is not so discouraging as might have been anticipated, after more than five months of unusually trying weather, but there is reason to fear an increasing death rate for some weeks to come. Since the snow went off and befouled surfaces became uncovered there has been a steadily increasing prevalence of the dust-borne diseases and the laboratory examinations show an increasing atmospheric pollution. Amygdalitis and other forms of "sore throat" are becoming epidemic and a serious increase of diphtheria is apprehended.

Much relief might be had if the repeated spring advice of the department were more fully heeded—to wit, that all agencies of street watering and private grounds sprinkling be utilized to the limit. The traction companies should thoroughly flush, not merely moisten, their rights of way and every house holder who pays for hose privileges or employs the private watering carts should "waste," or secure the wastage, of all the water the law allows on and about his premises—as well for his individual comfort as for the public health.

Dr. Cressy L. Wilbur, statistician of the United States Census Bureau, will deliver an address at the next meeting of the Associated Health Authorities and Sanitarians of Pennsylvania, to be held at Gettysburg on May 26th and 27th.

A Legacy to the Yale Medical School.—By the will of the late Mrs. Henry Farnam, of New Haven, Conn., the Yale Medical School receives a legacy of $54,500 as an addition to its general endowment fund.

The Good Samaritan Hospital, Cleveland, O., situated on Ansel Avenue, corner of Superior Street, was opened on March 16th. A staff of six visiting physicians is now in process of organization.

The Rockefeller Gift to Johns Hopkins Hospital.—It is stated that this gift was inspired by Messrs. Rockefeller and Gates having read with interest Professor William Osler's work, *The Practice of Medicine.*

Emergency Hospital, Washington, D. C.—Dr. James Dudley Morgan was elected by the board of directors of the Central Dispensary and Emergency Hospital chief of the medical service of that institution, at a meeting held April 8th.

Wisconsin Wars on Quacks.—Dr. Filip A. Forsbeck, of the Wisconsin State board of medical examiners, is asking for warrants to secure the arrest of several physicians in Milwaukee who have not secured licenses to practise. One conviction has already taken place.

Oneida County, N. Y., Medical Society.—The annual meeting of this society was held in Utica, April 12th. The following officers were elected: President, Dr. L. F. Pattengill; vice-president, Dr. T. Z. Jones, of Waterville; secretary, Dr. F. H. Brewer, of Utica; treasurer, Dr. H. G. Jones, of Utica.

Pontotoc County, Miss., Medical Association.—This association was organized April 7th by fourteen physicians of the county, and the following officers were elected: President, Dr. L. A. Ellison; vice-president, Dr. L. L. Newman; secretary and treasurer, Dr. T. A. Williams; delegate to State society, Dr. J. A. Donaldson.

Presbyterian Home Hospital, Memphis, Tenn.—The training school in connection with this hospital graduated the following as trained nurses, April 7th: Miss Bertie V. Taylor, of Clarksville, Tenn.; Miss Carol Crowder, of Kosciusko, Miss., and Mrs. Bertie LeMay, of Florence, Ala. Reverend W. H. Neel, D. D., addressed the class.

Stupid Joke on a Jersey City Physician.—A letter, purporting to be the resignation of Dr. E. P. Buffett as surgeon at the Jersey City Hospital, was received on April 15th by the chief of the Jersey City police. Dr. Buffett denies that he sent the letter or authorized it or has any intention of resigning. The police are investigating.

Quacks to Be Ousted from Oklahoma Territory.—The Oklahoma County Medical Association has decided to take action against the numerous quacks who have infested the Territory since its first occuption, owing to its lack of a stringent medical law. Practitioners who cannot show a diploma from a reputable medical school are to be driven out.

The Herkimer County, N. Y., Medical Society has elected officers for the coming year as follows: President, Dr. George M. McCoombs, of Frankfort; first vice-president, Dr. Hugh G. Williams, of Newport; second vice-president, Dr. A. C. Douglas, of Ilion; third vice-president, Dr. John B. Ellis, of Little Falls; secretary, Dr. A. Walter Suiter, of Herkimer; librarian, Dr. E. W. Rude, of Ilion.

Cook County Hospital, Chicago.—The new internes, appointed after competitive examination at this institution, are: Dr. Kellogg Speed, Dr. W. H. Rendleman, Dr. B. B. Thermester, Dr. B. H. Foreman, Dr. W. H. Wilberstein, Dr. J. R. Morrell, Dr. H. J. Davis, Dr. J. B. Mathews, of Rush; Dr. F. Cuttle, of Physicians and Surgeons, and Dr. A. Wright, Dr. E. P. Norcross, Dr. M. Wolf, and Dr. Charles Fox, of Northwestern.

Chicago Eye, Ear, Nose, and Throat College.—At a recent meeting of the stockholders of this institution, the following directors for the ensuing year were elected: Dr. W. A. Fisher, Dr. A. G. Wippern, Dr. H. G. Woodruff, and Dr. J. R. Hoffman. At the meeting of the directors the following officers were elected: Dr. W. A. Fisher, president and treasurer; Dr. A. G. Wippern, vice-president, and Dr. J. R. Hoffman, secretary.

Frederick, Md., City Hospital.—At a meeting of the board of managers of the Frederick City Hospital, on April 12th, Mrs. Margaret E. S. Hood, a member of the board, announced her intention to build a wing to the hospital as a gift to the institution. The present building has been found not to be large enough to meet the demand for accommodations, and its capacity will be considerably enlarged by the addition of the new wing, which will cost between $5,000 and $10,000.

Cincinnati Hospital.—At the examination, concluded on April 10th, the following were successful in securing positions as internes in this institution: Jessie Wyler, Joseph L. Ransohoff, C. W. Smith, George S. Mytinger, Oscar Behrman, Oscar Berghausen, A. E. Osmond, and Edward B. Reemelin; alternates, O. D. Barker, A. F. Heavenrich, C. D. Heisel, and George H. Holt. The first named four will enter upon their duties in May, while the others must wait until November. The alternates will fill vacancies.

The Washington County, Tenn., Medical Society organized at Greenville, on March 17th, with the following officers: President, Dr. E. A. Cheek, of Arcola; vice-president, Dr. O. W. Stone, of Greenville; secretary and treasurer, Dr. M. O. Shivers, of Greenville; delegate to State medical association, Dr. J. D. Smythe, of Greenville. Dr. Martin, of Clarksdale, addressed the meeting on the necessity of organization as a means of benefiting the profession, and increasing their knowledge, and drawing its members in closer fraternal touch one with another.

New Hospital for the Confederate Home.—A valuable addition will be made to the Confederate Home at Pewee Valley, Ky., when the new hospital and cottages are added to that institution. As many of the inmates are old a well equipped hospital is much needed. The ground for the new buildings consists of three acres, which were purchased recently for $3,000. It is the desire of the trustees to enlarge the grounds further, and negotiations are being made with a view to purchasing property which joins the present grounds.

Traveling Hospitals for Canadian Militia.—The medical branch of the Canadian militia department has now on order a large supply of material and equipment that will add materially to the efficiency of this service. The purchases include eighteen ambulance wagons, of a new type, designed by Lieutenant-Colonel Fiset, director of the Canadian army medical service. Each wagon will be a hospital in itself, with room in it for four patients lying down or thirteen sitting up. There will be nine water carts—that is, one for each bearer company—twelve sets of medical panniers, twelve sets of surgical panniers, eighteen sets of canteen panniers, fifty surgical haversacks, and fifty monkey boxes.

North Carolina Medical College.—The members of the graduating class of this college for 1904 are:

A. E. Billings, of Viands; C. A. Baird, of Christie, Va.; J. A. Brewin, of Boston, Mass.; H. E. Bowman, of Martinsburg, W. Va.; R. A. Bradford, of Charlotte; W. N. Dalton, of Winston-Salem; L. W. Hovis, of Charlotte; H. H. Hodgins, of Red Springs; James L. Justice, of Jacksonville; J. F. Layton, of Albemarle; J. Q. Myers, of North Wilkesboro; D. C. McIntyre, of Lumberton; J. L. Nall, of Elise Hemp; J. J. Stewart, of Newton; H. C. Salmons, of Buck Shoals; W. F. Smith, of Salisbury; W. Simpson, of Monroe; W. M. Strong, of Charlotte.

The commencement exercises will be held at the Academy of Music, Charlotte, N. C., on the evening of May 16th.

New Roman Catholic Hospital in Chicago.—The Hospitalers of St. Joseph, who went to Chicago, from Kingston, Ontario, have decided to build a hospital, the Hôtel Dieu, at the corner of Harvard Avenue and Sixty-fourth Street. It will be four stories high, of fire proof construction, and cover an area of 165 by 175 feet. The exterior will be of Bedford stone, with tiled mansard roof, above which will rise an ornate dome 68 feet high. In the halls there will be enameled brick wainscoting, with marble and mosaic work, and the building will embody all the improvements that go to make up a first-class hospital. The cost is estimated at about $200,000. This, however, will be but a part of the building, which, when complete, will have a frontage of 225 feet and a depth of 175 feet. Reverend Bernard P. Murray, pastor of St. Bernard's parish, will have charge of the building.

Mortality of Michigan During March, 1904.—The total number of deaths returned to the Department of State for the month of March was 3,406, which was only 19 more than the number returned for the preceding month. The death rate for March was 16.0 per 1,000 population, as compared with 17.1 for the preceding month. Important causes of death were as follows: tuberculosis of lungs, 227; other forms of tuberculosis, 43; typhoid fever, 57; diphtheria and croup, 38; scarlet fever, 31; measles, 27; whooping cough, 21; pneumonia, 384; influenza, 156; cancer, 149; accidents and violence, 199. Deaths from pulmonary tuberculosis and typhoid fever showed some increase, while diphtheria and croup, pneumonia, and influenza caused considerably fewer deaths in March than in February. By ages there were 527 deaths of infants under one years of age; 185 deaths of children aged one to four years, inclusive, and 1,159 deaths of elderly persons 65 years and over. There were three deaths from smallpox, one in Casnovia village, Muskegon county, and one in Evart township, Osceola county; one in Leonidas township, St. Joseph county.

A Bill to Increase the Efficiency of the Medical Department of the United States Army.—

This bill appears to be simply an act of justice, as well as an entering wedge to shelve forever the impossible contract surgeon system as it now exists, and to increase the medical corps by a trained set of surgeons, who have already served from the first call for help, and to place them in the first class as to efficiency and service. The main features consist of positive rank as first lieutenant, length of service, the privilege of quarters, allowances, etc., of the officer of the same rank in the regular corps. To these should be added retirement for long and faithful service, allowing for past service as volunteer medical officer, or for service in the reserves, and in case the medical reserve officer desires to take the examination for the regular corps, and provided he has three or more years of service, he is, if passed, made a captain at once, and does not have to wait for from five to eight years for a captaincy. This bill will do away with the contract system entirely, and in its place there will be organized a commissioned force of experienced medical officers (reserve) with actual rank and its privileges, and in number no more than are now serving under the present régime.

There are several changes that would make this bill as near perfect as possible, one of which is the question of relative rank. The new bill states that the officer entering the reserves must take rank after all other lieutenants of the line or staff. Far better would be the plan of the volunteer medical corps during the campaign in Cuba and the Philippines—that of taking rank according to date of commission.

The present contract surgeons are much interested in the bill, and are grateful to the secretary of war, the surgeon-general of the army, and the medical societies, who approve heartily of the bill.

Dr. L. C. Lane's Realty in Dispute.—George E. Saner, a druggist of Denver, Col., will institute suit to recover real estate in San Francisco, Cal., claimed to be valued at nearly $500,000, which has been in the name of late Dr. L. C. Lane, and comprises part of the large estate left by the deceased physician.

Mr. Saner asserts that he and four other heirs of the late Dr. E. S. Cooper, of Galesburg, Ill., are entitled to this property under the will of the late Dr. Elias Cooper, of this city, founder of the Cooper Medical College, and one of the most eminent practitioners in the history of San Francisco. According to Saner's statement, Dr. Elias Cooper left to his brother, Dr. E. S. Cooper, of Galesburg, certain parcels of land in this city, which the latter never conveyed to any one. Saner is a grandson of the eastern Dr. Cooper and is one of five direct heirs.

After Dr. Elias Cooper's death in this city, Mr. Saner says, Dr. Lane bought out the interests of all the other heirs in the estate, except that of his grandfather, who refused all of Dr. Lane's offers. Notwithstanding this, Dr. Lane took possession of the holdings and enjoyed all the profits from them, and when he died conveyed them with his own property to the beneficiaries of his will. Mr. Saner's grandfather never made any attempt to assert his rights, according to his grandson, but told his grandchildren that the property was his, and that they would succeed to all his interests in it.

It is said that Mr. Saner has employed counsel who will begin an immediate investigation into the records with the intention of instituting such proceedings as may be best to determine the proper ownership of the real estate in question.

Health in Michigan During March, 1904.—For the month of March, 1904, compared with the preceding month, cancer, smallpox, cholera morbus, meningitis, diphtheria, and puerperal fever were more prevalent; and syphilis, typhoid fever, intermittent fever, and dysentery were less prevalent.

For the month of March, 1904, compared with the average for March in the ten years 1894-1903, scarlet fever, typhoid fever, smallpox, and diphtheria were more than usually prevalent; and pneumonia, erysipelas, inflammation of bowels, intermittent fever, remittent fever, whooping cough, dysentery, cholera morbus, and puerperal fever were less than usually prevalent.

Including reports by regular observers and others, meningitis was reported present in Michigan during the month of March, 1904, at ten places; whooping cough at twenty-two places; diphtheria at eight-one places; typhoid fever at eighty-two places; smallpox at 138 places; measles at 152 plaes; scarlet fever at 162 places; pneumonia at 166 places; and consumption at 238 places.

Reports from all sources show meningitis reported present at the same number of places; whooping cough at two places more; diphtheria at sixteen places fewer; typhoid fever at five places fewer; smallpox at seven places more; measles at twenty-three places more; scarlet fever at the same number of places; pneumonia at fifty-seven places more; and consumption at twenty-six places more, in the month of March, 1904, when compared with the preceding month.

The State Board of Health has instructed the secretary to have printed 11,000 copies of a new edition of the pamphlet on the *Restriction and Prevention of Scarlet Fever.* The secretary has also been instructed to prepare material for and issue the Teachers' Sanitary Bulletins for June, July, August, and September.

A new edition of the four page circular, *Treatment of the Drowned or Electrically Shocked,* also copies of this circular in the form of a poster have been ordered printed and distributed, particularly to localities on the lake shores and around inland lakes and streams, and to managers of electric light plants.

A proposed plan for the systematic examination of eyes and ears of school children has been referred to the secretary, who is instructed to work out from the material on hand a suitable article for publication in one of the teachers' sanitary bulletins, and in this way bring the subject before the teachers of the State.

The board has also ordered the printing of a new edition of the pamphlet on the *Restriction and Prevention of Pneumonia.*

Pith of Current Literature.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT.

March 8, 1904.

1. Central Paralysis of the Mother During Pregnancy, By R. von Hoesslin.
2. Primary Anæsthesia, By C. Hofmann.
3. Ether Anæsthesia by the Drop Method, By E. Barten.
4. Artificial Congestion, By Luxembourg.
5. Muzin of Tetanus Bacilli, By L. Heim.
6. Diagnosis of Insufficiency of the Pulmonary Artery, By E. Fromherz.
7. Total Rhinoplasty by Aid of the Arm, By Habs.
8. Traumatic Hernia of the Lung without External Injury, By G. Riebold.
9. Liver Abscess and Diffuse Cholangeitis with Many Complications Cured by Several Operations, By H. Schelble.
10. New Patella Formed by Osteoplastic Resection of the Tibia, By Dumstrey.
11. Lumbar Puncture in Uræmia, By Seiffert.
12. Treatment of Basedow's Disease by Rodagen, By W. Kuhnemann.
13. Rare Röntgen Ray Picture, By K. Hugel.

1. **Paralysis During Pregnancy.**—Hoesslin believes that many cases of spinal or cerebral paralysis arising during pregnancy have their origin in autointoxications, unless organic disease of the brain or spinal cord existed before conception. These pareses or paralyses appear to have no influence upon conceptions, pregnancy, or birth, even cerebral disturbances not interfering with the normal course of gestation. In some of the spinal diseases, the birth proceeded without pain, but in some cases delay or weak pains was observed, while in others parturition was more rapid than usual. In case a spinal lesion becomes worse during pregnancy, and especially if it shows a tendency to ascend, the gestation must be interrupted. Multiple sclerosis, particularly, if existing before conception, is likely to give evidence of severe exacerbations.

2. **Primary Anæsthesia.**—Hofmann says that primary anæsthesia induced by giving ether by the drop method, can be brought about in from one to three minutes, especially if the administration has been preceded by morphine. When the moment of unconsciousness arrives, the necessary incision is rapidly made and the patient allowed to come to himself, although not permitted to sit up at once. The incision may be accompanied by a cry, but the patient feels no pain. In his hands the method has proved safe and agreeable and vomiting has rarely been noticed.

3. **Ether Anæsthesia by the Drop Method.**—Barten cordially endorses this method. In 300 anæsthesias, an average of 180 drops only was used. He does not precede the ether by morphine. The preliminary preparations for the operation are not resisted by the patient, showing that before deep anæsthesia is reached, an absence of sensation has appeared. No signs of collapse have been noted, but occasionally, respiratory cessation has temporarily set in. Vomiting sometimes takes place, but the greater number of patients awake free from headache and nausea, and are at once ready to take nourishment. The method has an advantage over local anæsthesia, in that consciousness is abolished.

6. **Diagnosis of Insufficiency of the Pulmonary Artery.**—Fromherz reports two cases. The auscultatory finding was the same in both cases, —a systolic murmur with the point of greatest intensity in the second intercostal space to the left of the sternum, and a sound, distinctly audible, over the pulmonary artery accompanied by a diastolic murmur. The differential diagnosis must exclude aortic insufficiency, stenosis of the pulmonary artery, persistent ductus arteriosus Botalli, pericarditis, extracardiac sounds such as are occasionally heard in the course of typhoid fever, rheumatism and chlorosis, relative pulmonary insufficiency without anatomical changes, and the rarer cases in which there are simultaneous lesions in the aorta and pulmonary artery. The author gives the points in differential diagnosis, which are of too great length to be included in this abstract.

11. **Lumbar Puncture in Uræmia.**—Seiffert has performed lumbar puncture in cases of uræmia due to the nephritis of scarlet fever, and has had remarkably successful results. Within half an hour, the mind became clear. In most cases a single lumbar puncture sufficed. From seventy-five to 450 drops of cerebrospinal fluid were withdrawn.

12. **Treatment of Basedow's Disease With Rodagen.**—Kuhnemann describes rodagen as the precipitate obtained from the milk of goats with the thyreoid gland removed, by the addition of alcohol. He reports a case treated by this preparation in which the patient gained in weight, her appetite and sleep returned, the pulse decreased in frequency, the circumference of the neck was diminished, the palpitation and systolic apical murmur disappeared. The tremor also disappeared, and the exophthalmos was almost entirely gone. The dose was thirty grains of rodagen three times daily.

BERLINER KLINISCHE WOCHENSCHRIFT

March 7, 1904.

1. Some Rare Peripheral Paralyses, By M. Bernhardt.
2. The Intensity of Cholera Amboceptor Formation in Rabbits Under the Influence of Alcohol and Mixed Infection, By E. Friedberger
3. Emergency Clinic in the Charité Hospital, By P. Jacob.
4. Anatomical Findings in Appendicitis and Indications for Appendicectomy, By Karewski.
5. Treatment of Ozæna with Injections of Hard Paraffin, By H. Fliess.

1. **Rare Peripheral Paralyses.**—Bernhardt describes three unusual cases. In the first, there was an atrophic paralysis of the right supraspinatus and infraspinatus muscles, occasioned by an isolated paralysis of the suprascapular nerve on that side. In the second case the patient had received a peculiar injury of the right upper arm from a rope, causing an

isolated paralysis of the musculocutaneous nerve. The last case was that of a little girl suffering from a paralysis of the left crural and sciatic nerves, following an attempt at bloodless reposition of a congenital dislocation of the hip. By means of the galvanic current, an improvement, but no cure, was obtained. With reference to the last case, the author calls attention to the possible dangers which may follow such violent manipulations.

2. **Amboceptor Formation in Infected Rabbits.**—Friedberger has experimented with rabbits infected with cholera to determine what effect the administration of alcohol would have upon the production of specific protective bodies in the blood. His studies show that an intoxicating dose of alcohol administered simultaneously with the immunization of the animal, increases the intensity of the antibody formation about two and a half times as much as the formation of these bodies in the check animals. The author says this confirms the clinical value of the administration of alcohol in the beginning of the acute infectious diseases. As to mixed infections, Friedberger states that animals inoculated with two species of bacteria, when immunized against cholera, produce fewer antibodies than the check animals.

4. **Anatomical Findings in Appendicitis.**—Karewski, from a large number of specimens, comes to the conclusion that there is no certain method of diagnosticating the severity of an appendicular inflammation. Under the guise of a very simple process, a very malignant and dangerous inflammation may be going on. Symptoms are not to be relied upon, and therefore every patient who is the subject of appendicular inflammation, should be operated on.

5. **Treatment of Ozæna.**—Fliess describes the technics of injecting hard paraffin into the inferior turbinated, as he has done in twelve patients suffering from ozæna. He reports decided improvement in the symptoms, but no cure, although the crusts and the odor disappeared almost entirely. Fliess uses hard paraffin only on acount of the danger of pulmonary embolism.

RIFORMA MEDICA,

February 24, 1904.

1. Latent Meningitis in Pneumonia, By G. Curlo.
2. Mixed Infections in Diphtheria and Their Treatment. An Experimental Research, By G. Castronuovo.
3. The Use of Retrograde Drainage in Penetrating Wounds of the Brain, By Tito Cavazzani.

1. **Latent Meningitis in Pneumonia.**—Curlo reports two cases of pneumonia which are interesting in connection with the question of latent meningitis, and presents a series of statistics of the cases of pneumonia treated in his hospital from 1882 to 1903. There were in this space of time 1,350 patients with pneumonia, and of these 20 had meningeal complications—that is, an average of $1^{9}/_{10}$ per cent. This number differs somewhat from the percentages observed by other authors within recent years. Thus, Nauwerk gives $1^{5}/_{10}$; Huss, 0.08 per cent.; Bach, 0.13 per cent., and Furket, 2 per cent. The great disparity between these numbers is due to various causes. A meningitis due to the germ of pneumonia may remain completely latent, and may not be discovered, either because no necropsy is performed, or because the cranium is not opened. On the basis, however, of the clinical histories and the necropsy reports of this large series of cases, Curlo concludes that meningitis occurs much more frequently in pneumonia than is ordinarily believed, and that very often the delirium of alcoholics with pneumonia is due to a meningitis rather than to functional disturbances.

2. **Mixed Infections in Diphtheria.**—Castronuovo concludes from an experimental study of this subject that when the streptococcus is associated with the diphtheria bacillus there is no appreciable increase in virulence of either germ. When streptococci are injected into animals with the diphtheria toxine, the virulence of the streptococci is only exceptionally increased. The union of the diphtheria bacillus with the pneumococcus does not produce a reciprocally exalted virulence. The inoculation of pneumococci and of the diphtheria toxine even shows a slight attentuation of the effects of each element. The antistreptococcus serums of Marmorek and of Aronson have but slight effects, either curative or preventive. A combination of diphtheria and pneumonia antitoxine is very efficient in this form of mixed infection.

3. **Retrograde Drainage in Brain Surgery.**—Cavazzani reports a case of gunshot wound of the cranium in which the bullet passed through the skull and the brain, severing the left optic nerve, and in which transcerebral drainage was used with a favorable result. The patient was a man aged twenty-one years, who was shot in the left temple with a revolver. The patient was found bleeding from the wound and from the nostrils, and was delirious and restless, but semiconscious. The left pupil was contracted, immobile, the eyeball was immovable and the upper eyelid drooped. A wound was found in the temporal region where the bullet entered, and another wound on the other side also in the temple where it had passed out. The bony opening was enlarged somewhat and the meningeal artery was tied where it had been wounded. The track of the bullet was found to be such that the sphenoidal sinus had been penetrated. Cavazzani feared, therefore, that the brain would be infected through this sinus, and especially that the cavernous sinuses and the internal carotid would be involved in the septic process. It was important, therefore, to secure some means of draining the track of the bullet. A long button probe was passed through the cranium in the track of the projectile, and a strip of gauze was drawn through with the aid of this instrument. A part of this strip was saturated with an ethereal solution of iodoform, and was drawn through in such a manner that it remained within the brain, leaving one end hanging through each wound. This is what the author called retrograde drainage. The patient recovered, but eight months later he had sensory acoustic epilepsy. The gauze was renewed every second or third day during the first two weeks and gradually was shortened, beginning at the left side

until the track healed. Cavazzani gives a number of rules for retrograde cerebral drainage. The iodoform gauze should be passed in the track of the bullet in the direction opposite to the course taken by the latter. The strip of gauze must be in proportion to the diameter of the canal in such a way as to injure the tissue but little. The chief advantage of drainage in such cases is to secure the removal of all clots and fragments of brain tissue or bone, etc. It also acts as a disinfectant and bactericidal agent when iodoform is used in the gauze.

ROUSSKY VRATCH.

January 31, 1904.

1. On Acute Intestinal Obstruction in Connection with Diseases of the Female Generative Organs, By G. F. Zeidler.
2. Saline Injections in the Treatment of Mental Diseases, By B. S. Heidenberg.
3. Phagocytosis and Leucocytosis After Injections of Virulent Streptococci Into the Peritonæum (*To be continued*), By F. V. Boukoyemski.
4. On the Treatment of Insufficiency of the Heart by Means of Baths with the Sinusoidal Alternating Current, By A. A. Eck.
5. On the Mud Baths of the Caucasus (*To be continued*), By D. A. Paryshell.

1. **Intestinal Obstruction with Diseases of Women.**—Zeidler found that in 64 cases of acute intestinal obstruction, 16 (25 per cent.) showed a dependence upon pathological changes in the female generative organs. The general mortality in the 64 cases of acute obstruction which came to the operating table was 51.56 per cent. In the 16 cases, however, in which the obstruction was due to diseases of the female genitals, the mortality was only 31.25 per cent. Zeidler attributes this difference to the fact that in this class of cases the diagnosis of obstruction is made earlier and more accurately. The most common form of obstruction following or accompanying diseases of women is that due to adhesions resulting from laparotomy. Such adhesions are almost constantly found after all operations in the pelvic cavity, and this complication is much more common in gynæcological operations than in procedures involving the stomach, intestines, etc. Another group of cases of acute obstruction occurs as the result of peritonitis from disease of the female generative organs. Out of eight cases, two were due to puerperal peritonitis, and six cases to pelvic peritonitis due to other causes. In three cases pelvic exudates filling the pelvis were the cause of the obstruction. In these three cases the exudate was so dense that it was taken at first for a tumor growing from the bones of the pelvis. In four cases inoperable tumors of the female pelvic organs were the cause of obstruction.

2. **Saline Injections in Mental Disease.**—Heidenberg calls attention to the value of saline infusions in the treatment of the insane. The best method is the introduction of saline solutions subcutaneously. The results of this treatment consist in calming excitable patients and promoting sleep and appetite. In many cases saline infusions may replace warm baths. Saline infusions are indicated principally in mental disease of infectious, toxic, or autotoxic origin, particularly in cases with excitement, loss of sleep, and loss of appetite. As a rule, the insane bear these infusions very well, and do not object to the treatment.

BOSTON MEDICAL AND SURGICAL JOURNAL.

April 7, 1904.

1. Infectious Arthritis, By Joel E. Goldthwait.
2. Some Points on Diagnosis and Treatment of Certain Neglected Minor Surgical Lesions, By E. A. Codman.
3. Radical Cure of Inguinal Hernia, By John O'Conor.

1. **Infectious Arthritis.**—Goldthwait uses the term infectious arthritis to designate a joint disease resulting from the presence within the body of some infectious organism, the symptoms being due either to the presence of the organism itself within the joint or to some toxine produced by that organism in some other part of the body. Much confusion exists in regard to the non-tuberculous joint diseases, and it is in the hope of adding to our knowledge of such affections that the author publishes his paper. He discusses the characteristic changes that are brought about by various organisms, such as the pneumococcus, the gonococcus, and the typhoid bacillus, and shows the great aid offered by the x ray in reaching a correct diagnosis. Illustrations are given of the typical appearances of the joints in atrophic, hypertrophic, and infectious arthritis. The paper ends with the report of 18 cases of joint disease which serve to confirm some of the author's views.

2. **Minor Surgical Lesions.**—Codman discusses the following lesions: (A) Wrist joint. (1) Fractures of the scaphoid bone. (2) Dislocation of the semilunar bone. (3) The diagnosis between fracture of the scaphoid bone and early tuberculosis of the wrist; rheumatoid and osteoid arthritis and tenosynovitis of the tendons of the thumb and long extensors of the wrist. (B) Shoulder joint. (1) Fractures, specially those of the greater and lesser tuberosities and of the facets of insertion of the short rotators of the humerus. (2) Affections of the various bursæ. (C) Ankle joint. (1) Impacted fractures of the os calcis. (2) Oblique fissure of the external malleolus. The author asserts that ecchymosis and accurately localized tenderness are often good evidence of the presence of fracture, where no crepitus, deformity, or abnormal mobility can be obtained.

3. **Hernia.**—O'Conor describes a new operation for the cure of inguinal hernia. He has used the method fifty times with perfect satisfaction.

April 14, 1904.

1. Bilateral Facial Atrophy, with Report of a Case and Its Treatment by Subcutaneous Injection of Paraffin, By Benjamin T. Burley.
2. A Many-Phased Case of Chorea, By Horace E. Marion.
3. A Case of Huntington's Chorea: Its Social Aspects, By J. J. Putnam.
4. A New Treatment for Morphine Addiction, By William S. Birge.

1. **Facial Atrophy.**—Burley asserts that any case of supposed facial atrophy that appreciably improves under treatment demonstrates that an error in diagnosis has been made. Up to date, 212 unilateral and 10 bilateral cases of facial atrophy have been placed on record. Judging by the cuts given by the author he obtained excellent cosmetic effects in his one case by the subcutaneous injection of paraffin.

2. **Chorea.**—Marion reports at length the history of a case of chorea and adds the report made by Hoch on the microscopy of the patient's brain. The case presented some interesting medical and ethical points. The woman was from childhood a neurotic and died insane. She bore, in all, six children, the last being conceived during the late stages of her mental degeneracy.

3. **Chorea: Its Social Aspects.**—Putnam considers the social aspects of such cases as the one reported in this issue by Marion. He attempts to indicate the solution of such difficult problems as those connected with the marriage and the giving birth to offspring by persons with a neurotic history. For instance, is their marriage to be countenanced? Is abortion to be countenanced in order to avoid the possibility of tainted offspring. Should such people be instructed by their physicians on how to avoid conception?

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

April 16, 1904.

1. Surgical Treatment of Nephritis (Bright's Disease), By Alexander Hugh Ferguson.
2. The Correction of Retrodisplacements of the Uterus, By Charles W. Oviatt.
3. The Surgical Relation of the Vermiform Appendix to Perforation in Typhoid Fever, By Levi J. Hammond.
4. The Action of Mineral Acid on the Cellular Substance of Bacillus Typhosus, By May Wheeler.
5. The Chemistry of the *Bacillus Coli Communis*, By Mary F. Leach.
6. *Insufficientia Pylori*, By Mark I. Knapp.
7. Therapeutics of Insanity, By Orpheus Everts.
8. The Ultimate Results of the Bloodless Replacements of Congenitally Dislocated Hips (*To be continued*), By John Ridlon.
9. The Composition of Some So Called Synthetic and "Ethical" Nostrums, By William J. Robinson.

1. **Nephritis.**—Ferguson reviews the results that have followed the surgical treatment of nephritis. He reports three cases of great importance. It goes without saying that the author is an enthusiastic advocate of renal decapsulation. The author asserts that the mortality of the operation itself is slight, about five per cent., though the deaths that have followed within one year of the date of operation numbered 27 in a total of 123 cases.

2. **Retrodisplacement of the Uterus.**—Oviatt makes a plea for the adoption of Noble's method of operating for the relief of retrodisplacement of the uterus. He quotes the description of the technics of the operation from the paper on the subject published by Noble in 1902. The author has used the method 23 times during the past year and, so far as he has been able to follow his cases, believes that the results have been all that could have been hoped for.

3. **Perforation in Typhoid Fever.**—Hammond believes that patients who have once suffered from appendicitis are specially liable to perforation if they ever develop typhoid fever. Therefore, if a typhoid patient, who has a history of a previous appendicitis, develops early in his typhoid symptoms of appendicular inflammation, it will be the part of wisdom to resort at once to laparotomy. If this is done the author believes that the mortality from perforation will be reduced by about ten per cent.

4. **Bacillus Typhosus.**—Wheeler has conducted some studies for the purpose of shedding light on the chemical and physical properties of the cellular substance of the typhoid bacillus. The broad conclusions to be drawn from the work done are: (1) That there are present in the cellular substance of the *Bacillus typhosus* one or more compound proteid bodies, one of which, at least, seems to be of the nature of a phosphorized glycoproteid. (2) That proteid bodies are split off by the use of dilute acid, cleavage taking place regardless of the strength of the acid, so long as it is quite dilute; and that the total amount of this cleavage product which can be split off by dilute acid composes about 10 per cent. of the weight of the dry germ substance. (3) That the cleavage of amidonitrogen by acid is definite regardless of the strength of the acid; that the largest amount of diamidonitrogen is obtained by the use of 5 per cent. acid, as compared with that obtained by the use of 1 per cent. and 33 1-3 per cent., while the largest amount of monamidonitrogen is found in the 33 1-3 per cent. acid extract.

6. **Insufficientia Pylori.**—Knapp gives at length the ætiology, symptomatology, diagnosis, and treatment of insufficientia pylori. The condition yields readily to treatment which consists essentially in regulation of the diet and in the proper mastication of the food. Medicinally, strychnine gives brilliant results. The author pushes this drug vigorously and not infrequently gives as much as one seventh of a grain three times a day.

MEDICAL RECORD.

April 16, 1904.

1. The Tuberculosis Hospitals of the New York State Hospitals for the Insane, By Frederick Peterson, and G. L. Heins.
2. The Deficient Urea Excretion in Gout and Lithæmia, By Richard K. Macalester.
3. Operation for Congenital Saddle Nose by Introduction of a Celluloid Plate, By Joseph Wiener, Jr.
4. The Bladder in Health and Disease, as Demonstrated by the Cystoscope, By Henry G. Spooner.

1. **Tuberculosis Hospitals.** — Peterson and Heins write a descriptive article on the new hospitals that are being erected for the care of the tuberculous insane. Plans and elevations of the Edgewood pavilion are shown. The problem of housing insane tuberculous patients is a special one and in these new hospitals there are few single rooms and many dormitories.

2. **Gout and Lithæmia.**—Macalester has studied the excretion of urea in twenty cases of gout

and lithæmia. His analyses were all performed by the so-called clinical methods. From the study of these cases, whose histories are briefly reported, the following conclusions are drawn: (1) Persistent deficient urea excretion is always present in, and characteristic of, chronic gouty conditions. (2) The total urea output in gout is considerably lower than that found in chronic Bright's disease, about two thirds of the amount in other miscellaneous chronic disorders, and only about three fifths of the quantity, excreted in health. (3) Deficient urea excretion is an important factor in the diagnosis between gouty and chronic rheumatic troubles, and between lithæmia and certain nervous conditions dependent on other causes. (4) It is not present in chronic rheumatic conditions. (5) It points to perverted hepatic metabolism, and lends color to the Murchison theory of gout, there being in the cases discussed no clinical evidence of kidney trouble in support of the renal theory. (6) A diminished uric acid excretion is to a certain degree commensurate with that of urea. (7) Gout, goutiness, and lithæmia are of the same origin, and but modifications of the same disorder. (8) Chronic gouty conditions are in general more amenable to treatment, especially to balneotherapy, than chronic rheumatic affections.

3. **Saddle Nose.**—Wiener calls attention to some of the accidents that have followed the use of paraffin injections for the cure of various deformities. He reports one case of saddle nose deformity cured by him, about three years ago, by subcutaneous insertion of a celluloid plate. The author recommends this methods as being free from danger and giving very good results.

4. **The Cystoscope.**—Spooner describes the Nitze cystoscope and the best way of using it. He then describes and illustrates about a dozen views of the bladder wall as it appears in health and in certain diseases.

MEDICAL NEWS.

April 16, 1904.

1. Ulcer and Cancer of the Stomach, from a Surgical Standpoint, By William J. Mayo.
2. Otitis Media in Croupous Pneumonia: with the Report of a Case of Acute Suppurative Otitis Media Preceding the Pneumonia, By Nathan G. Ward.
3. Hepatectomy for Tuberculoma of the Liver, By Joseph Ransohoff.
4. The Relationship Existing Between Ophthalmology and Otology and Dentistry, By Frank Allport.
5. A Historical Sketch of Some of the So Called Cures for Consumption, with a Few Notes on Later-day Treatment, By J. Edward Stubbert.
6. Hysteria and Organic Diseases, By William B. Noyes, and Richard C. Newton.
7. Varieties of Pulmonary Tuberculosis, By Jay Perkins.
8. Poisoning by the White of An Egg, By J. R. Clemens.

1. **Ulcer and Cancer of the Stomach.**—Mayo, in his paper, may be said to insist on two points: (1) That both ulcer and cancer of the stomach are surgical diseases, and (2) that operation should be resorted to early. The question that must be decided is: How early? The author goes into many particulars on this point. His position may, perhaps, without exaggeration be stated thus: (1) In ulcer, if there are no complications, four or five weeks of medical treatment may be justifiable. If at the end of this time a cure has not resulted, operate. (2) In cancer, whenever the diagnosis is no longer in doubt, operation, as a rule, will only serve to prolong the patient's life and suffering. Therefore to have cures, exploratory operations should be resorted to early and frequently. Such operations are practically without danger, and a suspicion of gastric cancer should cause us to lay the facts before the patient and his friends, and urge exploratory section.

2. **Otitis Media.**—Ward reviews the relation between systemic infections and otitis media. He devotes special attention to the consideration of pneumonia from the standpoint of otology. One case is reported in some detail in which the author believes that infection of the lungs and of the ear with the pneumococcus occurred simultaneously.

3. **Hepatectomy.**—Ransohoff reports one case in which he excised the greater portion of the left lobe of the liver for what, at the time of operation, he thought to be a malignant tumor. The new growth eventually turned out to be a solitary tubercle. The patient died. The author uses his cases as a text for discussing two points; the diagnosis of new growths in the liver, and the technics of hepatectomy. With regard to the latter he recommends operating in two steps and performing the excision by means of the thermocautery.

5. **Tuberculosis.**—Stubbert summarizes his paper thus: "With our present knowledge and clinical experience in the treatment of this disease, diet, hygiene, and fresh air are universally accepted as the foundation of all scientific treatment, although it is equally acknowledged that, by themselves alone, they are not sufficient, but must be supplemented by symptomatic treatment in the way of antisepsis, tonics, and surgical interference when necessary. The probability is that within the next three years, we will see notable advances in immunization and the stimulating effect of light. In the meantime, the physician who would prescribe climate alone is equally culpable with him who would ignore climate, diet and hygiene in favor of medicinal or other treatment. The man who would justly earn the gratitude of his patients will be he who will prescribe a judicious, scientific combination of the two basic lines of treatment."

7. **Varieties of Pulmonary Tuberculosis.**—Perkins proposes classifying tuberculosis of the lung under six heads: (1) Localized fibrous form. (2) Fibrocaseous form. (3) Fibroid phthisis. Generalized fibrous form. (4) Phthisis florida. (5) Chronic parenchymatous tuberculosis. (6) Acute miliary form. The author describes the lesions and symptoms which characterize each one of these forms of pulmonary tuberculosis.

8. **Poisoning by the White of An Egg.**—Clemmens's case of poisoning by the white of an egg had the following points of interest. The victim, a child aged fourteen months, "was suddenly

seized one afternoon with an attack of acute urticaria and alarming collapse, the face and ears being greatly swollen and the radial pulse withdrawn from the wrist. The child was apparently moribund, but hypodermics of strychnine tided over the crisis. Later the child vomited the contents of the stomach—water and mucus. The pupils were widely dilated during the attack and the face pale. The child rallied slowly and was the source of anxiety for the following two days." The child had four similar attacks in all. The author is quite sure it was white of egg that produced the symptoms. The child was in poor health, suffered from indigestion and had recently recovered from whooping cough. Preceding the first two attacks the white of an egg had been given the child in its milk. Prior to the third attack it had had some custard. Prior to the fourth, some ginger bread made with eggs.

AMERICAN MEDICINE.

April 16, 1904.

1. A Review of Literature Relating to Serum Diagnosis, By RANDLE C. ROSENBERGER.
2. Appendicitis: Its Relation to Pelvic Inflammations, By J. M. BALDY.
3. Resuscitation After Apparent Death in Chloroform Anæsthesia: with a Report of Two Cases, By EMIL KING.
4. A Case of Pemphigus Vulgaris, with Some Observations on Its Bacteriology, By A. C. EUSTIS.
5. Blood Iron, By EDWARD T. WILLIAMS.
6. Multiple Myeloma, By GEORGE F. ZINNINGER.

1. **Serum Diagnosis.**—Rosenberger concludes his review of the literature of serum diagnosis with the following summary: "It will be seen that of 17,280 cases of enteric fever, 16,352 gave positive reactions and 928 did not; positive, 94.6 per cent. In paratyphoid fever 42 cases have been collated, and in 40 of these, or 95.2 per cent., a positive reaction was obtained. In tuberculosis 221 cases were enumerated, and of them 194, or 87.7 per cent., gave a positive reaction. Of 390 cases of bacillary dysentery 313, or 80.2 per cent., responded to the agglutination test. In the other diseases only a small number have been reported, hence no reasonable estimate can be given of the percentage of reactions obtainable."

2. **Appendicular Inflammation and Pelvic Inflammations.**—Baldy does not believe that there is any relationship between these two diseases. In his experience appendicular inflammation has never given rise to pelvic inflammatory disease, nor has inflammation of the pelvic organs ever given rise to appendicular inflammation. Therefore he concludes that if the two diseases should ever be observed together it would be due to a coincidence.

3. **Chloroform Anæsthesia.**—King formulates the following conclusions regarding chloroform anæsthesia: (1) Deep anæsthesia is always a condition of danger. Therefore every precaution must be taken to guard against danger. (2) When serious accident occurs we must have ready a well matured plan of treatment which meets the indication in the best possible manner. (3) Death usually resulting from failure of the vital centres the first indication is their stimulation. Artificial respiration, tongue traction and heart compression should be first tried. The application of cold, ether being poured on the abdomen according to Hare, inversion, suspension and succussion, dilatation of the sphincter ani and electricity are worthy of trial if the others fail. (4) Hypodermic injections during the stage of collapse are a waste of time. The arterial pressure being nil there can be no effect from medication unless the injection be into the heart. They may do good before cardiac arrest or after the contractions are resumed, and then the remedies of value are limited to a few. (5) Injections of ether and alcohol in any form are apt to be harmful. Their effect in overdose is so similar to chloroform in their action on the vital centres that we only add to the danger by their use. (6) Mechanical efforts at resuscitation must not be so rough that internal organs are injured. That this is possible is proved by reported cases where the liver was torn, blood found in the pleura and the tongue wounded. (7) Since we cannot know when the molecular changes separating true from seeming death take place our efforts at resuscitation should continue for at least one hour.

4. **Pemphigus Vulgaris.**—Eustis reports in detail one case of pemphigus vulgaris. He made some bacteriological observations on the contents of the blebs, and reports the results obtained by inoculating animals. The following conclusions are presented: (1) In cases of pemphigus a diplococcus can be isolated from the contents of the bullas. (2) This diplococcus when injected intravenously into the rabbit will cause death. (3) A diplococcus removed from the blood of the rabbit and identical with that obtained from a case of pemphigus vulgaris, when injected into the pig *(Sus scrofa)* produces a pustular eruption in the latter animal, attended with mild constitutional disturbances. (4) Arsenic is the main remedy to be relied upon in the treatment of pemphigus vulgaris.

6. **Multiple Myeloma.**—Zinninger reports one case of this rare affection. The pathological diagnosis was confirmed by W. H. Welch. The author does not discuss the case, but merely records it. So far as the theory of the formation of these tumors is concerned, the author is inclined to accept McCallum's conclusions rather than Wright's.

BRITISH MEDICAL JOURNAL.

April 2, 1904.

1. The Detection of Early Tubercle in the Lungs, By SIR I. OWEN.
2. The Early Diagnosis of Tuberculosis of the Lungs, By C. G. H. BAUMLER.
3. The Pathology and Surgery of Certain Diseases of the Pancreas. (Hunterian Lecture: III), By A. W. M. ROBSON.
4. The Chemistry of the Urine in Diseases of the Pancreas. (Arris and Gale Lecture), By P. J. CAMMIDGE.
5. Report No. LXXXII to the Scientific Grants Committee of the B. M. A. The Adaptation of the Pancreas, By F. A. BAINBRIDGE.

1 and 2. **Early Diagnosis of Tuberculosis.**—Owen says that the power of detecting with pre-

cision the early presence of tuberculosis of the lung is of the greatest importance. And to this end we are still forced to rely chiefly on physical examination. Bacteriology has supplemented but cannot replace it: the Röntgen ray promises much, but will probably never rival the fingers and ears for delicacy and exactitude of diagnosis. The preliminary search for signs of tuberculosis of the lungs is a search for signs of consolidation. The pitch of the harsh or tubular breathing heard in early tubercle of the apex is nearly always much lower than that heard over consolidation due to pneumonia or compression from fluid. High pitched tubular breathing is only heard where there is continuous consolidation from the point of auscultation to the root of the lung. In tuberculosis of the apex the consolidation is superficial. More deeply seated consolidation may fail to give tubular breathing, but here the vocal resonance is increased. Harsh breathing with bronchophony is of more serious import than the presence of either sign alone. Allowance must be made for the normal excess in vocal resonance of the right chest. The value of vocal fremitus in the diagnosis of early lesions is practically nil. In percussion of the apex the examiner should stand behind the patient: the same percussive force and the same spot of the pleximeter finger should always be used. In some cases the affected apex may be more resonant than that of the sound side. "Deep" percussion may give evidence of consolidation too deep to furnish stethoscopic signs, of scattered gray tubercle, or of a greatly thickened pleura. Compensatory emphysema in the neighborhood of scars may give rise to the most contradictory signs. Moist sounds in a tuberculous lung do not necessarily mean "breaking down:" such sounds accompany the very earliest stages of gray tuberculosis nodule. Such crepitations need to be distinguished from the friction sound of tuberculous pleurisy and from the dry crackle of apical emphysema. Clicks at the end of inspiration are formally diagnostic of tubercle. Tuberculous rhonchi can be distinguished from those due to bronchial catarrh, or asthma, by the fact that they are persistently localized. Moist sounds may be absent in bronchopneumonic cases, thus making the diagnosis between such lesions and a quiescent fibrous patch very difficult. Inspection, palpation, and measurement will be of assistance here. Baumler states that in early cases of pulmonary tuberculosis attention must be paid to the subjective as well as objective symptoms. The temperature range must be carefully observed, as well as the influence on it of rest and exercise. A continuous, even if slight, elevation of temperature is very suggestive of tuberculosis. Alveolar and lobular infiltration and bronchial catarrh being the coarse anatomical basis of the disease, diminished or altered resonance on percussion, and altered breath sounds on auscultation will be the chief signs to be looked for. Careful comparison of the two sides and corresponding points will lead to the discovery of very slight changes. A marked difference in percussion may be present without any lung disease in the apices, when the two sides of the chest are not perfectly symmetrical. Tuberculosis of the lungs does not invariably commence at the apices: it may start in a large bronchus of the upper lobe, and the signs are at first those of collapse of the lung, followed by those of lobular pneumonia. Auscultation usually yields the first suspicious signs. Persistent and localized râles, more especially in the upper parts of the lungs, are the most important signs of tuberculous disease. Deviations of the respiratory murmur, while not so certain and more common, are always suspicious, especially where they occur over the apices. Frequently repeated careful examination of the sputum is especially desirable in those cases in which the patient, while in good general health, has a persistent cough. Such patients are generally beyond middle age, rather stout than the reverse, and at first suggest emphysema. Should an aneurysm of a branch of the pulmonary artery exist in the wall of a small cavity, profuse or even fatal hæmorrhage may occur, without there ever having been any suspicion of tuberculosis. Hæmoptysis is often the first symptom of pulmonary tuberculosis. The loss of blood is often very trifling, but is apt to be frequently repeated. Whenever diagnostic methods give no decisive result, there remains the tuberculin test as a very valuable means of settling the question. The serum agglutination test is not suitable for every day practice.

4. **Urine in Pancreatic Disease.**—(See Abstract of the *Lancet* for March 19, 1904, in this *Journal* for April 9, 1904).

5. **Adaptation of the Pancreas.**—Bainbridge, as a result of his experiments, reaches the following conclusions: Lactose is absent from the pancreatic juice of adult dogs, unless they are fed on milk diet. The pancreas adapts itself to differences of diet by modifying the composition of its secretion as regards the enzymes. The formation of lactose by the pancreas is a specific reaction to a diet containing lactose. This adaptation is brought about by a chemical mechanism: by the action of lactose on the intestinal mucous membrane some substance is produced which acts as a specific chemical stimulus to the pancreas, causing it to form lactose.

LANCET.

April 2, 1904.

1. Some Laryngological, Rhinological, and Otological Experiences, By J. Bark.
2. The Pathology and Surgery of Certain Diseases of the Pancreas. (Hunterian Lectures: III), By A. W. M. Robson.
3. On the Precipitin of Cobra Venom, By G. Lamb.
4. On a New Method of Testing the Blood and the Urine, with Special Reference to the Determination of the Excretory Efficiency of the Kidney, By A. E. Wright, and J. N. Kilmer.
5. Remarks on the Relations of Pulmonary Tuberculosis to Other Diseases, By F. P. Weber.
6. Two Cases of "Corset Cancer," with Remarks on the Origin and Spread of Cancer, By R. C. Lucas.
7. A Topographical and Clinical Study of Fibroids of the Neck of the Uterus (Cervix Fibroids), By J. Bland-Sutton.

8. A Case of Sloughing of the Central Part of a Uterine Myoma Shortly After Delivery,
By J. D. MALCOLM.

2. **Disease of the Pancreas.**—Robson tells us that the surgery of cystic disease of the pancreas is much in advance of pancreatic surgery as a whole. Simple drainage is usually sufficient to bring about relief or cure. The symptoms vary according to the size and seat of the tumor, and are at first dependent on the disease leading to the cystic formation, and later to the pressure exerted by the tumor on neighboring viscera. Fatty stools, azotorrhœa, and glycosuria will be present if the degeneration of the gland is sufficiently advanced. In all the author's cases there has been a well marked pancreatic reaction in the urine, indicating catarrhal or interstitial inflammation. Chronic interstitial pancreatitis is the most frequent cause of cyst formation. Excision of the cyst may occasionally be performed; incision and drainage should always be tried first. Fistulæ do not usually follow the drainage. Of 160 cases operated upon, recovery ensued in 140.

Injuries to the pancreas are not always fatal. The indications for operation depend upon the severity of the symptoms and on the presence of either inflammation or hæmorrhage. Of five gunshot wounds operated on, three recovered.

Pancreatic calculi are stated never to form in a healthy pancreas: they are the results of catarrh of the ducts with stagnation of the secretions, which generally if not always results from infection. Instead of calculi being formed, the ducts may be lined with calcareous material. As a rule, the calculi are numerous; they contain either calcium carbonate or phosphate, and consequently are opaque to the x rays, in which respect they differ from gallstones. The symptoms depend upon the associated conditions—cyst, abscess, chronic inflammation, etc. If the calculus descends into the ampulla of Vater jaundice ensues, but the presence of the urinary pancreatic reaction and the use of the x rays should make the diagnosis clear. Medical treatment is useless, beyond the relief of pain, but surgery offers a reasonable hope of cure. The operation of pancreolithotomy is very carefully described by the author. Cancer is the most common neoplasm of the pancreas. Loss of flesh and strength is very marked in these cases. Sugar is found only when the whole gland is involved. The cases may be divided into three types: 1. Where the tumor extends to the right and compresses the bile and pancreatic ducts. 2. Where it extends upward and forward and compresses the pylorus. 3. Where it extends backward, compressing the vena cava and the portal veins. The symptoms, of course, vary with each type of case. Medical treatment is purely symptomatic, and surgical treatment is not very hopeful. If the head of the pancreas is involved there is no hope. Sarcoma is rare, especially the primary variety.

4. **New Urinary and Blood Test.**—Wright and Kilmer's new method of testing the blood and urine is as follows: A standard quantity of normal red corpuscles suspended in a measured volume of salt solution of a standard strength furnishes a test fluid. The urine or the blood fluid (serum) from which the urine is derived, is mixed in progressive dilutions in a capillary tube with measured volumes of the standard suspension of red blood corpuscles. The point is determined at which the urine or serum has been so far diluted as to allow of complete hæmolysis of the standard suspension of red corpuscles. From these data taken in association with the data obtained on diluting the suspension of corpuscles with progressive dilutions of a decinormal sodium chloride solution, the concentration of the serum and urine is calculated. The quotient obtained by dividing the latter by the former is denoted "the excretory quotient." It is probable that what is measured by the hæmolytic index is generally the salt content of the fluid. The presence of urea is a matter of indifference, it having no hæmolysing effect. The test is of value in cases of threatened uræmia, nephritis, etc.

5. **Pulmonary Tuberculosis.**—Weber considers the relations of pulmonary tuberculosis to certain constitutional defects and to diseases of the heart, liver, and kidneys.

Heart.—Conditions of the circulation which tend to passive hyperæmia of the lungs (mitral insufficiency and stenosis) have a hindering action on the growth of tubercle, while anæmia of the lungs favors tuberculosis. The association of tuberculosis and congenital pulmonary stenosis is notorious.

Liver.—Enlargement of the liver from fatty infiltration is frequently found in consumptive patients. Cirrhosis of the liver is not rare, and in a few cases may be due to a local tuberculous process. There is a close connection between tuberculosis and alcoholism, and the children of alcoholics.

Kidneys.—Parenchymatous and interstitial nephritis are frequently found in advanced cases of pulmonary tuberculosis, and are a result of the lung disease, being caused by toxic irritation.

There is undoubted resistance between gout and tuberculosis, probably partly due to the meaty foods which most persons with acquired goutiness have been accustomed to indulge in freely. Great meat eaters rarely become phthisical; on the other hand, the relatively great incidence of tuberculosis among the poor is partly due to the insufficiency of meaty food. There is probably no antagonism between cancer and tuberculosis: the two diseases naturally tend to occur at different age periods. Lymphadenoma on the other hand tends to become associated with tuberculosis. Syphilis and diabetes, by lowering bodily resistance, predispose to tuberculosis.

6. **"Corset Cancer."**—Lucas calls attention to a mode of onset of cancer of the breast, which he calls "corset cancer." The site where this carcinoma attacks the skin and cellular tissue is over an upper and outer radiant from the nipple corresponding exactly to the point where the upper edge of a corset crosses the pectoralis muscle. It occurred on the right side in the three cases seen by the author, probably due to an undue use of the right arm, the friction of the corset at this spot being the cause of the cancerous process.

Book Notices.

Social Diseases and Marriage. Social Prophylaxis. By PRINCE A. MORROW, A. M., M. D., Emeritus Professor of Genitourinary Diseases in the University and Bellevue Hospital Medical College, New York; Surgeon to the City Hospital, etc. New York and Philadelphia: Lea Brothers & Co., 1904. Pp. xxi-390.

Many of the chapters forming this book have already appeared in the current medical journals, where they have attracted attention and have given the author a reputation for sincerity and dignity in his discussion of the subject which is fully borne out by those portions of the work which are now submitted for the first time.

There is one general criticism of the book which we feel we must make, and yet it is offered in no captious spirit. If the work is intended for medical readers only, there is too much of the purely elemental; if it is expected to be circulated among the laity, there is too much of the technical, as, for instance, the reference to chest serum as the best means of making cultures of the gonococcus and the discussion of postconceptional syphilis. But if the book is written for the study of sociologists and for those whose interest in the race is paramount to that in their own special sphere, it contains just enough of the philosophy of venereal diseases and of their destructive influence to teach well the lessons which the author repeats on almost every page.

Since the book cannot be viewed in the light of a medical work pure and simple, we shall not take up those points which seem to us debatable. But we cannot refrain from saying that the view that gonorrhœal inflammation is responsible for tubal pregnancy is no longer held. It may occasionally be so, but, as Miholitsch has demonstrated in a series of cases, malformation of the tube is the most usual cause. Again, the most recent German literature emphatically endorses the prophylactic instillation of silver nitrate into the eyes of the new-born in preference to other silver preparations.

We have done with criticism. For the work as it stands we can have but admiration. It assails unchastity, it preaches good morals as essential to healthy bodies, it leaves no stone unturned to instil the lesson of ravage and destruction which the venereal diseases can cause to their original victim and to those bound to him. Professional ethics is dignified, the causes of prostitution are tersely but vividly given, and a remedy therefor is suggested which, if not entirely feasible in this country of individual liberty, is still along the lines of light. The Anglo Saxon antipathy to the legal recognition of the social evil is emphasized and the lessons and results of this ostrichlike attitude are pointed out.

The book is written in a charming style, and gives the impression of scholarship and of a catholic spirit in the treatment of its difficult subject matter. It will well repay reading by the physician and by all those who have to do with the moral and physical rearing of the young.

The Management of Lateral Curvature of the Spine, Stooping, and the Development of the Chest in Phthisis. By E. NOBLE SMITH, F. R. C. S., Edin., etc.; Senior Surgeon to the City Orthopædic Hospital, London. London: Smith, Elder & Co, 1904. Pp. viii-133.

This little book contains the gist of the author's extensive experience in the treatment of the postural deformities of the spine and chest. He occupies a middle ground between those who use only support and those who use only exercises in these affections. In the milder cases he relies on strengthening and corrective exercises, and to these he adds in the severer cases the use of an anteroposterior support—Chance's apparatus—which permits of movement in certain directions and favors free chest expansion. He rejects jackets altogether. While the monograph is rather sketchy, many useful hints will be found scattered through its pages.

Portfolio of Dermochromes. By Professor JACOBI, of Freiburg im Breisgau. English Adaptation of Text by J. J. PRINGLE, M. B., F. R. C. P., Physician to the Department for Diseases of the Skin at the Middlesex Hospital, London. Vol. II. New York: Rebman Company, 1903. Pp. ix, 83-181. Two Vols. Price, $16.00.

The second volume of this excellent series of clinical pictures completes the work. Of its general scope adequate mention was made in our notice of Volume I. The illustrations seem to us to mark the limit of perfection in the art of lithography as applied to atlases of disease of the skin, while the descriptive text is admirable from its conciseness of statement and general accuracy. As a work for general physicians this book has no superior, and to them we heartily commend it.

Essentials of Pelvic Diagnosis, with Ilustrative Cases. By E. STANMORE BISHOP, F. R. C. S., England, Author of Uterine Fibromyomata, their Pathology, Diagnosis, and Treatment; Honorary Surgeon, Ancoats Hospital, Manchester, etc. And an Appendix on Examination of Blood, etc., by CHARLES H. MELLAND, M. D. (Lond.), M. R. C. P., Honorary Physician, Ancoats Hospital, Manchester, etc., etc. New York: William Wood & Company, 1903. Pp. vii-297.

This unusual book deserves extensive circulation and a wide reading. It is more eminently fitted for the student than any work of a similar nature with which we are acquainted. It deals with the pelvic lesions of both sexes, and embraces every abnormity within the pelvic cavity, on the abdominal wall itself, and on the external genitals.

The first part of the work is devoted to methods of diagnosis, including the use of instruments and of the hand, the position of the patient, and a consideration of pain from its diagnostic standpoint. The second part, the author calls " Lines of Diagnosis," in which certain symptoms are stated, amplified, and expanded, and the only logical diagnosis thus attainable is vividly and tersely brought before the student. The classification is especially good.

The third part of the book is composed of diagnostic tables, by which, with given symptoms and by a process of exclusion and inclusion, an infallible diagnosis should be made. The only fault to be found with this is that the student learns to reach his conclusion by deductive rather than by inductive reasoning.

Illustrative cases are given and an appendix contains hæmatological and bacteriological data by Dr. Melland. The illustrations are few in number, but are of value in connection with the text.

This is a book of which it can be said that the practitioner will be a gainer for having it in his possession and for knowing its contents.

A System of Physiological Therapeutics. Edited by Solomon Solis-Cohen, A. M., M. D., Senior Assistant Professor of Clinical Medicine in Jefferson Medical College, etc. Vol. IX. Hydrotherapy—Baths and Mineral Waters—Heliotherapy—Phototherapy—Infusions. Illustrated. Philadelphia: P. Blakiston's Son and Company, 1903.

This volume, one of an excellent series, is devoted to the therapy of water in its various external and internal applications, to that of heat in its various forms, and to that of light.

The subjects of hydrotherapy, thermotherapy, heliotherapy, and phototherapy are from the pen of the world authority in those topics, Dr. Wilhelm Winternitz, of Vienna. Baths and mineral waters are discussed by Dr. E. H. Kisch, of Prague. American mineral springs, their distribution in the United States, and the classification of American waters are treated by Dr. Guy Hinsdale and Dr. A. C. Peak, respectively. Dr. Harvey Cushing, of Johns Hopkins Hospital, deals with saline irrigations and infusions. He has contributed one of the best chapters in the book.

On the whole, this volume is the peer of any of its predecessors. Dr. Solis-Cohen has shown his usual excellent discernment in the selection of his contributors to it, and it may truthfully be said to be unexcelled by any work of its kind in the English language.

Die Entstehung der Zückerkrankheit und ihre Beziehungen zu den Veränderungen der Blutgefässdrüsen. Von Dr. A. Lorand, Brunnenarzt in Karlsbad. Berlin: August Hirschwald, 1903. Pp. 62.

The author opens this little pamphlet by going into the question of the relationship between diabetes, exophthalmic goître, and acromegaly. He shows the frequency with which the same symptoms are found in all three of these diseases, and goes carefully into the relation which the thyreoid gland bears to other glandular organs, especially the pancreas. He devotes a chapter to the frequency with which glycosuria is found in overactivity of the thyreoid gland, and the infrequency with which it is found in the reverse condition.

He closes with a short article upon numerous therapeutic tests in cases of diabetes, made by giving the serum, and in some cases, the milk, of animals from which the thyreoid has been removed. The author himself admits that at best he does not expect to effect a complete cure of the diabetes, but merely an amelioration of the symptoms. Many of his statements are rather forced, and at times, we fear, he bases his conclusions upon insufficient data. His experimental work undoubtedly possesses a great deal of merit, and should prove of some value in the future consideration of diabetes.

Le Sens des attitudes. Par Pierre Bonnier. Paris, C. Naud, 1904. Pp. 114.

The author's expressed intention is not to define a new faculty, but to demonstrate, as he terms it, "the power of a word put in the right place." In fact, he has simply bracketed a number of biological conceptions, such as muscle sense, sense of space (Cyon), kinæsthetic, and stereognostic sense, which he considers not sufficiently well founded.

The notion of attitude, somewhat neglected hitherto, is made the common formula of all these physiological terms, the synthesis of vague ideas producing a definite and practical unity. This complex sense is traced through its various manifestations in special organs of sight, hearing, touch, and relation to orientation, subjective and objective. Indeed, the conception of a sense of attitude is made to include even psychical orientation, sense of direction, and equilibration.

A Manual of Medicine. Edited by W. H. Allchin, M. D., Lond., F. R. C. P., F. R. S., Ed. Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital, etc. Vol. V. New York: The Macmillan Company. London: Macmillan & Co., Ltd., 1904. Pp. 687. (Price, $2.00).

The fifth volume of this manual of medicine maintains the excellence and the defects of the former volumes. It is devoted to the consideration of the diseases of the digestive system, of the liver, of the peritonæum, of the abdominal vessels, of the kidneys, and of the ductless glands. It is to be expected that a work produced by the cooperation of many individuals will not be uniform in the conception, scope, and treatment of its subjects. It would be invidious to compare the various chapters, some of which are very good, some fair, and a few inadequate in every sense.

The Distribution of Bloodvessels in the Labyrinth of the Ear of Sus Scrofa Domesticus. By George E. Shambaugh, Instructor in the Anatomy of the Ear, Nose, and Throat. Printed from Volume X of the *Decennial Publications.* Chicago: The University of Chicago Press, 1903. Pp. 20. (Price, $1.25).

The author's beautifully illustrated presentation is based on the study of more than a hundred specimens taken from pig embryos at full term, prepared by Eichler's method of making celloidin casts of the labyrinth after previously injecting the bloodvessels. When cleared in creosote, the casts had become entirely transparent, except for the net work of bloodvessels, and could be examined and drawn through the stereoscopic microscope. Thick serial sections of the injected, decalcified labyrinth were also made to clear up some doubtful points of interpretation.

The work is a valuable contribution to our knowledge of the angeiogenesis of the middle ear in higher animals, and admirably supplements the investigations of Liebenmann and of Eichler on the labyrinthine blood supply in man.

Rabóty Gospitálnoi Khirurgítcheskoi Klïniki. Prof. P. I. Diákonova. Tom II. Priv. Doc. N. I. NAPÓLKOFF: Obzór Naútchnoi Déyatielnosti Gospitálnoi Khirurgítcheskoi Klïniki İmperátorskovo Moskóvskovo Universitiéta s' 30 Oktiabriá 1901 po 1 Máya 1903. Pod Redáktsiey Prof. P. I. DIÁKONOVA. Moskva, 1903.
The Work of the Surgical Hospital, Clinic of Professor P. I. Diakonoff. Volume II. Private Docent N. I. NAPALOFF: A Review of the Scientific Work of the Surgical Hospital Clinic of the Imperial University of Moscow from October 30, 1901, to May 1, 1903. Edited by Professor P. I. DIAKONOFF. 8vo, pp. 661, with 45 Illustrations. Moscow: A. A. Levenson, 1903.

This volume contains a very complete record of the activity of the Moscow University Surgical Clinic during the years 1901 to 1903. The bulk of the book is devoted to a description of the more interesting cases and to statistics of the various classes of surgical affections met with in the clinic during that time. The introductory chapters are, however, given to a description of the institution, its equipment, organization, methods of work and management, etc. A feature of the clinic is that the patients are not kept in the wards during the day, unless they are bedridden, but are allowed to pass their time in special living rooms and corridors, to eat meals in common, etc., at the very earliest day after an operation. In this manner the convalescents find their sojourn in the clinic less tedious.

Anæsthesia is conducted with a combination of ethyl bromide and chloroform. At first from six to ten c. c. of bromethyl are poured on the mask, followed by chloroform. In some cases bromethyl alone is used for short operations. All dissections during operations are made with sharp instruments, and every anatomical feature is thoroughly brought out as the operation proceeds. The fingers are used as little as possible in operating, instruments being employed for grasping, etc., whenever necessary. The simplest instruments are always preferred. The least possible number of ligatures is left on bleeding vessels, and the least possible number of deep sutures is left in place. Silk is used almost exclusively in wound sutures, but on the abdominal wall the clinic employs aluminum bronze wire. In the treatment of wounds hardly any antiseptics are used, asepsis being chiefly relied upon. Appliances are used for sterilizing hand brushes, from which one brush may be removed at a time by pressing a pedal, without touching the apparatus. A similar system of jars with pedal levers is used as receptacles for liquid soap, and in many other ways perfect asepsis is always aimed at. The equipment of the clinic is as complete as that of any similar institution of western Europe.

An Atlas of Human Anatomy for Students and Physicians. By CARL TOLDT, M. D., Professor of Anatomy in the University of Vienna, Assisted by Professor ALOIS DALLA ROSA, M. D., Translated from the Third German Edition and Adapted to English and American and International Terminology by M. EDEN PAUL, M. D., Brux., M. R. C. S., L. R. C. P. Third Section, Myology (figures 490 to 640 and index). New York: Rebman Company, 1904. Pp. 259-401.

Five pages of this section are devoted to the general anatomy of striated muscles and their relations to joints. Then the individual voluntary muscles and their relations are portrayed. The section concludes with the anatomy of the inguinal and femoral canals, with special reference to hernia. The same accuracy and thoroughness that marked the first and second sections are to be observed in this one. The completed work will undoubtedly prove of the greatest value.

Diseases of Women. By ALFRED LEWIS GALABIN, M. A., M. D., F. R. C. P., Late Fellow of Trinity College, Cambridge; Consulting Obstetric Physician to Guy's Hospital, etc. Sixth Edition, Much Enlarged. With 284 Illustrations. Philadelphia: P. Blakiston's Sons, 1903. Pp. viii-695. (Price, $5.00 net.)

The sixth edition of this well known work places it almost in the position of being regarded as a new book, so extensive have been the revision and alteration. Not only is this noticeable in the text, but the number of illustrations has been materially increased, and both have been brought into consonance with modern gynæcological teaching.

All that was antiquated in former editions of Galabin's work has been eliminated, and the newer notions on inflammation, on sepsis, on operative technics, and on the philosophy of gynæcological work have been included within the book. Here and there are some omissions, such as that of a description of Dudley's operation for dysmenorrhœa, for instance. But the reader will be astonished at the great wealth of scientific and modern material to be found within the work. It is a most satisfactory textbook in its present form.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, etc., by Leading Members of the Medical Profession throughout the World. Edited by A. O. KELLY, A. M., M. D., Philadelphia, U. S. A. Vol IV. Thirteenth Series, 1904. Philadelphia: J. B. Lippincott Company, 1904. Illustrated. Pp. viii-321. (Price, cloth, $2.00 net.)

Among the contributors to this edition of the quarterly which has now assumed a dignified place among works of its kind, are Albarran, Battle, Corner, Duncan, Julien, Pinard, and Valude, of England and France, and Bishop, Veen, Da Costa, Davenport, Preble, Senn, Satterthwaite, Wiggin, and Wood, of this country. The topics discussed are therapeutics, medicine, surgery, gynæcology, neurology, orthopædics, ophthalmology, and pathology. The various volumes are of unquestionable value to the practitioner who seeks a knowledge of the clinical work going on in the various hospitals of the world.

Transactions of the American Pædiatric Society, Fourteenth Session, Held at Boston, May 26, 27, and 28, 1902. With Addenda from the Thirteenth Session and an Index, Vols. I.-XIV, Inclusive. Edited by WALTER LESTER CARR, M. D. Reprinted from the *Archives of Pædiatrics.* 1902. Pp. 310.

Like all reports of the transactions of the American Pædiatric Society, this volume is of interest and value to every general practitioner as well as to the pædiatrist. These papers, presented at the Boston meeting in 1902, cover a wide field, ranging from the Effects of Tight Diapers to Renal Decapsulation for Parenchymatous Nephritis. There are twenty-nine contributions, among them: Intussusception, A Case of Chondrodystrophia Fœtalis, The Management of Rheumatic Children, The Use of the Term " Exanthem," Conclusions as to the Treatment of Tuberculous Peritonitis in Children, The Place of Cereals in Infant Feeding, and A Contribution to the Pathological Anatomy of Sporadic Cretinism. The others are equally valuable, but their enumeration would take too much space.

The volume contains also a complete index to the *Transactions* of the society from its foundation. To pædiatrists or those interested in the study and literature of children's diseases this portion of the book will prove of the greatest service and convenience.

Diseases of the Intestines. A Textbook for Practitioners and Students of Medicine. By MAX EINHORN, M. D., Professor of Medicine at the New York Postgraduate Medical School and Hospital, etc. Second Revised Edition. New York: William Wood & Company, 1904. Pp. xiv-397.

It is now about four years since the first appearance of this book, and as, according to the author, progress in this branch of medicine has been very slight, very few changes are to be found in this, the second edition. Unfortunately, the English literature upon this subject contains entirely too few works, and Dr. Einhorn's book is undoubtedly invaluable to any one interested in this subject who is unable to cope with the foreign language, more especially the German. Although the work is accurate and well written, we feel it necessary to point out that brevity has been carried to the extreme, which precludes its use as a satisfactory reference book for physicians, even though the information it contains is sufficient for the use of students, and for the hasty reference of physicians. Throughout the book liberal reference to the literature of each subject is made, and the author also gives us the benefit of his own unexcelled experience.

Infant Feeding in its Relation to Health and Disease. By LOUIS FISCHER, M. D., Visiting Physician to the Willard Parker and Riverside Hospitals, etc., New York. 800 pp., xvi-357. Containing 54 Illustrations with 24 Charts and Tables. Mostly Original. Third Edition. Philadelphia: F. A. Davis Company, 1903.

It has been our pleasure to review the first and second editions of Dr. Fischer's book in these columns, and on those occasions we pointed out in detail the features of the work which commend themselves to the practical physician. The third edition bears evidences of a complete revision, some parts being entirely rewritten in the light of the latest advances in infant feeding. As the book stands now, it not only presents a great mass of information on the feeding of infants in health and disease, but it also contains a conservative and well balanced estimate of the value of the different methods of artificial feeding. There are several new chapters.

A Manual of the Practice of Medicine. Sixth Edition, Thoroughly Revised, Enlarged and Reset. By A. A. STEVENS, A. M., M. D., Professor of Pathology in the Woman's Medical College of Pennsylvania, etc. Postoctavo of 556 Pages, Illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Flexible Leather, $2.25 net.

Stevens's *Manual* still holds its popularity with medical students. The sixth edition shows some changes, the most extensive being in the chapter devoted to diseases of the digestive system.

BOOK NEWS.

Our readers will be glad to learn from the list of publishers' announcements given in this issue of the *Journal* that a treatise on Röntgen ray diagnosis and therapy, by Dr. Carl Beck, of New York, is soon to be published. Dr. Beck's important contributions to our knowledge of these subjects, many of which have been published in our columns, have made him widely known to the profession as a surgeon in the highest degree competent to write upon them systematically.

It will be seen by our announcements that Dr. Julius Salinger, formerly of the *Philadelphia Medical Journal*, is soon to bring out a translation of Dr. Wilhelm von Leube's treatise on medical diagnosis, to which he will add annotations. We are glad to observe that Dr. Salinger's literary activity is to be so worthily continued.

We have had the privilege of examining many of the advance sheets of a remarkable book, entitled *The Surgery of the Heart and Lungs,* by Dr. Benjamin Merrill Ricketts, the well known Cincinnati surgeon. The book, we understand, is to appear shortly. In many respects it is unique, and we feel confident that it will appeal decidedly to the appreciation of the profession.

The continued popularity of the *Handbook of Surgical Operations,* by Sir Frederick Treves and Mr. Jonathan Hutchinson, Jr., is shown by the fact that a new edition is announced by the publishers. We understand that this edition is an abridgment of Sir Frederick Treves's *Manual of Operative Surgery.*

The forthcoming treatise on radiotherapy, by Dr. Leopold Freund, of Vienna, will doubtless prove a very valuable addition to our present scanty store of textbooks on the subject. A point to be made in the book, as we understand, is that of explaining the subject so clearly and concisely that any ordinarily well informed medical man will have no difficulty in following the technical details. It is to treat of the elements of electricity, high frequency treatment, the x ray method, Becquerel rays (radium), and treatment with heat and light rays (elements of light physics). There will be appended to it some notes on instrumentation, with illustrations, by Clarence A. Wright, of London. The translation from the German is by Dr. G. H. Lancashire, of Manchester, England.

Dr. Carl von Noorden, of Frankfort-on-Main, is so well known in medical literature that his forthcoming clinical treatises on the disorders of metabolism and nutrition, written in conjunction with Dr. Carl Dapper, will surely command the interest of the medical profession in the United States.

It will be noted with satisfaction that the seventh volume of the American edition of Nothnagel's *Practice of Medicine,* devoted to tuberculous disease, is soon to be issued. The author, Dr. Cornet, is widely known for his solid contributions to our knowledge of the subject, and it is not to be doubted that Dr. James's additions will prove of substantial value.

A new work by Nothnagel himself, on diseases of the intestines and peritonæum, edited by Dr. Rolleston, of London, is announced as soon to be published. We understand that the editor's additions include sections on intestinal sand, sprue, ulcerative colitis, and idiopathic dilatation of the colon.

It is a subject for congratulation that so widely recognized an authority on epilepsy as Dr. Spratling, of the Craig Colony, should have undertaken to prepare a book on that disease. We have published many of Dr. Spratling's contributions to periodical literature, dealing with the subject of epilepsy, and we are sure that our readers will welcome his book when it appears. We understand that it is to be exhaustive, including the psychological and the legal aspects of the subject.

Dr. Joseph McFarland, of Philadelphia, is one of the few writers on recondite topics in pathology that seem to possess the faculty of making themselves thoroughly understood by the general run of medical men. We may expect, therefore, that his forthcoming textbook, announced in this issue of the *Journal,* will at once meet with popularity. But Dr. McFarland's lucidity of statement is by no means his only strong point; his grasp of what is known or believed in pathology is amply shown in his previous writings.

Dr. Howard A. Kelly, of Baltimore, it will be remembered, made something of a stir not long ago by announcing that the French were entitled to be accorded to priority in the assignment of importance to disease of the vermiform appendix, fortifying his position by citations from old writings. It may be imagined that Dr. Kelly ran across these old records in preparing his book on the vermiform appendix and its diseases, now announced. The book is to be a large one, and we learn that the pictorial illustrations will be of unusual beauty.

It has been our privilege at times to present our readers with articles by Dr. L. Napoleon Boston, of Philadelphia. We are glad to see it announced now that Dr. Boston will soon give us a practical manual of clinical and laboratory diagnosis. The work, we are informed, will deal thoroughly with the subject of examinations of the various secretions and excretions and of animal parasites.

Among the moderate-sized books on surgery, Dr. Frederick R. Griffith's handbook, announced as soon to be published, seems likely to take a prominent place. The author has been a frequent contributor to our columns, and his articles have all been pithy and readable.

The textbook of materia medica, by Dr. Robert A. Hatcher, of New York, and Dr. Torald Sollmann, of Cleveland, soon to appear, deals with subjects that of late years have been somewhat neglected by medical writers, however fully they may have been treated of by the pharmacists. We may look for a treatise of great value to physicians.

Boston is not prolific in medical books, but when a Bostonian produces one it is extremely likely to be a good one. A textbook of legal medicine, by Dr. Frank W. Draper, is now announced, and there can be no doubt that the author's long attention to forensic medicine, well known throughout the country, will be found to have enabled him to produce a most serviceable book.

Among the monographs announced, one on diseases of the liver, by Dr. Humphrey D. Rolleston, of London, will probably prove to be of exceptional value.

A member of our staff, Dr. G. A. De Santos Saxe, is about to bring out a new guide to urinary examination. Dr. Saxe's literary ability makes it assured that his book will be more than usually easy to follow.

We congratulate Dr. Warren Stone Bickham on the fact that so short a time has elapsed since the original publication of his work on operative surgery that practically no changes are said to have been called for in the second edition, now announced for speedy publication.

PUBLISHERS' ANNOUNCEMENTS.

D. Appleton & Co., New York:

Röntgen Ray Diagnosis and Therapy. By Carl Beck, Professor of Surgery in the New York Postgraduate Medical School and Hospital. 324 Illustrations. Cloth, $4.00.

Medical Diagnosis. By Wilhelm von Leube, Würzburg. Translated and edited with annotations, by Julius L. Salinger, M. D., Philadelphia. Five Colored Plates and 74 Other Illustrations. Cloth, $5.00. (Sold only by subscription).

The Grafton Press, New York:

The Surgery of the Heart and Lungs. A History and Résumé of Surgical Conditions found therein and Experimental and Clinical Research in Man and Lower Animals, with reference to Pneumonotomy, Pneumonectomy, Bronchotomy, Cardiotomy, and Cardiorrhaphy. By Benjamin Merrill Ricketts, Ph. B., M. D., Cincinnati. One Hundred Illustrations Cloth, $5.00 (Sold only on subscription)

W. T. Keener & Co., Chicago:

Veterinary Pathology and Therapeutics. Vol. I. By Friedberger and Frohner. (Ready May 1st).

The Therapeutics of Mineral Springs and Climates. By I. Burney Yeo, M. D., F. R. C. P. 12mo. 760 pages. Cloth, $3.50. (Ready May 1st).

New Methods of Treatment. By Dr. J. Laumonier. Translated by H. W. Syers, M. A., M. D., Cantab. Cloth, $2.50. (Ready May 1st).

Handbook of Surgical Operations. By Sir Frederick Treves, Bart., F. R. C. S., and Mr. Jonathan Hutchinson, Jr., F. R. C. S., new edition. Cloth, $2.50. (Ready May 1st).

A New Series of Practical Handbooks on Treatment. Publication to be begun in June.

The Rebman Company, New York:

Radiotherapy. By Leopold Freund, of Vienna. (Ready now). Cloth, $5.00; half leather, $6.00.

W. B. Saunders & Co., Philadelphia:

Nothnagel's Practice of Medicine. Vol. VII of the American edition. Tuberculosis and Acute General Miliary Tuberculosis. By Dr. G. Cornet, of Berlin. Edited, with additions, by Walter B. James, M. D., of the College of Physicians and Surgeons, New York. Cloth, $5.00; half morocco, $6.00.

Diseases of the Intestines and Peritonæum. By Hermann Nothnagel, of Vienna. Edited, with additions, by Humphrey D. Rolleston, M. D., F. R. C. P., of St. George's Hospital, London. Cloth, $5.00; half morocco, $6.00.

Epilepsy and Its Treatment. By William P. Spratling, M. D., Superintendent of the Craig Colony for Epileptics, at Sonyea, N. Y.

A Textbook of Pathology. By Joseph McFarland, M. D, of the Medicochirurgical College, Philadelphia.

The Vermiform Appendix and Its Diseases. By Howard A. Kelly, M. D., of the Johns Hopkins University, Baltimore.

Clinical Diagnosis. By L. Napoleon Boston, M. D., of the Medicochirurgical College, Philadelphia.

A Handbook of Surgery. By Frederic R. Griffith, M. D., of New York.

A Textbook of Materia Medica, including Laboratory Exercises in the Histological and Chemical Examination of Drugs. By Robert A. Hatcher, Ph. G., M. D., of Cornell University Medical School, New York, and Torald Sollmann, M. D., of the Western Reserve University, Cleveland.

A Textbook of Legal Medicine. By Frank W. Draper, M. D., of Harvard University Medical School, Boston.

Diseases of the Liver. By Humphrey D. Rolleston, M. D., F. R. C. P., of St. George's Hospital, London.

Examination of the Urine. By G. A. De Santos Saxe, Pathologist to the Columbus Hospital, New York.

A Textbook of Operative Surgery. By Warren Stone Bickham, M. D., of the College of Physicians and Surgeons, New York. Second edition. Cloth, $6.00; sheep or half morocco, $7.00.

E. B. Treat & Co., New York:

Clinical Treatises on the Disorders of Metabolism and Nutrition. Part V, concerning the Effects of Saline Waters (Homburg and Kissingen) on Metabolism. By Dr. Carl von Noorden, Frankfort-on-Main, and Dr. Carl Dapper. Price, $1.00.

BOOKS, PAMPHLETS, ETC., RECEIVED.

Transactions of the Obstetrical Society of London, Vol. XLV, for the Year 1903. With a list of officers, fellows, etc. Part IV, for October, November, and December. Edited by Amand Routh, M. D., Senior Secretary, and Herbert R. Spencer, M. D. London: Published by the Society at their Library, 20 Hanover Square, W. 1903. [Price Ten Shillings].

The Prevention of Consumption. By Alfred Hillier, M. D., C. M., B. A., Secretary to the National Association for the Prevention of Consumption (London); Member of the Council of the International Association for the Prevention of Tuberculosis (Berlin); Visiting Physician to the London Open-Air Sanitorium. Revised by Professor R. Koch. With Illustrations. London, New York, and Bombay: Longmans, Green, & Co., 1903.

Fieber und Fieberbehandlung. Von Dr. Bergel, Arzt in Inowrazlaw. Berlin: S. Karger. 1904.

Zur Psychopathologie des Alltagslebens. (Ueber Vergessen, Versprechen, Vergreifen, Aberglaube und Irrtum) Von Professor Dr. Sigm. Freud, in Wien. Berlin: S. Karger, 1904.

Festschrift zum sechzigsten Geburtstage von Robert Koch. Herausgegebeen von seinen dankbaren Schülern. Mit 8 Tafeln, 1 Plan, und 79 Abbildungen im Text. Jena: Gustav Fischer. 1903. [Preis, 20 Mk.].

Anæsthesia in Dental Surgery. By Thomas D. Luke, M. B., F. R. C. S. E., Anæsthetist to the Dental Hospital, the Deaconess Hospital, and Instructor in Anæsthetics to the University Surgical Classes, Royal Infirmary, Edinburgh. With Twenty-eight Illustrations. New York: Rebman Company, 1903.

Die nasalen Reflexneurosen und die normalen Nasenreflexe. Von Dr. A. Kuttner. Berlin: August Hirschwald, 1904.

Experimentelle Untersuchungen zur Lehre von der Atrophie gelähmter Muskeln. Von Dr. Friedrich Jamin, Assistent an der medizinischen Klinik. Mit 13 Kurven. Aus der medizinischen Klinik zu Erlangen. Jena: Gustav Fischer, 1904. [Preis, M. 5].

Manual of Clinical Microscopy and Chemistry. Prepared for the Use of Students and Practitioners of Medicine. By Dr. Hermann Lenhartz, Professor of Medicine and Director of Hospital at Hamburg, etc. Authorized Translation from the Fourth and Last German Edition, with Notes and Additions, by Henry T. Brooks, M. D., Professor of Histology and Pathology at the New York Postgraduate Medical School and Hospital, etc. With 148 Illustrations in the Text and 9 Colored Plates. Pp. xxxii-412. Philadelphia: F. A. Davis Company. [Price, Cloth, $3.00].

Transactions of the Ninth Annual Meeting of the American Laryngological, Rhinological, and Otological Society, held in Lexington, Ky., April 30, May 1 and 3, 1903. New York: Published by the Society, 1903.

Transactions of the Vermont State Medical Society for the year 1903. Annual Meeting for 1904, at Rutland, October 13th and 14th. Burlington: Free Press Association, 1903.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE; SECTION IN PÆDIATRICS.

Meeting Held on March 10, 1904.

Dr. D. Bovaird, Jr., in the Chair.

The Limitations of Chemistry in Infant Feeding was the title of a paper read by Dr. Henry Dwight Chapin (see page 776).

Dr. Schwartz, in opening the discussion, stated that the German calorimetric method of feeding determined not "what," but "how much" should be given during twenty-four hours, in order to avoid underfeeding. In investigating calorimetrically many of our present formulæ he had found that children were being underfed. By careful weighings of normal breast fed infants before and after nursing, and by chemical examination of the mother's milk for quantity of fat, sugar, and proteids, it was possible to establish a calorimetric table of feeding. It had been found that 1 gramme of proteid yielded 4.3 of calories; 1 gramme of fat, 9 of calories; 1 gramme of sugar, 4.3 of calories; and one litre of mother's milk offered 625 of calories. During the early period of lactation this was slightly increased. Hence when milk diluted with water (1 to 3) was given as a food, the chemical estimation of fat, sugar, and proteids, and conversion into terms of calories fixed the amount to be given per diem. It should be our desire to give cow's milk of equivalent caloric value. In using buttermilk the Germans found the chemical constituents and their caloric strength fixed the amount to be given to the infants. By constant use of one formula for any age, underfeeding would result, wherefore he believed it advisable to combine the percentage and calorimetric methods.

Dr. Carmalt asked why it was necessary to give one fifth more of cow's milk, as compared with mother's milk, if merely desirable to secure a calorimetric equivalent.

Dr. Schwartz replied that this was probably due to greater caloric waste in the stools where cow's milk was made the infant food.

Dr. Bovaird stated that infant feeding had been largely developed through chemistry. He considered that Dr. Chapin had pointed out gaps in our knowledge rather than any true imperfections of our methods. It appeared to him as a problem of too little chemistry. Recognizing the differences between casein of cow's milk and that of human milk, we could not imitate mother's milk, even if chemistry permitted an exact determination of the percentage of fat, sugar, and proteids in cow's milk. While analyses did not permit us to approximate more closely, we must be dependent on the breast for the only correct food. "Chemical feeders" were inconsistent in trying to imitate Nature by giving the infant quantities similar to that offered by the mother. Feeding on this principle, with milk as nearly like mother's chemically as possible, it was probable that nine out of ten children did not digest it. To avoid this the cow's milk was modified to some percentage formula, for example.

fat, 3 per cent.; sugar, 6 per cent.; proteid, 1 per cent. This offered a percentage that would shame a mother. During lactation human milk did not increase, but decreased in strength. In artificial feeding it was necessary to work on just the reverse principle, until finally the infant received mixtures which were practically impossible for human breasts.

The trouble lay in securing "feedings to fit." Chemistry, by assisting us to reach this goal, deserved continued study until, our deficiences removed, we might apply its principles to a more human modification of milk.

Dr. **Gallant** said that the key to infant feeding was to let the baby "have what it wants and needs." If chemistry could work out the effect of each ingredient of milk on children so that it would be possible to tell when the feeding mixture contained too much of one or another ingredient, it would offer valuable aid to the pædiatrician. The mixtures of general practitioners were usually unfit for use, and did not represent any fixed percentages. As mixtures did not really establish percentages, it was more important to study what the child needed and wanted than to follow textbook formulæ.

Dr. **Nicoll** stated that a normal child free from taint of patent medicines or from indigestion of mother's milk would thrive on chemical percentage milk. There were many, however, who needed to be studied as individuals and not as subjects for formulæ. He reported, as an example, the following case: A healthy child fed at the breast one month. As the mother was tuberculous, breast feeding was discontinued and condensed milk substituted. In six weeks an eczema appeared, and condensed milk was stopped. The mother gave this two months and a half old child raw cow's milk. The stools showed perfect digestion, but the child did not appear to gain in weight rapidly after two months and a half of feeding, and the movements were increased to seven each day. Modified milk, fat, 3 per cent.; sugar, 6 per cent.; proteid, 1 per cent., with barley water as a diluent, started up a diarrhœa, but did not better the child's general condition. Fat, 4 per cent.; sugar, 7 per cent.; proteid, 2 per cent., was tried for six weeks with no results, save the development of an ileocolitis. As a sort of last resort the mother was advised to take the cream off a quart of milk and to feed the child with four ounces every three hours. Within three days the diarrhœa had disappeared and the child began to gain weight. At nine months it weighed 19 pounds, was free from evidence of rickets, and was now a healthy child of two years.

Dr. **Pisek** thought it necessary to take all that the chemist gave, but to consider, in addition, the physical properties of milk, as for example, the differences of curds. In figuring out the problem as to how to secure the digestion of curds, the child should not be regarded as a test tube, but as an individual requiring more than formulæ or calories.

Dr. **Chapin**, in closing the discussion, called attention to the fact that he desired merely to show the "limitations of chemistry." He wished to ask if chemistry would tell us the difference between a diamond and a piece of charcoal. They were chemically the same, but we could distinguish these two forms of carbon outside of chemistry. Caseins were essentially the same, and purely chemical studies would not suffice to distinguish them. The biology of milk must be investigated. Chemical assays were imperfect, but as far as they went, they gave much aid, and showed the limitations of nutrition. Chemists tried to do more than this by attemping to lay down laws of feeding. Percentages existed on paper only, not in the milk pot. The casein of cow's milk was intended for digestion in four stomachs and a long intestine, hence the biology and physiology of the cow demanded consideration. These were factors chemists did not weigh. Chemistry simply showed the general value of a food. The pædiatrician must go beyond this and ascertain the physiological adaptitude of the food and its digestibility for a patient.

Official News.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending April 16, 1904:

Blanchard, Robert M., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, to take effect on or about April 20, 1904.

Ford, Clyde S., First Lieutenant and Assistant Surgeon. Granted leave of absence for twenty days, to take effect April 14, 1904.

Mabee, James I., First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence.

Miller, Reuben B., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months from April 6, 1904.

Moseley, Edward B., Lieutenant-Colonel and Deputy Surgeon-General. Leave of absence extended three months, with permission to go beyond the sea.

Powell, William A., First Lieutenant and Assistant Surgeon. Relieved from duty as surgeon on transport *Thomas*, to take effect on arrival of transport at Manila, and ordered to report to the Commanding General of the Division of the Philippines for duty.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending April 16, 1904:

Biddle, C., Surgeon. Detached from the *Lancaster* and ordered to the Asiatic Station, via the *Solace*, for duty as fleet surgeon on board the flagship.

Campbell, F. E., Assistant Surgeon. Detached from the Naval Museum of Hygiene and Medical School, Washington, D, C., and ordered to the *Newport*.

De Vries, J. C., Acting Assistant Surgeon. Resignation accepted, to take effect on April 11, 1904.

Drake, N. H., Surgeon. Detached from the *Maine* and ordered to the *Lancaster*.

Gill, J. E., Assistant Surgeon. Detached from the Naval Museum of Hygiene and Medical School, Washington, D. C., and ordered to the *Kearsarge*.

Green, E. H., Medical Inspector. Detached from duty as fleet surgeon of the Asiatic Fleet and ordered home to await orders.

Kennedy, J. T., Passed Assistant Surgeon. Detached from the Naval Academy, April 26th, and ordered to Washington, D. C., for duty, to accompany the marine detachment to the Louisiana Purchase Exposition, St. Louis, Mo.

Kite, I. W., Surgeon. Detached from the Navy Yard, Norfolk, Va., and ordered to the *Maine*.

Lumsden, G. P., Surgeon. Detached from the Naval Recruiting Station, Chicago, Ill., and ordered to the Navy Yard, Norfolk, Va.

McCullough, F. E., Passed Assistant Surgeon. Ordered to the *Wisconsin*.

Odell, H. E., Passed Assistant Surgeon. Detached from the *Wheeling* and ordered to the *Adams*.

Parker, E. K., Passed Assistant Surgeon. Detached from the *Adams* and ordered to the *Wheeling*.

Smith, C. G., Assistant Surgeon. Detached from the *Newport* and ordered to await orders.

Wise, A. H., Acting Assistant Surgeon. Detached from the Naval Hospital, Naval Home, Philadelphia, Pa., and ordered to the Naval and Marine Rendezvous, Chicago, Ill.

Woodward, J. S., Assistant Surgeon. Detached from the Naval Proving Grounds, Indian Head, Md., and ordered to the *Brooklyn*.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from April 9 to April 15, 1904:

Place.	Date.	Cases.	Deaths.
Smallpox—United States.			
California—Los Angeles	Mar. 26-April 2	2	
California—San Francisco	Mar. 28-April 3	1	
Illinois—Chicago	April 2-9	8	1
Illinois—Danville	April 2-9	4	
Iowa—Des Moines	April 2-9	1	
Louisiana—New Orleans	April 2-9	2	
		One imported.	
Maryland—Baltimore	April 2-9	1	
Michigan—Detroit	April 2-9	1	
Michigan—Grand Rapids	April 2-9	2	
Missouri—St. Louis	April 2-9	11	
New Hampshire—Manchester	April 2-9	1	
New Jersey—Camden	April 2-9	2	
New Jersey—Trenton	April 2-9	2	
New York—Buffalo	April 2-9	2	
Ohio—Cincinnati	April 1-8	3	
Ohio—Cleveland	April 1-8	3	
Ohio—Dayton	April 2-9	4	1
Pennsylvania—Johnstown	April 2-9	1	
Pennsylvania—Philadelphia	April 2-9	20	5
Pennsylvania—Pittsburgh	April 2-9	5	1
		One imported.	
South Carolina—Charleston	April 2-9	4	
Tennessee—Nashville	April 2-9	2	
Wisconsin—Milwaukee	April 2-9	2	
Smallpox—Foreign.			
Africa—Cape Town	Feb. 6-13	3	
Argentina—Buenos Ayres	Feb. 1-29		58
Austria—Prague	Mar. 12-19	1	
Brazil—Rio de Janeiro	Mar. 6-13	45	30
Canada—Winnipeg	Mar. 26-April 2	4	
China—Hongkong	Feb. 21-28		2
China—Shanghai	Feb. 27-Mar. 5		6
Colombia—Barranquilla	Mar. 21-27		1
France—Paris	Mar. 19-26	16	1
Great Britain—Dundee	Mar. 12-19	4	
Great Britain—Edinburgh	Mar. 19-26	5	2
Great Britain—Glasgow	Mar. 25-April 1	18	2
Great Britain—Leith	Mar. 19-26	10	1
Great Britain—London	Mar. 19-26	54 *	
Great Britain—Manchester	Mar. 19-26	12	
Gt. Britain—Newcastle-on-Tyne	Mar. 19-26	3	
Great Britain—Nottingham	Mar. 19-26	11	1
Great Britain—South Shields	Mar. 19-26		1
India—Karachi	Mar. 6-13	14	3
Japan—Nagasaki Ken	To Mar. 8	27	
Mexico—Vera Cruz	April 2-9	1	
Russia—St. Petersburg	Mar. 12-19	9	5
Smallpox—Insular.			
Philippine Islands—Manila	Feb. 13-20		1
Yellow Fever.			
Brazil—Rio de Janeiro	Mar. 6-13	6	1
Ecuador—Guayaquil	Mar. 12-19		4
Mexico—Vera Cruz	April 2-9	1	
Cholera—Foreign.			
India—Madras	Mar. 5-11		2
Turkey in Asia—Basra	Mar. 26-31	5	7
Plague.			
Africa—Cape Colony	Mar. 5-12	6	3
Africa—Transvaal, Johannesburg	Mar. 20		8
Australia—Sydney	Mar. 10	1	
Brazil—Rio de Janeiro	Mar. 6-13	4	1
Egypt—Port Said	Mar. 18	1	
Formosa	Feb. 29-Mar. 6	96	49
Mauritius	Mar. 3-10	3	

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* Erroneously reported April 9 as 84.

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending April 14, 1904:

Greene, J. B., Passed Assistant Surgeon. Granted extension of leave of absence, on account of sickness, for sixty days from February 25, 1904.

Gregory, G. A., Acting Assistant Surgeon. Granted leave of absence for three days from April 12th.

Jackson, J. M., Acting Assistant Surgeon. Granted leave of absence for five days from April 20th.

Rodman, J. C., Acting Assistant Surgeon. Granted six days' leave of absence from April 12th.

Stiles, C. W., Chief of Division of Zoology. Detailed to attend meeting of Medical Association of Mississippi at Jackson, Miss., April 20th-22nd.

Ward, W. K., Assistant Surgeon. Granted extension of leave of absence for four days from April 7th.

Warren, B. S., Assistant Surgeon. Granted extension of leave of absence for one day. April 11, 1904.

Board Convened.

Board convened to meet at Stapleton, N. Y., April 18, 1904, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Surgeon Preston H. Bailhache, chairman. Passed Assistant Surgeon A. C. Smith, recorder.

Births, Marriages, and Deaths.

Born.

Rogers.—In Chicago, Illinois, on Saturday, April 9th, to Dr. Daniel Weston Rogers and Mrs. Rogers, a daughter.

Married.

Berlin—Koen.—In Mannington, West Virginia, on Wednesday, April 6th, Dr. W. C. Berlin, of Cleveland, Ohio, and Miss Bessie Lee Koen.

Baughman—Reeve.—In Washington, D. C., on Wednesday, April 6th, Dr. Greer Baughman, of Richmond, Va., and Miss Wilhelmina Agnes Reeve.

Cummiskey—Stiles.—In Washington, D. C., on Thursday, April 7th, Dr. Edward Francis Cummiskey and Miss Marcella Stiles.

De Kay—Waldorf.—In Middletown, N. Y., on Wednesday, April 6th, Dr. Julius Miner De Kay and Miss Della Marie Waldorf.

Savin—Sweet.—In Baltimore, Maryland, on Wednesday, April 6th, Dr. Thomas Littleton Savin and Dr. Jessie Ella Sweet.

Vanderbeek—Dunkerly.—In Paterson, New Jersey, on Thursday, April 14th, Dr. Andrew Vanderbeek and Miss Mabel Dunkerly.

Died.

Anred-Nordin.—In New York, N. Y., on Monday, April 11th, Dr. Gosta Anred-Nordin, in the twenty-fifth year of his age,

Bissell.—In New York, N. Y., on Sunday, April 10th, Dr. Philip Bissell, in the twenty-ninth year of his age.

Buckley.—In Prescott, Canada, on Sunday, April 3rd, Dr. William P. Buckley.

Clark.—In Vanceburg, Kentucky, on Monday, April 4th, Dr. T. S. Clark, in the fifty-seventh year of his age.

Griffin.—In Covington Georgia, on Monday, April 4th, Dr. George C. Griffin, in the seventieth year of his age.

Monmonier.—In Franklin, Maryland, on Wednesday, April 6th, Dr. J. Carroll Monmonier, in the fifty-eighth year of his age.

Mulherin.—In Philadelphia, Pennsylvania, on Thursday, April 7th, Dr. William J. Mulherin, Jr.

Ray.—In Buckeye, Kentucky, on Friday, April 8th, Dr. William Ray, in the seventieth year of his age.

White.—In Bemis, Tennessee, on Monday, April 4th, Dr. R. C. White, in the fifty-fifth year of his age.

New York Medical Journal
AND
Philadelphia Medical Journal.
CONSOLIDATED.

A Weekly Review of Medicine

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Original Communications.

ACCURACY IN X RAY DIAGNOSIS.*

By RUSSELL H. BOGGS, M. D.,
PITTSBURGH, PA.

The field of radiography has not been exhausted. Much still remains to be done in perfecting and standardizing the technics before the best results can be obtained. There can be no doubt that still much improvement awaits us, and the rapid rate at which the accuracy of x ray work is progressing is surprising. The proper management of the work involves attention to a number of details, and the best methods are attained only by long and careful study. The rapid advancement of radiotherapeutic work has taken up a greater part of our time, and many details in radiography have been overlooked. In order to learn what details of technique produce the best results, a careful record should be kept, and when reports are made more of the minute process should be emphasized. Another great mistake is that much of the x ray work is done in a hurried manner, and some operators are never able to produce two negatives of the same standard. This certainly shows that a careful study of the apparatus and technique has not been made.

Without having mastered the detail in the process, nothing but unsatisfactory results can be expected. The time has come for accuracy along this line of work, as well as in other branches of science. Many cases in the past have been operated on unnecessarily, due to the lack of skill of some inexperienced radiographer. To-day when such a mistake occurs, it is not blamed on the fallacies of x ray, but on the operator who makes a diagnosis without having a radiograph showing sufficient detail to give a decided opinion, or without making a careful study of the plate. It is not necessary to cite a number of cases to illustrate the above statement, as I have no doubt each of you has had cases referred after they had been operated on, in which a hasty diagnosis had been made from some poor negative. It is certainly essential that there should be a standard for a normal radiograph of every part of the body, and that unless the plate reaches this standard no diagnosis should be made.

There are so many points which might be brought up, but I only want to mention one in regard to developing the properly exposed plate, and that is, the fact that so many operators seem to develop their plates in such a manner as to obtain only surface development. It seems to have been universally adopted that the rapid and slow emulsion plates are acted upon by the x rays in about the same manner and degree, and that the best plate is the one which has a thick coating. It should also be understood that the silver in the emulsion is affected the same through the entire thickness according to the density between it and the focus tube, and that, as the density varies so greatly in the different parts, in order to affect the greatest amount of silver with the developer, the process must necessarily be slow. Then in order to obtain a slow developer which gives sufficient contrast as well as detail and also leaves a clear negative, I have found that it is necessary to use one in which the reducer is at least twice as strong as the usual formula, with about one fifth of the amount of alkali.

I have used many different developers, but cannot see any great advantage that one has over the other. The following gives very good results:

Edinol	1 drachm.
Sodium sulphite (dry)	1 drachm.
Sodium carbonate (dry)	1 drachm.
Water	10 ounces.

With such a developer the image will appear slowly, the high lights, half-tones, and shadows appear by degrees, and as the development proceeds, it is often necessary to add more alkali, but this depends upon the exposure. When developing, it must be borne in mind that we have a plate which, according to the density of the part, is overexposed, normally exposed, and underexposed. These conditions are always found in x ray work, and therefore the development is an entirely different process from ordinary photography and ordinarily cannot be successfully done by an ordinary photographer.

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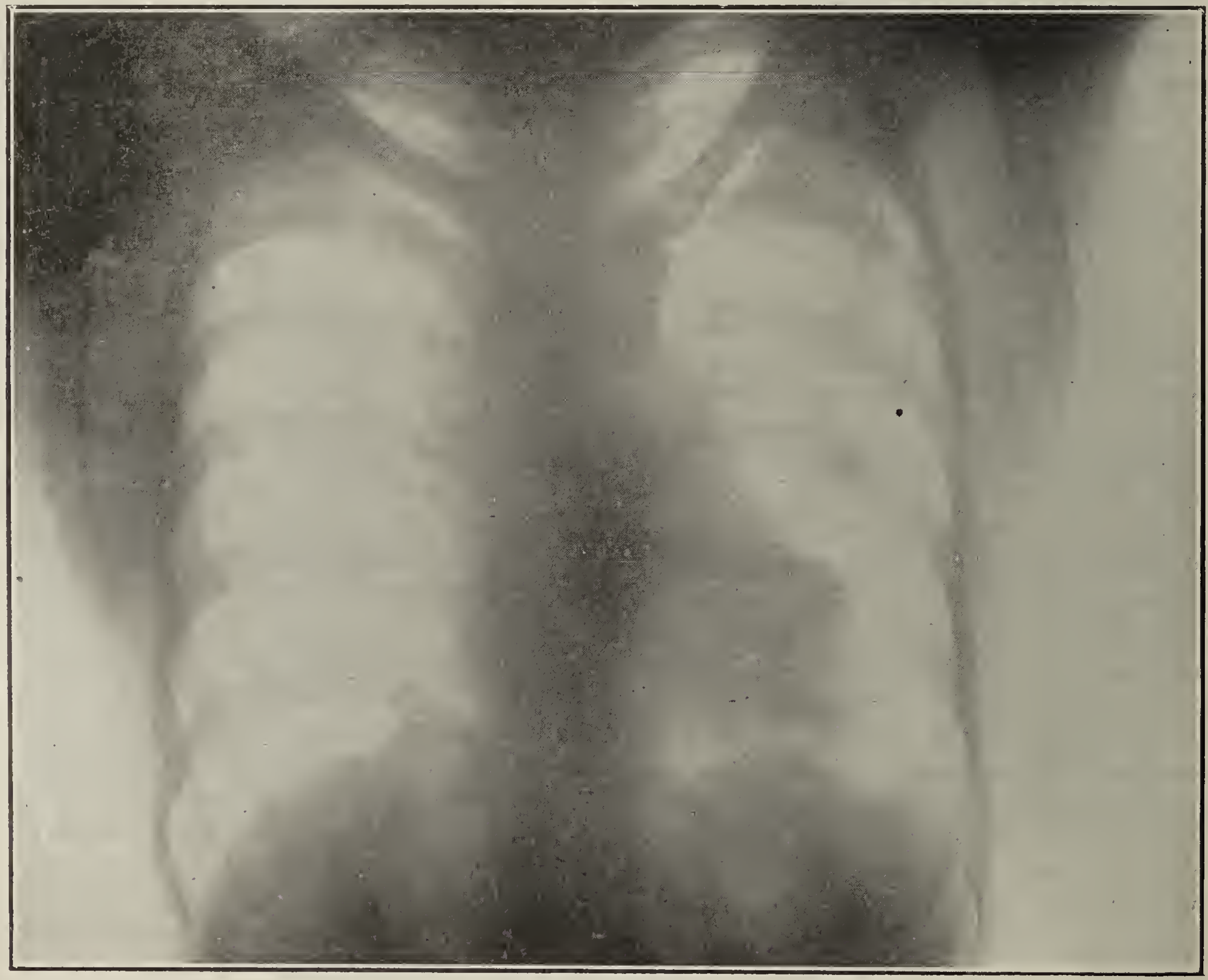
* Read before the American Röntgen Ray Society, December 10, 1903.

A physician cannot make a diagnosis until he is familiar with a normal radiograph of the part at different ages. He must be familiar with the shadows cast by the normal parts in different positions, and then he will at once see if the picture is a distorted or correct view of the part under examination. To-day, when the radiographer shows that a foreign body is present, he has done very little to assist the surgeon, unless he is able accurately to locate its depth. Exact location of a foreign body in the tissues is done by a mathematical process, and is, therefore, accurate, if the process is carried out properly. There are a number of processes, but each requires the making of two radiographs with the tube in different positions.

Different operators use different methods and each, being familiar with his own process, arrives at the same accurate location. I have had a radiographic table made with a modified Mackenzie-Davidson localizer attached, which is so arranged that it is very easy to figure out the calculations quickly.

In a normal radiograph of the chest, the first thing you will see is the three vertical zones—one light in the centre, caused by the heart and mediastinal contents, and two dark, one on each side of the light area, caused by the lung tissue being less dense. The pulmonary zones are crossed by the ribs, and in many radiographs the structure of the bone can be seen. On close examination usually the smaller bronchi are visible. In all radiographs which are taken during an inspiration the diaphragm and upper border of the liver are shown. In examining the lungs it is best to make two radiographs, one anteriorly, the other posteriorly; and when examining the heart and mediastinal contents, not only anterior and posterior pictures are necessary, but also a radiograph with the tube placed at an angle to the mediastinal contents, and in this way a shadow of a diseased gland may be obtained, which would otherwise be obstructed by the vertebræ. When examining the developed plate, notice the position of the shoulder joints, compare the clavicles and ribs, and notice if the curve of the diaphram is normal.

Then examine the respiratory and circulatory organs. Notice the degree of clearness of the pulmonary images, and do not mistake a sclerosis of a bronchial tube for a consolidation, as has often been done. Another mistake which occurs

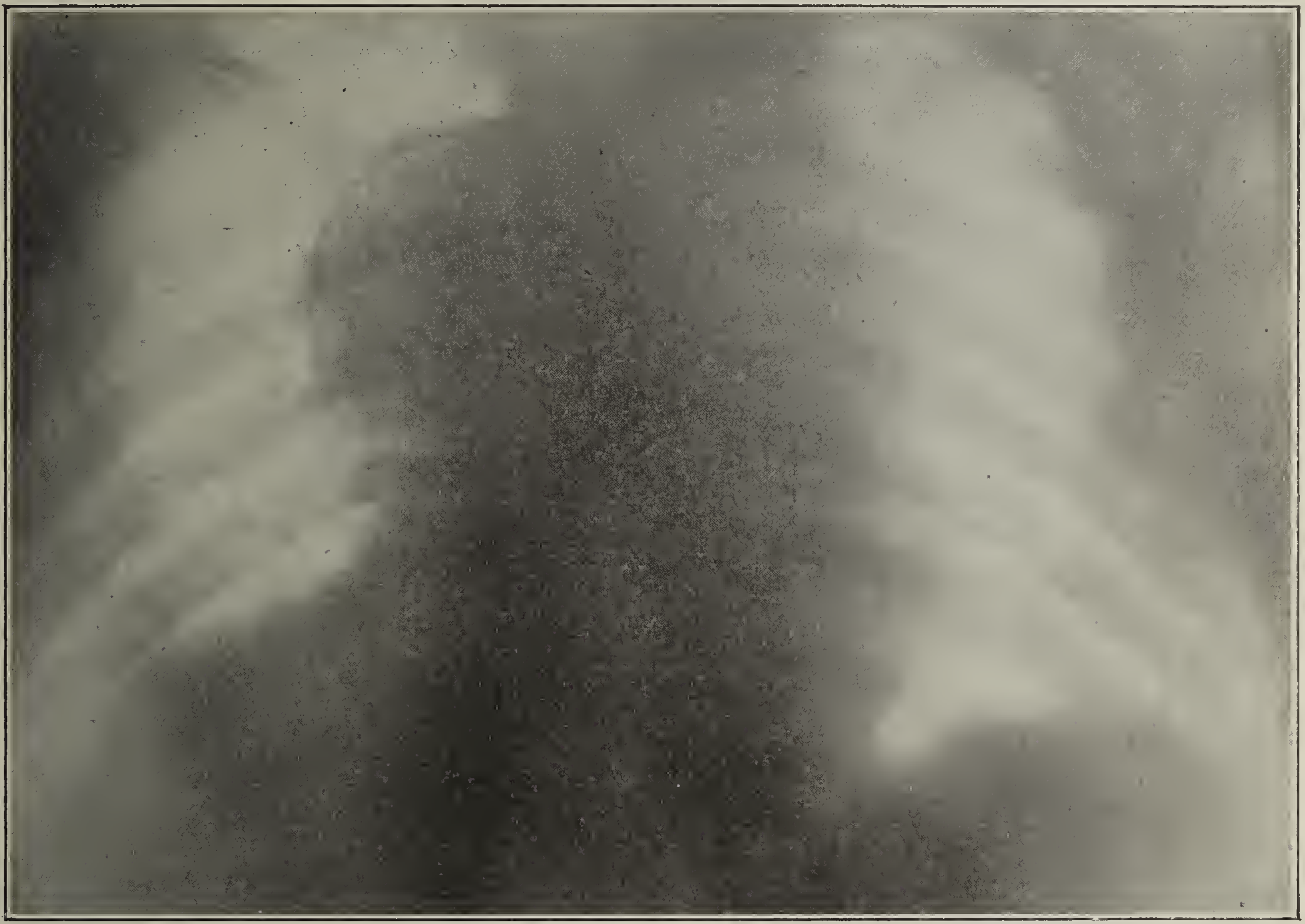


Infiltration of lungs.

frequently in examining a solidified lung, is in diagnosticating a small amount of the normal lung tissue which is surrounded by the solidification, as a cavity. Cavities in the lung, no matter how small or whether filled with air or pus, can be shown, and the depth located, by the making of two radiographs with the tube in different positions, in the same manner as in locating a foreign body. If the lung tissue is slightly œdematous, it is a much more difficult task to obtain a radiograph in a short exposure.

Finally comes the examination of the heart and the aortic arch. The position and size of the heart should be carefully noted, as it may be displaced upward by distention of the stomach, or laterally by fluid or a growth in the pleural cavity; one of the most important uses of x ray in the chest is for the diagnosis of aneurysm. It not only diagnosticates the aneurysm, but shows whether it is sacculated or fusiform, and thereby greatly aids in deciding upon the treatment. In the following case, which I reported in an article published in the *Journal of Advanced Therapeutics*, October, 1902, there had been a diagnosis of aneurysm made and the picture was taken to ascertain whether it was fusiform or sacculated. The question was that, if it was sacculated the surgeon, Dr. McGrew, intended to place needles in the sac. The radiograph showed the aneurysm to be fusiform, with a certain amount of fibrin deposits in the sac. The patient had been to Johns Hopkins, and there had taken the gelatin treatment. It would have been extremely interesting to have had a radiograph before the gelatin treatment was given.

Another case was examined by x ray, to ascertain whether there was an abdominal aortic aneurysm, as had been previously diagnosticated. The radiograph showed the necessary detail, but no unusual densities that would indicate the presence of an aneurysm. The picture showed the heart to be of enormous size. After close study of the radiograph and careful examination of the patient, a diagnosis of a complicated valvular disease was made.


Aortic aneurysm.

A third case was referred by Dr. E. B. Haworth for an x ray examination with the following history: The case was one diagnosticated as aneurysm of the arch of the aorta by physicians of considerable ability and prominence, and was under treatment for the same for about two years. The first and most prominent symptom was interference with return circulation from the head and upper extremities. Collateral circulation from these regions was accomplished through the superficial veins of the chest and abdomen, which became much enlarged, forming a pronounced caput Medusæ. The circulation through these enlarged veins is from above downward. The return circulation, therefore, from the head and upper extremities passed down through these veins and emptied into the femoral veins; thence, to the inferior ascending vena cava. The other characteristic symptoms of aortic aneurysm were not marked. Serum accumulated in the right pleural cavity, as a result of the interference with the circulation, and was aspirated a number of times, only to reaccumulate. The radiographic examination was made after the last withdrawal of the fluid. The radiograph showed the trouble to be a mediastinal growth with fibrous deposits in both lungs, but more deposits in the right. The diagnosis between aneurysm and a mediastinal growth was made from the following considerations:

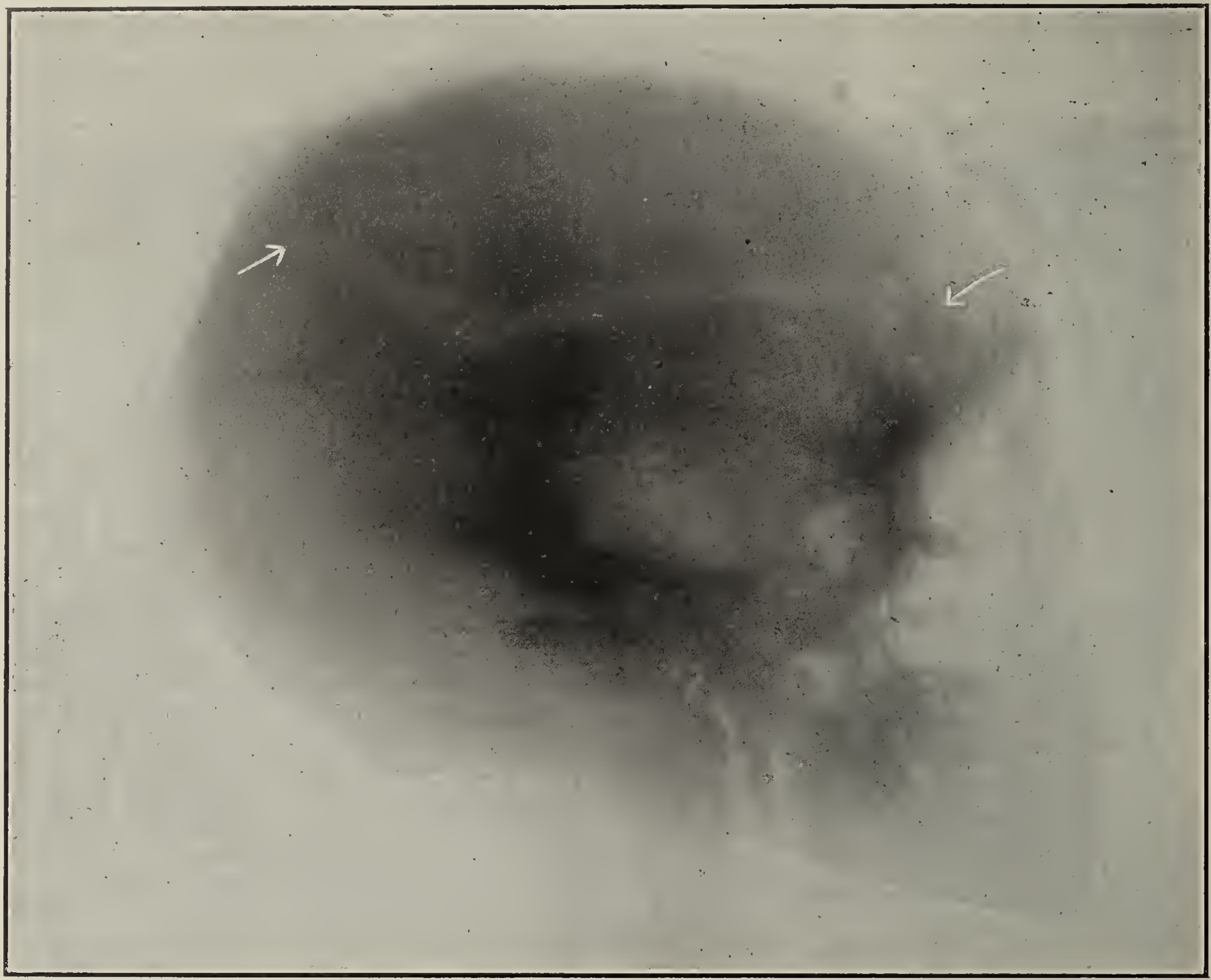
First.—That the picture showed the growth was slightly irregular, while, if it was an aneurysm, the circumference would be more regular like the outer border of the heart as shown in a radiograph.

Second.—That the entire mass was not of the same density.

Third.—That there was a certain amount of fibrous deposits in the lungs.

Fourth.—That under a fluoroscopic examination the growth did not pulsate.

While speaking of chest examinations, I will mention a case in which a child swallowed a nickel four months before coming for an examination. There is nothing of unusual interest connected with this case, except that the nickel had remained in the œsophagus all this time, but the patient had lately complained of pain which might indicate that an ulcer had formed. During this time the child had been treated for acute indigestion.



This light area between the marks is due to less density of the table—caused by syphilis.

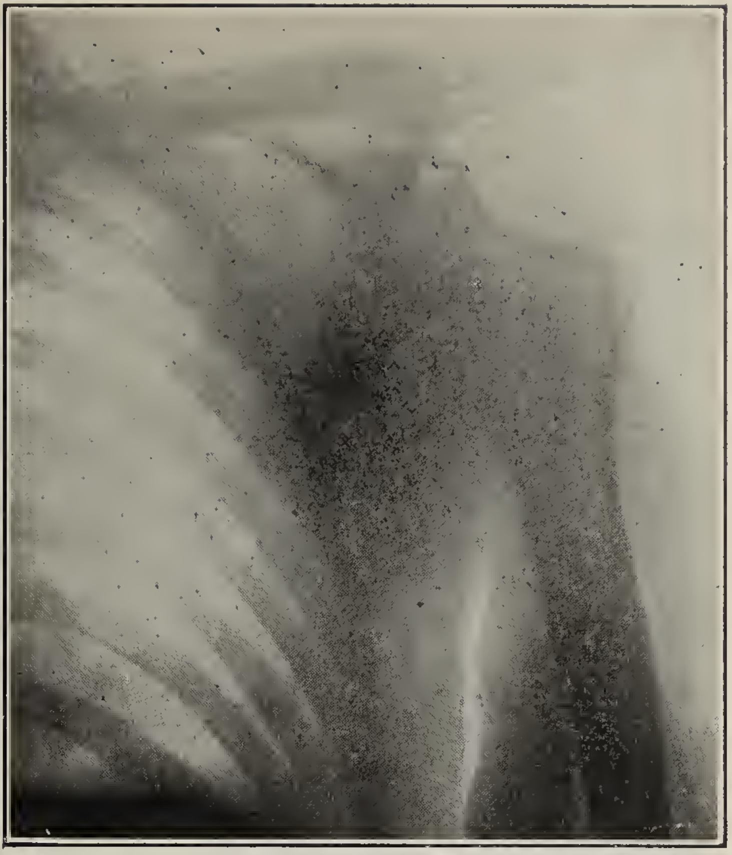
Unless a radiograph of the head shows the inner and outer table of the skull sphenomaxillary, vomer, and nasal bones, the antrum of Highmore, frontal sinus, and all detail, what use is the picture in the way of diagnosis? But with a perfect plate, many cases of brain tumors, all foreign bodies, fractures, abscesses, etc., can be diagnosticated.

Recently, I had the pleasure of hearing a very interesting talk, by a prominent nerve specialist, on the diagnosis and treatment of brain cysts and tumors. During his discussion he said there were usually sufficient symptoms present in these cases to make a diagnosis, but that, after a diagnosis of brain tumor or cyst had been made, it was extremely difficult to accurately locate the growth. He never mentioned x ray as an aid in diagnosis. This shows that x ray has not received his serious consideration, or else his work has not been done in a very satisfactory manner. In many cases of brain tumors and all cysts, there is sufficient density to both diagnosticate and locate the trouble.

The speaker just referred to said that he had made a diagnosis of 137 brain tumors and cysts, had advised operation in 30 of these, and that 24 had been operated upon. The tumor was found in 14 cases and in 10 the growth was not revealed until the post mortem examination had been made. Now, if the x ray had been used in these cases, the exact location might have been known before the operation, and probably in some few cases the picture would have shown whether an operation was advisable. I do not mention the above for the purpose of criticizing the doctor, as his address was extremely interesting and instructive.

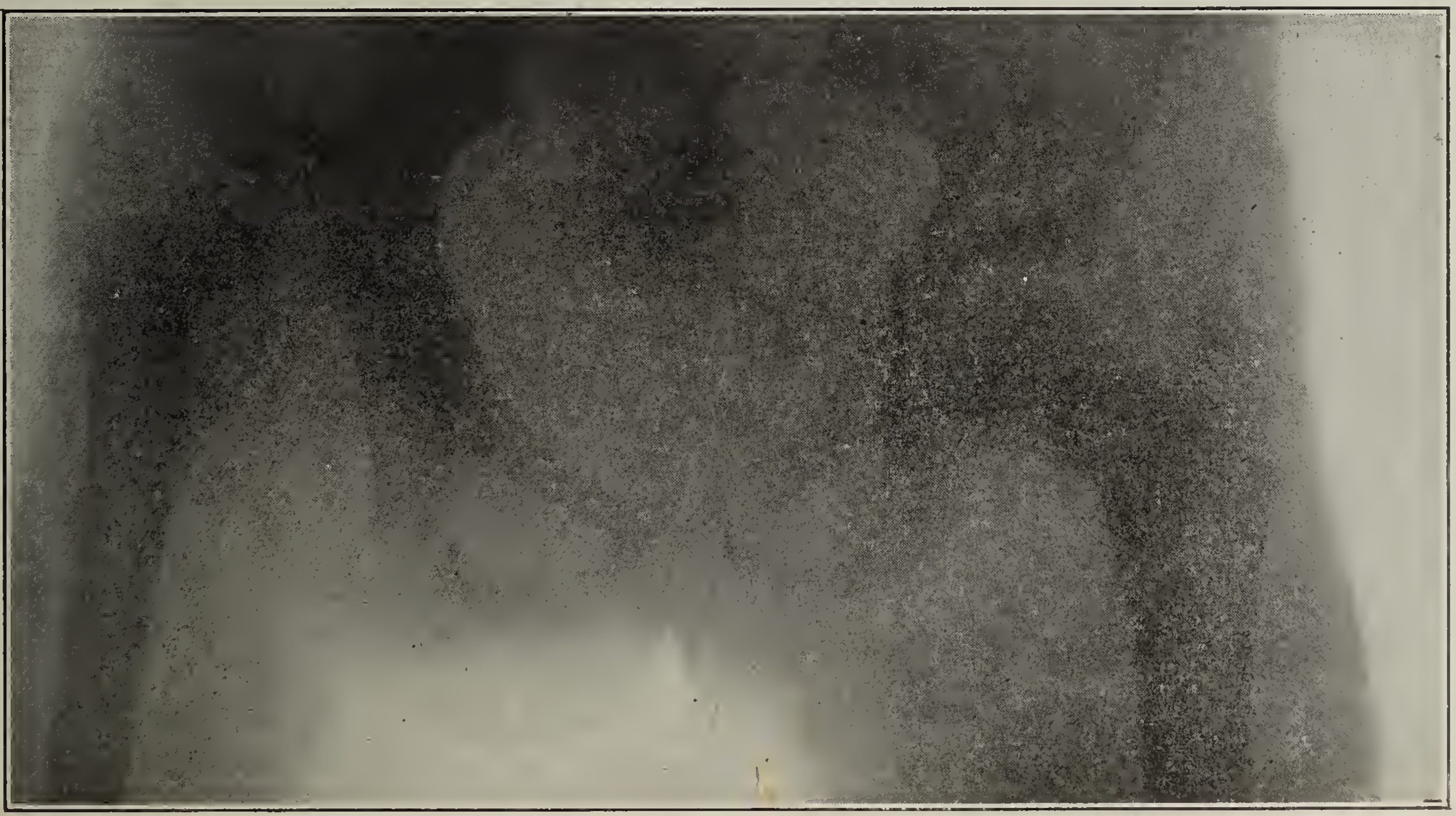
The want of contrast between the parts of the abdominal contents is the principal reason why radiography is more difficult here than in other parts of the body. In order to show the contrast between portions of the alimentary canal and the surrounding tissue, it is often necessary to introduce into the cavity a gaseous or opaque substance.

The stomach can often be distended in this way with the two solutions of seidlitz powder sufficient to obtain a clear outline on the plate. It not only permits the study of the walls of the stomach, which may assist in revealing a tumor, but it especially facilitates the examination of the neighboring organs. The filling of these organs by an emulsion of bismuth can often be utilized to show the outline with more accuracy. In this way the path of a fistula can be ascertained by filling it with fluid.



Fracture of humerus and dislocation of head of bone.

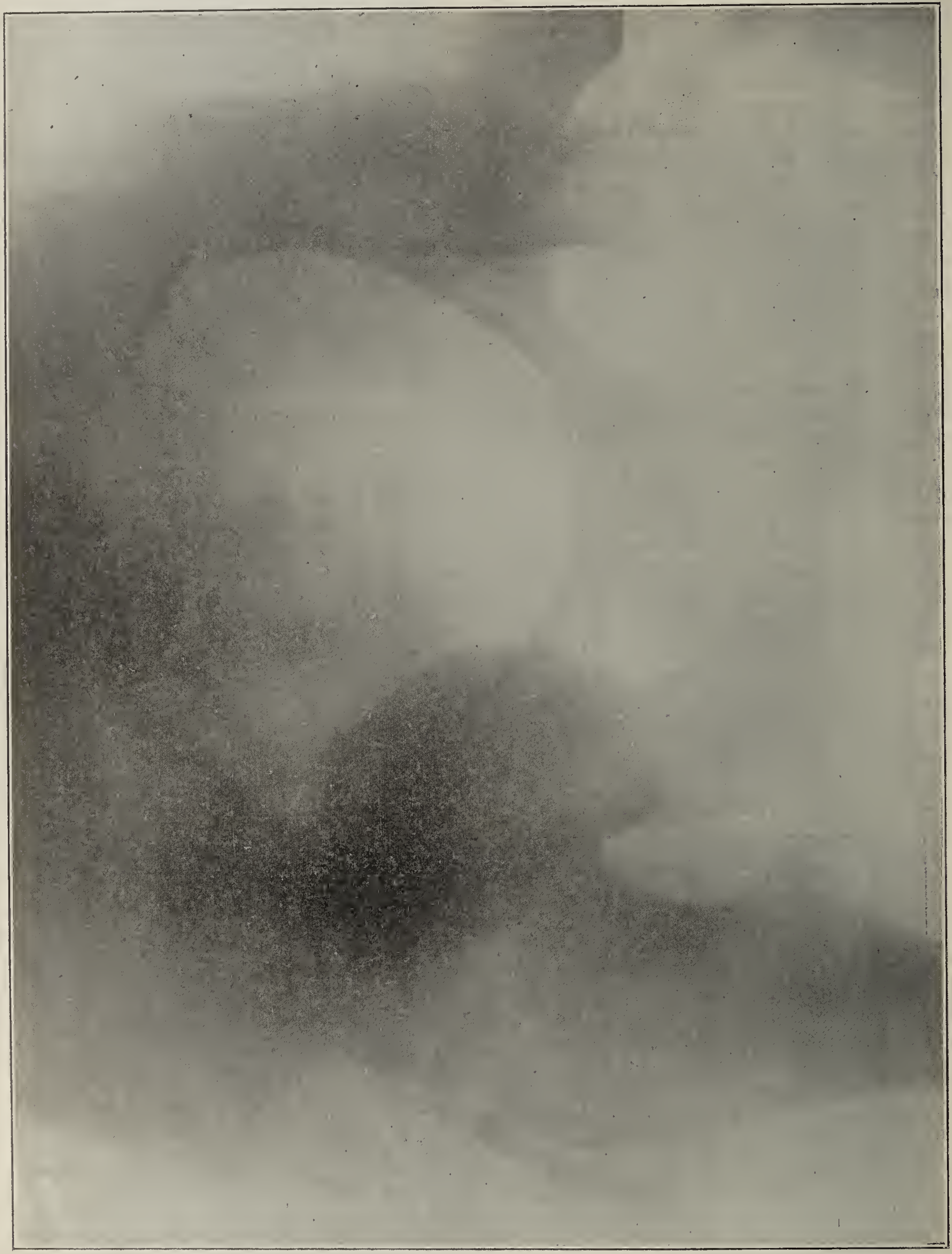
A plate that shows the spinal column, with each articulation and process and the outline of the last ribs, psoas muscles and, in most cases, the outline of the kidneys, should be a standard for making a diagnosis of pus, stone, or tuberculous deposits in the kidney, ureter, or bladder, and tuberculous or lymphosarcomatous nodules in the intestines or omentum. It might be well to state that a tuberculous or lymphosarcomatous condition of the above has been mistaken, in several instances, for renal calculi; probably also in some cases where the radiograph indicates the presence of a stone the surgeon has been unable



Congenital dislocation.

to find it, the shadow being due to some density in the intestines or omentum.

If such were suspected, two radiographs should be made with the tube in different positions, as in locating a bullet, which would show the depth of the object casting the shadow. I have here four radiographs, two showing tuberculous deposits in the kidney, one a tuberculous deposit in the bladder and one lymphosarcomatous nodules of the bladder. One of the radiographs of the kidney and one showing the tuberculous deposits in the bladder were of the same patient. When the patient was referred to the surgeon he found during the examination that bacilli were present in the sputum in large numbers. The diagnosis was made of tuberculous deposits and the patient was



Tuberculosis of hip joint.

sent South. The other tuberculous kidney was removed on the strength of the radiograph without opening the kidney to prevent infection. The eight calcareous deposits which were diagnosticated as renal calculi were found when the organ was examined.

The fourth case showing calcareous deposits caused by lymphosarcoma was referred for an examination on account of his symptoms, which simulated stone in the bladder. Two radiographs were taken, one with the patient lying on his face and the other on his back, the plates being under him during the exposures. Both radiographs showed three spots, and a diagnosis of encysted vesical calculi was made. A week later the surgeon operated without having the plates present and failed to locate the suspected calculi. Then there were a great many things said about the fallacies of x ray. Later, Dr. C. B. King was called in to see the case, and made a diagnosis of sarcoma of the liver and adjacent organs. The patient died and a post mortem examination was held. The examination showed sarcoma of the gallbladder and pancreas. In the omentum there was a number of calcareous deposits and in the bladder the three calcareous deposits, which showed in both the radiographs, were found. All present were much impressed with the accuracy of x ray diagnosis of different densities.

Among the cases of kidney stones which I have located since I read my paper on calculi, with a report of cases, a year ago, I have two of unusual interest; one on account of the patient weighing two hundred and forty pounds, this picture showing three large stones and also the outline of the kidney; and the other on account of the large amount of pus, as well as of a stone present. Both cases were verified by operation.

Mr. H., aged sixty-five years, referred by Dr. R. J. McCready, had hæmaturia and some pain, the bladder symptoms gradually increasing until there was a stoppage of urine, and the pain on micturition increased until September first, when the case was referred for an x ray examination.

The plate showed a growth in the bladder which was diagnosticated as carcinoma. Several days later the case was operated on and the diagnosis was verified.

Among my collection of hip cases I have one of unusual interest which I will mention.

Mr. C., referred by Dr. Nettleton, had been treated by several other physicians for rheumatism. The radiograph showed that the trouble was tuberculosis, that the head of the femur was absent, and that the femur, when a weight was placed on the limb, was displaced upward to the crest of the ilium, and that this displacement had infected the border of the ilium.

ACTINIC SUNLIGHT IN THE TREATMENT OF PULMONARY TUBERCULOSIS.

By J. W. KIME, M. D.,

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During the past half decade a remedy has sprung into prominence which in the past has been put to little use in medicine, but which at the present time is receiving the attention which marks the advent of few remedies in the field of therapy. I refer to light in its various forms, which now occupies the centre of the stage in medical thought. It was not unknown to those who preceded us by many centuries that sunlight was a messenger of beneficent origin and that, besides cheering man with its effulgent rays, it imparted to his failing strength new life and vigor but seldom effected by the ponderable drugs of the shops. The ancient Romans made

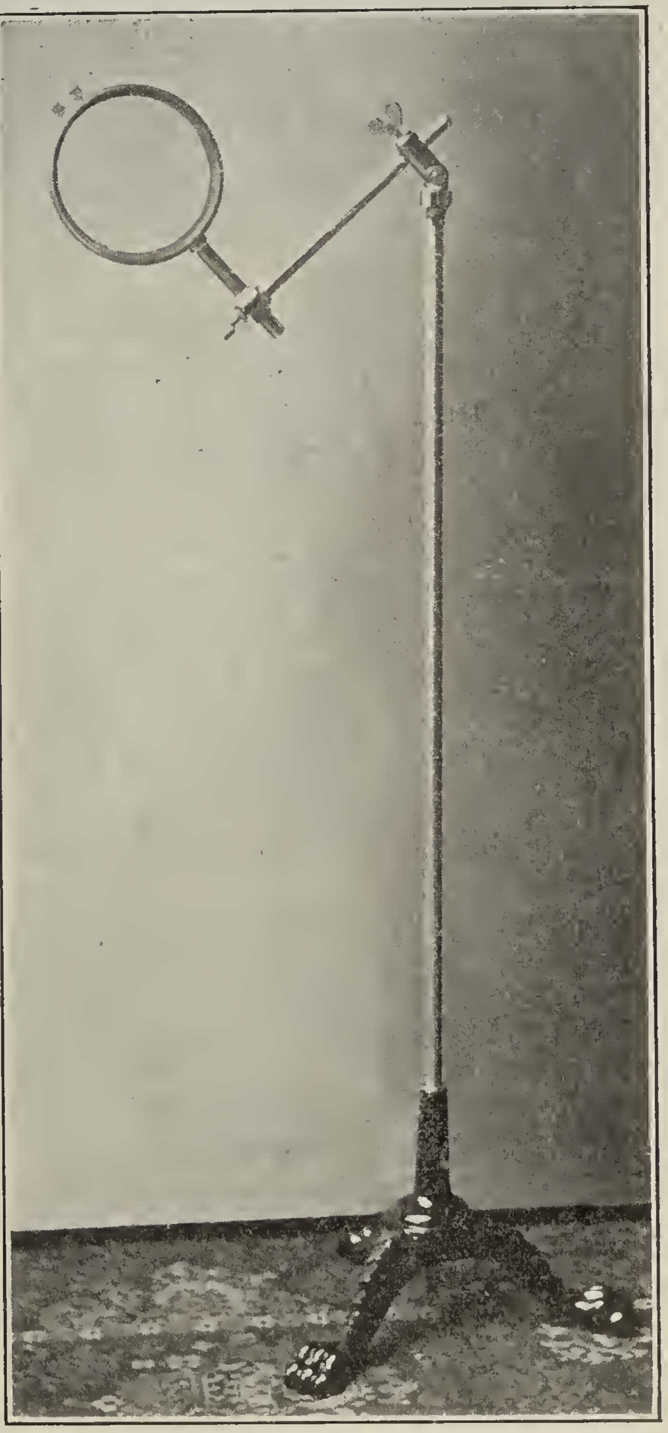

Fig. 1.—Lupus Lens.

extensive use of the sun bath, and it was prescribed by the practitioners of the day for anæmia, tuberculosis, and chronic affections of many sorts. The bath was taken with the clothing entirely removed from the body, which, in its nudity, was exposed to the direct rays of the sun.

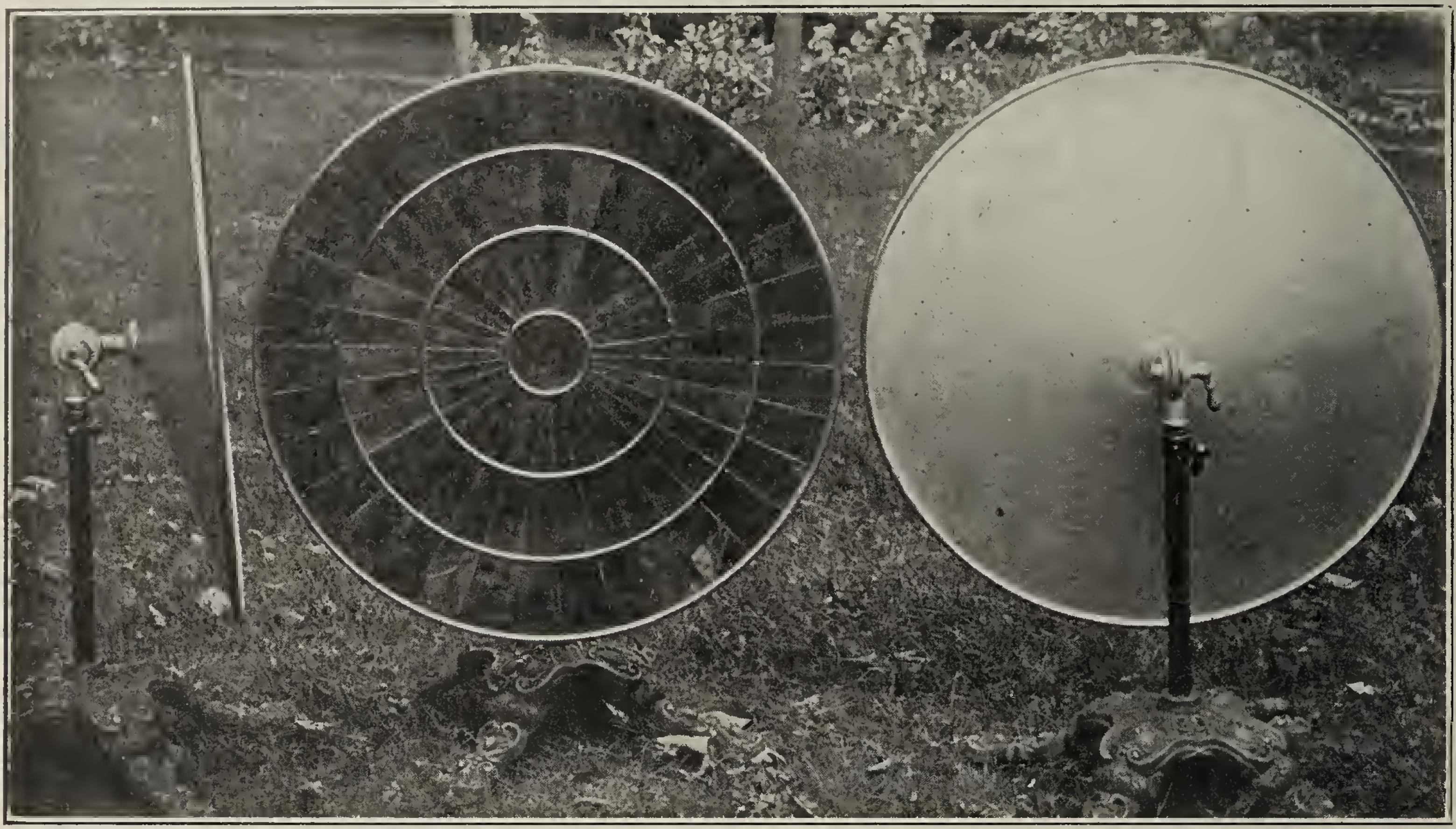

Fig. 2.—Reflectors.

In various places in this country, as well as in Europe, this form of bath is still administered.

The value of the sun bath lies in the effect of the chemical rays of the sun upon the tissues of the body.

It is the chemical light and not the heat which accomplishes the results desired to be attained. The chemical ray of the solar beam finds expression in the darkened plate of the photographer, in the dusky skin of the Hottentot, and in the sunbrowned cheek of the tiller of the fields. It paints upon the brow the picture of health, it removes the pallor of the lily and implants the damask of the rose.

In the therapy of light we seek to remove all the heat that it may be possible and to utilize to the maximum the chemical rays. In a recent scientific (not medical) article in the *Scientific American* (June 20, 1903), I have shown by photographic prints the effects of solar light when passed through glasses of various colors and through open space in which no glass intervened between the sensitized plate and the light of the sun. These experiments demonstrate conclusively that solar light which passes through blue glass is not deprived of any of its sensible rays of actinic light, but that as many of these rays reach the plate as when no glass at all intervenes. With glass of all other colors only a percentage of the actinic light reaches the plate. It was there also shown that a light of blue color was the coldest light which could be utilized. Since it is in blue light that we have a maximum of chemical rays and a minimum of heat, it is in a light of this color that we find the ideal for use in the treatment of disease.

While the x ray and the electric arc light are of much value in the treatment of certain diseases, especially those of the skin, I am old fashioned enough to believe that the best form of light yet invented is the lamp which for cycles has hung in the sky, drawing up from the depths an infinity of life, and whose maker and builder was God.

Treatment room, Denver, Colo.

I believe that the best source of light for use in the treatment of disease, as well as for illumination, is the sun itself.

In the treatment of lupus, superficial ulcers, and other chronic skin affections, I use a lens six inches in diameter, hollow, and backed with blue glass, all so mounted that it may be adjusted to any position.

The light is focused by means of this lens upon the point to be treated. Application of the light is made for an hour or more each day, depending upon the nature of the case, and results are such that I see no reason to wish for instruments more complex or complicated and more costly than the simple apparatus thus utilized. With it, lupus, chronic ulcers, and parasitic diseases of the skin generally, are treated with as much success as with the more complicated apparatus. With a beam of sunshine one foot square falling into the office the instrument is ready for use. I have elsewhere recently reported a series of cases thus treated *(Journal of American Medical Association,* April 11, 1903).

In the treatment of pulmonary tuberculosis the light is obtained in the following manner:

A concave reflector, thirty-six inches in diameter, overlaid with blue glass, focuses a strong blue light upon the surface of the chest, made bare, for two hours each day. This light is sufficiently strong thoroughly to illumine the lungs.

Patients thus treated, using, of course, in addition all other adjuvants of known value in the treatment of tuberculosis, respond more quickly, and a greater percentage of recoveries takes place than under any other method of treatment with which I am familiar.

Cases, even far advanced, almost immediately begin to show improvement, and I am quite convinced that but few cases in their earlier stages may not be permanently arrested. This statement is made from personal experience of a number of years, and is based upon a sufficient number of cases to warrant the statement.

In the *Medical Record* of November 1, 1902, is detailed a number of cases thus treated, since which time still others have been treated with like success.

For use at Denver, a slight modification is made in the reflectors, the skylight being constructed of blue glass, while the reflectors are not overlaid with glass.

In this connection the question naturally arises, how does the action of the light benefit the patient suffering from pulmonary tuberculosis? The light does not immediately destroy the tubercle bacillus, but it no doubt has an inhibiting effect on the production of virulent tubercle bacilli. Bacilli are still found after several weeks of treatment, but usually in diminishing numbers.

The order in which improvement occurs in most cases is as follows: Loss of chills and night sweats; gain in body weight; increased appetite; if diarrhœa has been a prominent symptom, it lessens and finally disappears; the strength increases, usually quite rapidly; patients who have walked but short distances soon walk considerable distances; cough diminishes without the use of medicines and, after a time varying from a few weeks to two months or more, the fever begins to decline, and after two or three months in most cases reaches the normal, where it remains. Bacilli may still be found in such cases, and they are almost the last evidence of the disease to disappear, as they were also the first factor in the production of the disease.

Patients frequently leave the sanitarium with bacilli still remaining and, when they return a few months later, the bacilli are found to be absent from the sputum.

From the sequence of these favorable symptoms it is quite apparent that the light acts as a restorative agent; it is a tonic and a tissue builder. As a considerable factor also in bringing about the results desired must be considered the direct effect of the powerful chemical light upon the blood which circulates through the surfaces upon which the light is poured. During the hours of treatment every drop of blood is brought many times through the illumined area and the chemical changes there effected in it are clearly beneficial to the welfare of the patient. It is also highly probable that the irritant effect of the light favors the production of inflammatory tissue about the diseased areas.

Light, and especially strongly concentrated actinic sunlight, is a remedy of very great value in the treatment of this most serious malady.

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The Medical Staff of the World's Fair.—Dr. A. O. Wall, Jr., of St. Louis, has just been added to the medical staff of the exposition by Medical Director L. H. Laidley. The medical staff of the exposition now comprises besides the medical staff the following doctors: J. G. Moore, Luther Walbridge, M. E. Sheets, and A. O. Wall, Jr. Dr. Sheets and Dr. Wall are resident in the hospital. Dr. Moore is principal assistant. Dr. Walbridge is the visiting physician. The medical staff has been occupying the new emergency hospital for some time. Arrangements are now being made to uniform the hospital corps as well as the physicians. The physicians will wear white duck coats and trousers, the coat buttoned close up to the chin.

EPIGASTRIC HERNIA.*

By CHARLES GREENE CUMSTON, M. D.,

BOSTON, MASS.

Epigastric hernia may be defined as a rupture occurring at some part of the linea alba between the umbilicus and the xiphoid appendix of the sternum. These herniæ may be found directly in the linea alba or slightly to one side of it, in the region of the inscriptiones tendineæ of the rectus muscle, and it not infrequently happens that several epigastric herniæ may be present in the same patient. Berger has reported a case where four small epigastric herniæ were present, one immediately above the other and each one could be reduced separately.

Epigastric hernia not infrequently accompanies other types of hernia.

Out of a total of ten thousand cases of hernia, Berger found one hundred and thirty-seven instances of the epigastric variety, in other words, 1.37 per cent. Out of 369 cases of hernia which were operated on at the surgical clinic at Kiel, during a period of thirteen years, 18 were epigastric ruptures making the percentage 4.65.

A most noticeable point is that epigastric hernia is far more frequently met with in the male sex, and in Berger's statistics, 120 out of the 137 cases of epigastric hernia were males. In the 18 cases operated on at Kiel and reported in the Inaugural Dissertation of Dr. Oskar Thies, all were males.

In most statistics it will be found that the greater number of these herniæ occur in the laboring class, and for this reason they are more frequently found in men that in women, although, as will be seen by the cases here reported, 5 out of 7 of them were of the well-to-do class, the other two being laborers.

The origin of epigastric hernia may be explained in two ways. Naturally, as might be expected, it may be the result of a traumatism or from changes arising in the histological structures of the linea alba. In the first instance the opening in the tissue followed by the appearance of the hernia may, for example, result from a direct blow or similar injury, and Witzel considers trauma as the ætiological factor in 50 per cent. of the cases; but this would seem to me far too high, judging from the various statistics I have been able to consult.

By far the most frequent ætiological factor of epigastric hernia is, without any doubt, certain changes which have taken place in the structures of the abdominal wall. It will be frequently discovered that a congenital or acquired diastasis of the recti has been present, and has acted as a predisposing factor in the ætiology of the hernia. An abnormal relaxation of the fibrous tissue, which is partly congenital and partly the result of an inherent tissue weakness of the individual, tends toward the same result, and early in the last century it was shown by Cooper, in his work on the anatomy and treatment of abdominal hernia, that the linea alba in children occasionally shows a deficiency in its formation. Long ago it was pointed out by Garengeot, a surgeon of considerable celebrity who flourished in the middle of the seventeenth century, that the fibrous tissue extending from the umbilicus to the xiphoid process was always thinner and broader than that situated below the umbilicus. From this it is readily to be conceived how, with the presence of such predisposing causes, any increase of intra-abdominal pressure, such as that caused by a hard labor, forced expiration, or vomiting, may produce an epigastric hernia. Another ætiological factor of the utmost importance is the appearance of the so called preperitoneal lipoma. It is a well known fact that large quantities of subserous cellular tissue are deposited upon the peritonæum in the region of the epigastrium, and this fat has the property of filling up the most minute slits and spaces. Roser believes that the fat penetrates into the spaces which are formed by the fibres of the linea alba, and which are interwoven, especially along the course of the small vessels and nerves which pass through these spaces. Now, if these little masses of fat continue to develop, the network of the linea alba is put upon the stretch and separated, and an opening for a hernia is formed. It should be remarked that these little masses of fat are always connected with the peritonæum by a sort of pedicle, and by this means they produce a certain amount of traction on the peritonæum which results in a funnel-shaped depression in the abdominal wall. In some of these cases no further development takes place after a lipoma has once formed, but in other instances the spaces become enlarged by further growth, and then the peritonæum enters into these spaces.

Two of the cases that I have to report were without doubt the result of a subperitoneal lipoma; their histories are briefly as follows

CASE I.—A student, twenty-three years old, consulted the writer on account of a certain amount of pain in the epigastric region, principally after a hearty meal, the attack being occasionally accompanied by vomiting. These attacks of indigestion, as his physician had called them, had been present more or less constantly for the past nine months, but of late they had become more intense, and he had noted that the pain had latterly been more severe in the region of the umbilicus. The patient also suffered from obstinate constipation.

Examination revealed a fairly well built man, and by inspection of the abdomen, with the patient lying down, nothing was observed, but when the patient was asked to stand up, a small protrusion made its appearance just to the right of, and about three centimetres above, the umbilicus. There was no evidence of an umbilical hernia and the umbilical orifice was practically closed.

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* Read by invitation at the Norfolk South District Medical Society, October 1, 1903.

A few days later, under ether, the umbilicus was excised, and above it was found a narrow opening in the linea alba through which the peritonæum was drawn by a preperitoneal lipoma. The narrow slit was opened up, the peritonæum drawn down, and after opening it and reducing the intestine, the neck of the sac was ligated and the sac removed. The linea alba was then closed by overlapping it from right to left, and sutured with strong celluloid interrupted mattress sutures. The skin incision was closed with silk worm gut. Stitches were removed in ten days and the patient was discharged cured in three weeks. Two years after the operation there was no recurrence.

Case II.—The second case was that of a man of sedentary habits, a good liver, forty-three years of age. Three months before coming under observation, he had suddenly been seized with pain in the epigastric region after a morning horseback ride. The physician summoned gave immediate relief by the use of morphine, but from time to time the patient would be taken down with these rather severe attacks of pain in the region of the stomach. A week or two before consulting the writer, the patient had one morning discovered a small bunch about the size of a small walnut about three fingers' breadth below the point of the sternum, situated in the linea alba.

Upon examination of this tumor it was found quite painful on pressure and not easily reduced when the patient was standing, but when in decubitus it became reduced spontaneously. Coughing caused the tumor to project markedly. A diagnosis of epigastric hernia was made and an operation advised. This consisted in making an incision over the tumor in the linea alba. When the skin was incised a small fatty tumor was revealed, which led directly into the abdominal cavity, as was seen when the peritonæum was incised. The lipoma was removed and the peritonæum closed with catgut. The linea alba was closed by overlapping it, and mattress sutures of celluloid thread were employed. The skin incision was closed with silkworm gut. This patient was operated on nearly five years ago and no recurrence has taken place. All pain complained of before the operation has disappeared and he considers himself perfectly well.

The two following cases upon which I have operated are good illustrations of a preformed defect in the fibrous tissue of the linea alba.

Case III.—A lumber merchant, fifty-three years old, for eight years had had a tumor situated five fingers' breadth above the umbilicus in the median line. This tumor had given rise to no discomfort until about six months ago, when some pain was felt in it. A truss was advised, but was badly tolerated by the patient, and to add to his misery, a second tumor made its appearance about two fingers' breadth below the one already present.

Examination showed a small opening in the linea alba, about three fingers' breadth above the umbilicus, and through this opening a small hard tumor could be made to protrude when the patient coughed. About two fingers' breadth above this hernia in the middle line, a second opening in the linea alba was found, which easily admitted two fingers. The contents of the larger and older hernia could not be completely reduced, even when the patient was lying down.

An incision was made in the median line extending from above the upper tumor to below the lower one. Both herniæ were found to be composed of a preperitoneal lipoma which contained the sac. The lower sac, with its lipoma, was opened, found empty, and was quickly ligatured and removed. When opening the sac of the larger hernia the omentum was found to be adherent all round, and after freeing it a portion of it was tied off in chain sutures and removed. The sac and lipoma were then tied off and removed. The linea alba existing between the two hernial orifices was incised, so that they were connected, and the fascia was brought together by overlapping and the use of silver mattress stitches, about twelve being required. Recovery was uneventful, the patient being discharged in two weeks and a half. No recurrence after five months.

Case IV.—The next case of a preformed defect in the structures in the linea alba is briefly as follows: A man forty-four years of age, by trade a dry goods clerk, had complained for eight or nine years of what he considered to be dyspepsia. Pain in the stomach was complained of after hearty meals, and was occasionally followed by vomiting. The patient was habitually constipated and suffered much of the time from headache. He had been treated on several occasions by different physicians for various forms of stomach trouble but without success.

When the patient first came under observation he was extremely emaciated, and by inspection an oval tumor about the size of a hen's egg was seen in the median line, about five fingers' breadth below the sternum. The tumor was uneven in surface, being somewhat bossed, and by palpation it was discovered that it was composed of two lumps, the upper one being the larger of the two. Palpation produced little tenderness. When the patient coughed, an impulse was thought to be felt within the tumor, which certainly did increase in size when increased intraabdominal pressure was brought to bear. A diagnosis of epigastric hernia was made and operation was advised. An incision in the skin, made in the median line, revealed two preperitoneal lipomata, each one protruding through a separate orifice. The orifices were separated by fibrous tissue of the linea alba about two and one-half centimetres in breadth. This was incised, thus connecting the two hernial orifices. The sacs were opened separately and the contents, which proved to be the omentum, which was considerably adherent, were peeled off and reduced, and the sacs were ligated at their necks and removed along with the lipomata. Overlapping of the fascia and mattress sutures. Silkworm gut for the skin incision. Recovery uneventful. The patient was now able to retain his food without discomfort, and within six months after the operation he had increased twenty-one pounds in weight. He was in excellent health and without any return of his former symptoms three years and seven months after the operation.

Epigastric hernia, pathologically considered, may be divided into two types; the first consists of a preperitoneal mass of fat united to the peritonæum by a pedicle, while in the second type, one is dealing with a true hernia. The first type rarely attains any size. It usually has the dimension of a small nut and on a superficial examination one might easily mistake it for an ordinary lipoma; but the presence of a pedicle containing blood vessels and connecting the growth to the peritonæum is typical of this type of hernia.

The true epigastric hernia, like all other herniæ, presents a canal, a sac, and its contents. The ring of the hernia is made up by the fibrous structures of the linea alba at a point where the aponeuroses of the abdominal muscles become interwoven in such a way that the angles on the sides are more or less acute while the upper and lower ones are obtuse. This gives the orifice of the hernia the form of a lozenge, with its greater diameter running in a horizontal direction; but at a later stage, from stretching, etc., it assumes an oval shape, having a more or less oblique direction. The sac, as in all other herniæ, is composed of the parietal peritonæum, which is covered by a considerable amount of fat. When the hernia is of long standing the other coverings have become so intimately connected that it is practically impossible to separate them. They consist of the fascia transversalis, the superficial fascia the subcutaneous connective tissue and the skin.

The contents of these herniæ vary, but in the larger number of cases the omentum is usually found. Occasionally, a loop of small intestine or a portion of the large intestine will be found within the sac, and occasionally the stomach formed the contents.

An epigastric hernia has a most characteristic appearance, but for all that, it nevertheless happens that it is overlooked and the patient is submitted to a medical treatment which naturally is unsuccessful. The symptoms for which the patient usually applies are indigestion, constipation, vomiting, and an increase in the size of the abdomen. Severe colicky pains may also torment the patient considerably, and are in all probability due to a traction exercised by the omentum which is in the sac upon the colon, and from here to the stomach. It may also possibly be due to pressure on the small nerves which leave the abdominal cavity at a point near the hernia. Pain is increased by movements of the body or by severe attacks of coughing, and by similar causes which tend to increase the intraabdominal pressure. Vomiting becomes more and more frequent, and may even occur after each meal, which causes the unfortunate patient to limit his diet with the result that he becomes emaciated and loses his strength. These patients become depressed mentally and often develop neurasthenia.

Strangulation is very infrequent in epigastric hernia, although recently Wiesinger has reported some cases of acute epigastric hernia. The cause of the strangulation appears to be an increased intraabdominal pressure. The case gives the picture of peritoneal irritation, occurring without much provocation, or, on the other hand, quite suddenly, when pressure is brought to bear while the patient is at stool. The pain ceases as soon as the strangulated bit of gut becomes gangrenous and an improvement appears to take place, but after a lapse of from one to two weeks abdominal pain again makes its appearance and there is a rise of temperature. A localized inflammation, accompanied by a suppurating process, spreads from the gangrenous intestine to the fascia, and invades the deeper layers of the abdominal wall until it reaches the surface. It slowly extends until it becomes visible at the umbilicus, because at this point there is the least resistence. In two cases reported by the before mentioned authority, the small intestine was strangulated and in one it was the stomach wall.

Usually the sac will be found adherent to the ring and the contents will also be more or less adherent to it.

The diagnosis is a simple matter in those cases where the hernia appears suddenly, because the localized pain will lead to an examination of the parts and the true condition of affairs will be ascertained. On the other hand, a diagnosis is more difficult in cases of epigastric hernia of long standing; but when a patient presents himself complaining of the symptoms already mentioned, it is the duty of the physician to examine the epigastric region carefully, and not to be content to dismiss the patient with simply a diagnosis of some affection of the stomach and a prescription.

The proper method of examining a patient suspected of having an epigastric hernia is to have him stand in an erect position with trunk bent forward. By the act of coughing the hernia will be made to protrude, and it will disappear more or less completely when the patient assumes a recumbent position. Should the contents be composed partly of intestine, resonance will be obtained on percussion, and when taxis is tried the usual peculiar gurgle will be heard and felt as the gut recedes into the abdominal cavity.

An acute epigastric hernia from traumatism occurring to a healthy person is not frequently met with, and I have only operated on one such case, the history of which is briefly as follows:

CASE V.—An Italian laborer, thirty-two years of age, fell from a scaffolding about six feet above the level of the ground, striking on the right side. At the time of the fall he complained of some pain in the chest, but as he presented no serious symptoms he resumed his work in about ten days. After working for several weeks he commenced to experience pain in the epigastric region, more especially when he did any lifting.

Upon examination, a small tumor situated in the middle line of the abdomen, about three fingers' breadth above the umbilicus, was noted. By palpation this little tumor, which might have been the size of a cherry, was found soft and could be outlined with considerable ease. Pressure elicited a slight tenderness in the tumor, and when the abdominal walls were made to contract the pain was quite severe. A diagnosis of a recent epigastric hernia was made, and on the following morning an incision through the skin in the middle line of the abdomen over the growth immediately revealed a preperitoneal lipoma which contained a small hernia sac. Upon opening the latter a small lump of omentum which adhered to the inner aspect of the sac was rapidly dissected off and replaced within the abdomen. The sac was ligated at its neck and removed along with the lipoma. The opening of the linea alba was closed by overlapping and mattress sutures of celluloid thread. Skin incision closed with silkworm gut. Recovery uneventful, the patient being discharged three weeks later in first-class condition, all abdominal pain having completely disappeared immediately after the operation. The ultimate result is unknown as the patient was lost sight of.

Pregnancy appears rarely to give rise to epigastric hernia, but the following case would seem to show that it may sometimes do so.

Case VI.—The patient, thirty-two years of age, the mother of five children, had suffered from an umbilical hernia and a diastasis of the recti above the umbilicus since the birth of her first child. The patient was extremely fat, weighing about 220 pounds. After the birth of her last child, eighteen months ago, she complained of pain in the umbilical hernia, and also, of a new pain situated higher up in the epigastric region, the distress here occurring more especially after food had been taken.

Examination revealed an umbilical hernia about the size of a large egg, while about midway between the sternum and the umbilicus another hernia, situated in the median line, was discovered. By palpation this second hernia could only be reduced slightly on pressure, and this reduction elicited considerable pain.

After a careful preparation the umbilical hernia was operated on according to Mayo's method, and the epigastric hernia was also radically dealt with. A median incision was carried over the tumor, which was found to be a lipoma, about the size of an English walnut and containing a small sac. The sac was opened and some omentum was found adherent to it, but it was easily peeled off and replaced within the abdomen. The sac was tied off at its neck and removed along with the lipoma. A radical cure of the hernia was done by overlapping and celluloid sutures. Nine months after the operation there had been no recurrence of either hernia.

Case VII.—I have had one other case of typical preperitoneal lipoma, in a male twenty-four years of age. For several years he had been treated off and on for constipation. About three months ago a small growth appeared in the epigastric region, about four fingers' breadth above the umbilicus. The cause for this growth was not apparent. It gave rise to abdominal pain after meals. By examination a small tumor, which was somewhat movable, was made out, but coughing did not produce any distinct impulse in the growth. An incision was made in the middle line and a fatty tumor about the size of a walnut was discovered. It was attached to the peritonæum by a long pedicle. The opening in the linea alba was enlarged and the tumor drawn out, along with the peritonæum to which it was attached. The peritonæum was opened, and after removal of the tumor, it was closed by catgut. The linea alba was overlapped and sutured, and the skin incision closed with silkworm gut. The patient was discharged well eighteen days after the operation but has not been heard from since.

From the cases reported in literature, as well as of those which have come under my personal observation, it would appear fair to assume that the prognosis of epigastric hernia is quite favorable if the disease is discovered in time and if proper treatment is immediately instituted.

Unfortunate occurrences may certainly arise which darken the prognosis. The appearance of serious symptoms, both physical and mental, and the inability to work in some cases, cause much distress to the patient.

The use of the truss is of little value, although by this means suffering may be averted to a certain extent. As in all herniæ, the proper way to deal with the epigastric variety is by radical operation, which simply consists in a cutaneous incision over the tumor, which exposes the lipoma that is practically always present, and when this is dissected out the neck of the sac should be sought for. The sac is then opened, and the contents, if any, are returned into the abdominal cavity. The sac is then ligated behind the neck and the linea alba closed by any device that may suit the surgeon, but it has always seemed to me that overlapping and mattress sutures have given the best results.

871 Beacon Street.

A St. Louis, Mo., Building for Physicians.—Work has been started on a four story office building at the southwest corner of Olive Street and Taylor Avenue. The building will cost when completed about $60,000, and is intended for tenancy by physicians exclusively, and the arrangement will conform to plans best suited for this purpose. Sanitary features are receiving special attention, and a fully equipped general operating room for the use of tenants is included in the plans. A drug store on the ground floor has been leased. The building will be ready for occupancy in November.

A PLEA FOR THE EARLIER DIAGNOSIS OF UTERINE CANCER.*

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The most significant fact in connection with cancer of the uterus is its amenability to treatment when the diagnosis is made sufficiently early.

As far back as 1891 Winter wrote that the good results of the operations were all lost when we considered the small percentage of cases that came to the gynæcologist in an operable condition. At that time the reports of the Berlin Clinic showed that only 31 per cent. of the women presenting themselves with uterine cancer were fit subjects for radical operations. This was a decided gain, when we consider that in the period between the years 1876 and 1883 the percentage of operable cases was only nineteen. From this time the percentage increased until 1900, when it was in the neighborhood of fifty. But these results are somewhat exceptional, for in a study of a subject of this kind our conclusions must be based upon the average obtained from a review of the statistics of a large number of clinics, rather than that of one.

In the following table one can see the wide differences that exist in the various clinics, the percentage of operable cases ranging from 9 to 48. A question that must also be considered in this matter is, what constitutes operability among the different operators. Thus, one operator will exercise the greatest care in the selection of his cases, while another will operate on any case in which it is still possible to remove the uterus. As an illustration of the first type may be mentioned Leopold, who estimates his operable cases at 20 per cent.; and an example of the second is Kaltenbach with 40 per cent. of operable cases. The truth probably lies between the two; the number of patients coming to us in a truly operable condition being in the neighborhood of 30 per cent.

TABLES.

GERMANY.		Cases.	Operable, Per cent.
Pernice	1887 to 1896 of	188	25
Thorn	1889 to 1896 of	226	35
Freund	1894 to 1898 of	144	28
Frommel		402	20
Winter (Königsberg)	1898 to 1899 of	105	43
Küstner	1893 to 1896 of	175	23
Kaltenbach		481	40
Breslau (Elizabethan Kranhenhaus)	1894 to 1900 of	—.	34.7
Leipzig Clinic	1887 to 1901 of	974	26.69
Hungary (Bücker)	1887 to 1895 of	705	10
Russia (Lapschin)	1883 to 1893 of	533	9
UNITED STATES.			
Jefferson Hospital (Montgomery) Last		100	42
Johns Hopkins (taken from Cullen's Book)		176	48

After the general adoption of hysterectomy as the radical procedure in cancer of the uterus, most of the operators directed their energies toward modifying and improving the technics of the various operations. With the radical abdominal method, the operation limit seems to have been reached. In our zeal to progress we must not forget the one tried and successful method, namely, "that of bringing the cases earlier to operation." In pursuance of this plan it can probably best be carried out by considering those two factors which so largely influence the operability of these cases, "the physician" and "the patient."

Concerning the physician, Winter, in Berlin, in analyzing a number of cases in 1891, found that of 76 per cent. of the women examined, who consulted their physicians first, 33 per cent. of the physicians neglected to examine the cases vaginally, contenting themselves with prescribing local and general remedies. In plain words, 33 per cent. of the physicians consulted failed in their duty to themselves and to their patients. Later, in 1895, in a second analysis of 100 cases, of 63 per cent. who consulted their physicians first, only 9 per cent. of the physicians failed to make the proper examinations. During this period the percentage of operable cases coming from the physicians rose from 22 to 33. This gain of over 10 per cent. Winter attributes to the efforts of himself and other clinicians, who in the meantime had become interested in this subject, in arousing the physicians to their sense of duty in this respect. Excepting those few cases of scirrhus, in which subjective symptoms come very late, uterine cancer can be diagnosticated when it is still amenable to radical operative treatment.

There is no more responsible duty devolving upon the physician than the diagnosis of this disease. A failure to do so, or even a delayed diagnosis, may mean the sacrifice of a human life. We should by all means strive to make a positive diagnosis at the first examination. In the existence of any doubt there must be no delay in consulting with the more experienced specialist. Nor is it any longer justifiable to keep a suspicious case under treatment for the purpose of observing the destructive tendencies of the disease, and by this means to arrive at a diagnosis. Although this class of patients at times presents a number of subjective symptoms that point very strongly to cancer, yet the diagnosis must invariably be the result of an objective examination, based upon a thorough visual and manual investigation. In doubtful cases a small piece of the suspicious tissue must be excised for microscopical study. It must not be forgotten that, even in those cases in which the visual and manual examinations are negative, we may still have beginning malignant disease in the upper part of the cervical canal or in the mucous membrane of the body of the uterus, without appreciable enlargement of the organ. In these cases it is imperative that the canal should be enlarged for the purposes of digitally exploring the cavity, and curetting the uterus to obtain tissue for histological examination.

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* Read before the December, 1903, meeting of the North Branch of the Philadelphia County Medical Society.

The subjective symptoms referred to above are, of course, the classical pain, discharge, and hæmorrhage of uterine cancer, with which you are all familiar.

Of pain there is very little to be said, excepting that its presence to any great degree augurs ill for the patient, and in such an instance the case, from a curative standpoint, is usually a hopeless one.

The second symptom, discharge, in its early stage presents nothing characteristic of the disease. It may be mucous or mucopurulent in nature. When it is watery, or serosanguineous it should always arouse suspicion of malignancy. Later, from the saprophytic decomposition, it becomes foul and putrescent.

The third and principal symptom, and the one that occurs most frequently, is hæmorrhage. It occurs in over 50 per cent. of the cases as the first symptom, and is often the only one until quite late in the disease. It is true that hæmorrhage occurs as an expression of so many different conditions in women that it is difficult to fix its character in carcinoma. Especially is it unsuspicious when it appears in the form of menorrhagia; more significant is it when it happens irregularly following coition, or straining at stool. This may also, at times, result from cervical erosions or endometritis, but not commonly. Mild post coitum bleeding is a frequent symptom, and often the first of cancer of the uterus; and should incite any physician to make a thorough examination. Post climacteric hæmorrhage has almost a pathognomonic character. It should always suggest carcinoma. Occasionally we do have a senile inflammation or a uterine polypus causing bleeding at this time of life, so exceptionally, however, that it merely proves the rule.

It is hardly possible any longer to regard it as a disease of the menopause, considering the large minority of cases that occur previously to the fortieth year. Oskar Müller found, in the 577 cases which formed the material of his study, that more than one third of the patients were under forty years of age. In the last 100 cases of E. E. Montgomery, at Jefferson Hospital, I found the percentage of women under forty years, to be even a little higher.

Thus do I wish to impress upon you the importance of the physician's duty thoroughly to investigate the condition of those cases that come to him complaining of this class of symptoms. This responsibility does not cease with the making of a diagnosis and the recommendation of a radical operative procedure. It is through him that the second factor, "the patient," can become influential in promoting the early recognition of this terrible disease. The patient's attitude has undoubtedly innocently assisted many times in contributing to her own destruction. One of the chief obstacles to her seeking early medical advice is her utter indifference to the presence of suspicious symptoms. Hæmorrhage and discharge, especially if they occur in the fourth decennium, are regarded optimistically as necessary evils incident to the menopause, to be patiently borne, on account of their temporary character. Her natural aversion to pelvic examinations, as well as a fear of operative procedures, also assists in the delay. It will be the task of the general practitioner, as one who is in more or less constant association with ailing woman, to efface these prevailing false opinions and to inculcate truths in their stead. Women should be taught the significance of certain pudendal symptoms, and the necessity for seeking early medical advice should be impressed upon them. Unfortunately, there are no characteristic symptoms in the early stages of uterine cancer that would indicate to the patient that she is suffering from so grave a disease. The imporant fact, that hæmorrhage and discharge (especially hæmorrhage) are not only symptomatic of benign conditions, but are the usual expressions of early malignant disease, as well, cannot be too strongly urged upon them. How often have we, on admonishing the patient with well advanced uterine cancer for not coming earlier, received the reply "that she had no pain," pain being evidently thought to be the essential symptom of the disease. The popular notion, that pain is the essential symptom, has not only cost many lives, but still interposes one of the principal difficulties in the way of our seeing the cases in their earliest stages.

Another error which commonly exists among the laity and is held in a vague and uncertain way by some of the members of the medical profession, is that the menopause is necessarily associated with irregular and profuse hæmorrhages from the uterus. This is often the reason why the woman delays seeking medical advice, as well as being at times responsible for the physician's neglect to make the necessary investigation. Unfortunately, to intensify this fallacy, profuse bleeding is at times associated with the menopause, without the presence of malignant disease. These are the very cases that require the most careful watching, and the prompt attention to local manifestations. From time to time the woman should be examined until all symptoms of danger have disappeared.

Pudendal hæmorrhage, it is well to bear in mind, is almost invariably the expression of some pathological condition which, if not malignant, still requires the benefit of medical skill.

Strange as it may seem, it is nevertheless a fact, that women suffering from so called cancerophobia, who live in a state of constant fear of having cancer and consult their physicians for the slightest symptoms, are proverbially free from the disease. It is not improbable that this prompt attention to minor troubles of the uterus may act as a form of prophylaxis. The studies of Thiersch, Waldeyer, and Billroth have shown to us that cancer is first a local disease, originating in the epithelium of the mucous membrane. By keeping the membrane in a permanently healthy state we are surely carrying out as far as possible the ideas of preventive medicine.

In the absence of any more tangible explanation, trauma and its sequelæ must be accepted as ætiological factors in the production of carcinoma of the uterus. Cancer occurs more frequently in this organ than in any other. Simpson, in England, found that out of 65,000 cases of cancer in women, 25,000 were of uterine origin. Schroeder, in Germany, found about the same proportion. Simpson, to demonstrate its more common occurrence in women, showed that the disease occurred about equally in the sexes up to fifteen years of age; after that the difference became marked until the ages between forty-five and fifty-five years, when the proportion of women to men was as 3½ to 1, and after this it again began to approach a more equal distribution. Furthermore, we know that that part of the uterus, the cervix, most subject to traumatic insult is the usual seat of the disease. Carcinoma of the body of the uterus occurs in only 3 per cent. of the cases. This is further borne out by the relation of childbirth to these cases. Winckel, in a study of his cases, found only 1.7 per cent. of his patients unmarried, and two thirds of these had given birth to children. Sinclair in his last 100 cases found only 1 unmarried, and that was a case of sarcoma; 70 per cent. of his women had borne an average of 5.8 per cent. of children. None was barren.

It is only natural, therefore, to infer that the healthy uterus is the one that is least liable to undergo malignant degeneration, and for this reason is it important that the mucosa should be kept in as normal a condition as is possible. Lacerations, inflammations, and erosions should never be neglected, and especially is this of value during those years in which a woman is passing through the menopause. Dührssen goes even further, and in a paper on the prevention of cancer, advises that those women who, at the menopause, are suffering from suspicious conditions of the endometrium, should be subjected to measures that would bring about the destruction of the epithelial lining of the uterus. He found that Sanger and others held similar views. The methods he recommended were the steam vaporization of Sueguereff, and an operative procedure of his own.

In this paper I have attempted to emphasize the crucial points that enter into the reduction of the mortality from cancer of the uterus, which may be briefly summarized by the following conclusions:

The statistics of the representative gynæcological clinics, as well as my own observations, show that the mortality from cancer of the uterus has undergone, and is still undergoing, a relative reduction. This reduction is chiefly the result of the increasing number of cases that are brought to timely operation, and is influenced largely by two highly important factors: *(a)* The physician, *(b)* the patient.

(a) The physician. The earlier a positive diagnosis is made, the better the opportunity for timely operative intervention, and necessarily the better chance for permanent cure. This early diagnosis should be facilitated by attaching due significance to all abnormal manifestations of any description, and the immediate verification of such symptoms by prompt ocular, manual, and microscopical investigations, notwithstanding any attempted counterinfluence on the part of the patient. The presence or absence of any one of the classical subjective symptoms pointing to cancer of the uterus should be utterly disregarded, and the diagnosis based upon objective examinations only.

(b) The patient. The patient should be emphatically impressed with the risk she runs, wherever there is the slightest suspicion of malignant disease, in failing to submit to the necessary pelvic examination, as well as with the grave nature of some cases of rapidly advancing car-

cinoma, which occur in the absence of symptoms indicative to the patient of such a condition. The popular fallacies that "pain" is the most significant symptom, and that pudendal hæmorrhage is always physiological, especially when associated with the menopause, must be dispelled.

2. In the present state of our knowledge of the predisposing and contributing causes of cancer of the uterus, we can conservatively accept, in the absence of a more tangible explanation, the view that trauma is often responsible for at least the propagation if not the cause of the disease.

3. The fact that women suffering from the so called condition of "cancerophobia," are comparatively free from the disease should be regarded not altogether in the light of a coincidence, but rather the relation between this immunity and the constant medical surveillance which the patient is under, should be considered.

4. In as far as the healthy uterus is less liable to undergo progressive malignant changes, a highly important element in prophylaxis should be to keep the uterine mucosa in as normal condition as possible, and under no circumstances to neglect lacerations, inflammation, and erosions, especially during the menopause.

1900 CHESTNUT STREET.

PROFESSIONAL RELATIONS, MUTUAL AND PUBLIC; A PRESIDENTIAL ADDRESS.*

By JOHN H. NEAL, M. D.,
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One year ago, at its annual meeting, the Strafford District Medical Society elected me its president for one year. I was not present at that meeting and therefore had no opportunity to express my appreciation of the act of its members and thank them for the honor they conferred upon me; I therefore take this occasion of doing so. Truly, it is an honor to any physician, no matter what his position in life may be, to represent as its official head, a society which can boast of the record which this society has. It is the oldest county or district society in the State (at least I have been so informed), having been established in 1808.

I consider it an honor to any man to be president of any county society in this State, for in every county there is a good number of intelligent and well educated men engaged in the practice of medicine. It has been a custom of this society, like most others of a similar character, for the president at its annual meeting to deliver what is ordinarily termed "an address." I find myself at this time confronted by this responsibility and duty; a duty from which I shrink, for I realize that it is no small task for one to present to this intelligent body anything which will be instructive, or even entertaining. I therefore ask for your charitable consideration of myself and your kind indulgence in what I may present to you for a short time. I have not selected any scientific or strictly medical subject for consideration, for the reason that it seems to me the short time allotted for the president's address should not be devoted to subjects of that character, but should be utilized in the consideration of those matters which relate to the relations which exist, or should exist, between physicians themselves, and those which exist, or should exist, between the profession and the public in general. The time at my disposal will not admit of even a suggestion of all the points connected with any subject to which I shall refer, and only a very superficial consideration of any.

Ours is characterized as an age of progress. Certainly, we are moving at a very rapid pace. Whether it is an age of progress, or whether it is a portion of a great cycle prescribed by destiny in which one event is following another with greater rapidity than has been characteristic of other epochs of the world's history, the future, and that alone, can determine. It is not my purpose to discuss this subject at this time. We must take the present as we find it, and meet the future as it opens up to us. From an economic standpoint ours is an age of combinations—combinations of capital, on the one hand, and combinations of labor, on the other.

Originally, combinations of capital were formed for legitimate protection and the cheapening of the cost of production, and undoubtedly with the intention on the part of those representing capital, of sharing the benefits so derived with the people. But they were not long prompted by such laudable motives. They soon learned that it was possible to control the production, and thereby the price. To-day we find many of the necessities controlled *absolutely* by the "trusts," so called, which have taken to themselves all the benefits derived from cheapened production and raised the price to as high a point as the people will stand—a most gigantic example of the selfishness and avarice of human nature.

Combinations of labor, or labor organizations, were originally formed for the purpose of making their members more proficient, in their several lines of work, by exchanging ideas. Another feature of these organizations in many cases was the provision for aid to the members in case of disability from sickness or accident and perhaps for a benefit to those dependent upon its members in case of death; all which objects were laudable. But those organizations, like the combinations of capital, have in many instances changed. Their objects and aims are not what they were in the beginning. Human nature is the same wherever it is found. These labor organizations have become selfish and avaricious, not willing to stop when they have obtained justice. Instead, their motive is "extortion to the last cent." The result is, that the great mass of humanity which depends upon its labor to provide the necessities of life—and which is unorganized—is unable to do so, owing to the high prices which have been produced by the greed and avarice to which I have referred. While this condition of affairs exists, either the great mass of people to which I have referred must be deprived of those necessities, or the producers of some of them must suffer. The physician is certainly among the last to be remunerated for his services.

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* Delivered at the annual meeting of the Strafford District Medical Society, at Dover, N. H., October 14, 1903, by its president, John H. Neal, M. D., of Rochester, N. H.

Organized society, to-day, considers a physician's services as a necessity. This is evidenced by our laws, which provide for such services in case of the indigent. It is a rule that in the alms houses provision is made for medical aid just as legally as for food, fuel, bed, and raiment. It is a fact, I am sure, that the laws of the land do not provide for any expenditure of money for those things which are not recognized as necessary, unless it be for the purpose of a "graft." And certainly, the salaries of physicians in public institutions generally are not large enough for the most skeptical to be suspicious.

Not only are the physician's services considered to be a necessity, but if he refuses to render aid when he is summoned, he is condemned by an enraged public. The coal dealer refuses to deliver coal unless he is prepaid, and no one finds any fault with him; the grocer likewise. The clothier and the dry goods merchant do a cash business. The unfortunate suffer for the want of fuel, food, and clothing; the physician is called upon as a result.

When we take into consideration the vast amount of work which the profession is doing for the public in the way of preventive medicine, and is oftentimes censured for so doing by those who, ignorant of their trials and sacrifices, condemn them, is it right that the physician should, like the coal dealer, the grocer, the clothier, etc., have one price for all? Should he bear the burden of rendering to the destitute one of the necessities of life when all others refuse to grant necessities without remuneration? I answer, *Yes;* positively, yes, if we cannot solve the problem otherwise. "Two wrongs never make one right." We have boasted that our profession is a liberal and charitable one. Let us so conduct ourselves that we can continue to make that claim. To render service without adequate recompense to those who are able to compensate is neither liberality nor charity.

There is a passage of scripture which reads as follows: "For whosoever hath, to him shall be given and he shall have more abundance: but whosoever hath not, from him shall be taken away even that he hath." I would paraphrase the above in the following manner: "We will render unto all the best there is in us; from him who hath we will demand in proportion to his abundance: but from him who hath not we will make no demand." Such has been the practice of some individuals in the profession. I believe that it should be general.

We have read much from time to time concerning the "hospital abuse," so-called. And certainly it is an abuse. In Strafford county I know of no reason for any complaint in that direction. We have no general hospital into which abuses can creep. In this respect we can repeat in chorus "blessed be nothing." This question, it is evident, does not demand our serious consideration. In fact, I will leave it—so far as it concerns us—with this admonition: Let us see to it that no greater abuse develops in the future than exists to-day. It seems to me that the profession can blame itself for all such abuses as have existed in the past and now exist. A hospital without a physician or surgeon would certainly be an anomaly. I am of the opinion that very little capital would be expended in the erection of hospitals if physicians refused to give their services in their behalf. I am not suggesting the abandoning of hospitals; on the contrary, I consider them a necessity. But it is a reflection upon the profession for its members to give their services for the benefit of those who are amply able to remunerate them or others. But I cannot give the profession the credit of doing this work for humanity's sake entirely; I am satisfied that many do it for personal reasons.

We frequently see articles in the different medical journals with titles such as The Passing of the Family Physician, The Passing of the General Practitioner, The Age of Specialists, etc. One would think from the nature of the titles that the family physician or general practitioner had passed from the field of action or was about leaving it for all time. From reading these articles one would not only infer that the family physician was fast becoming extinct, but one would also think that the era of specialists had recently begun. History informs us that so long ago as the time of Herodotus, specialism in medicine had developed in Egypt to such a degree that there was a specialist for nearly every organ of the body. So, we see that specialism in medicine is not a new feature. These articles sound like the wail of the dyspeptic, the imagination of the hasheesh fiend, the results of the workings of brain tissue influenced by other similar agents, or like articles written by some pessimistic general practitioners who, either from want of adaptability or application, or both, have not been successful. Or they may have been written by some optimistic and enthusiastic specialists who have settled in some localities in which the public is more than ordinarily gullible.

I am satisfied that all such writers are in error. There was never a time when the general practitioner, or family physician, was more in demand than at the present. It is true that his field of operation has changed, but that it has grown less I am not prepared to admit.

Preventive medicine has cut off a large territory, but this has been more than compensated for in other directions. The people are becoming constantly more enlightened and better informed. They realize more and more the importance of sanitation and of a knowledge of preventive medicine in general. They are also more interested in what were formerly supposed to be signs of no significance. Many people, to-day, have a better knowledge concerning certain diseases than the best physicians possessed a few years ago.

How many men present had one patient, fifteen years ago, consult them, during a whole year, fearing that he had appendicitis? How many patients consult each of you every year, now, for that purpose? How many people, twenty years ago, consulted the family physician concerning the headaches of their children when attending school? How many do so to-day. The number of such examples which could be cited is great.

People are more solicitious concerning their welfare than formerly. It seems that the estimate of the value of human life has increased. To whom do the people flee when they are concerned as to their physical welfare? To the specialist? No, certainly not. They consult the family physician. And it is well for them that they do so, for he is the man who is ready to recognize disease, or deviation from the normal, in any locality. He has equal respect for every organ in the body. He examines his patients in an unprejudiced manner and locates the trouble if within his power. When he has done so he may, or may not, need the aid of the specialist. What would be the result if the profession were composed of specialists and specialists only?

I have no desire or disposition to underrate the specialist's services. He is a natural product of civilization; his mission is a glorious one. But his tendency is to overestimate the importance of the organ over which he has special supervision. He is inclined to think that his special pet is the most important of all; that upon its perfectly healthy condition depends the welfare of the whole human economy. The enthusiastic eye specialist is inclined to think that the patient is deluded if he complains of headache and the eye is found to be normal in structure and free from disease; that the reflex nervous disturbances from other diseased organs are hardly worth considering. The gynæcologist is in the same frame of mind; he is of the opinion that the organs over which he has special supervision are the most important. He wonders that any woman complains after he has found the uterus and annexa well developed and in a healthy condition. He, too, feels that she should not suffer from headache. And if she persists in complaining and thereby annoying him, he proceeds to remove from his standpoint what is the only reasonable and scientific cause. Were it not for the general practitioner, my mind's eye can see a great internecine war raging which would threaten the very existence of the profession.

Were the general practitioner's duties only the directing of patients to the proper specialists, even *then* he would be indispensable; to act as a dispatcher, so to speak, similar to the train dispatchers on great systems of railway. Were it not for the careful orders which they issue there would be destruction all over the systems. But do not take this seriously. The general practitioner remains to exercise his judgment, care and caution; and he *will* remain as long as there are any left who believe in the present theories concerning matter, or until all have become daft and followers of that unchristian and unscientific dogma parading itself under the misnomer Christian Science, the chief exponent of which is that illustrious Mary Baker Glover Eddy, whose dicta and platitudes will be handed down in history to generations unborn as on a parity with those of the famous Salem witchcraft.

The general practitioner is progressive and a necessity; the specialist the same. Wherever and whenever the general practitioner has the greatest respect for the specialist, and at the same time and in the same place the specialist has the greatest respect for the general practitioner, there and then the profession will be the most progressive and prosperous and the public the best served.

There is one other question which I will mention, and then I have done. I refer to the dispensing of drugs. It seems to me that the profession has very largely drifted into a most unscientific and expensive habit; one which is expensive, not only to them, but also to their patients, in more ways than one. Many physicians are allowing the manufacturers of pharmaceutical products, so called, to do practically all the prescribing of drugs. Their salesmen make their regular tours, presenting samples of their products to the physicians, of the nature, quality and strength of which they know nothing. They have a prescription in some form or other to meet every indication. A specific for every disease; yes, every symptom. Their principal argument is their cheapness. And, in many instances, they could not enlarge upon that in *one* respect. These concerns have the audacity to send to physicians, in many cases, their preparations in containers on which are found labels stating the indications for their use, the doses and how administered, but not stating the amount of, and in *some* cases, the ingredients themselves. I cannot conceive of an act more audacious. And it is, in my opinion, one of the most serious charges that can be brought against the profession, that it stands this abuse. These concerns cannot be blamed for this condition of affairs. It has been brought about by the consent of the profession, which can also change the condition at its will.

But time will not permit me to continue to discuss this subject further. I will close with the following expression of my sentiment in this matter: Had I the power, I would compel every physician from the Atlantic to the Pacific and from Canada to the Gulf of Mexico to confine himself to the preparations recognized and standardized by the U. S. Pharmacopœia. I am sure that by its frequent revisions, all materials of medicine would be recognized by it as soon as necessity demanded.

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To Enlarge the Medical Department of the University of Syracuse.—That the authorities of Syracuse University are planning to enlarge the scope of the college of medicine is indicated by the purchase of property at the corner of East Genesee and Orange Streets and the securing of an option on adjoining property. It is said that it is planned to establish a college hospital, dispensary and library on the property. The purchase was completed on April 23rd, when Dean James B. Brooks, of the college of law, acting as attorney for the university, filed with the county clerk a deed covering the property, which extends ninety feet along Orange Street and twenty-two feet on Genesee Street.

THE HOPKINS-FOLIN METHOD FOR THE DETERMINATION OF URIC ACID IN URINE.

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NEW YORK,

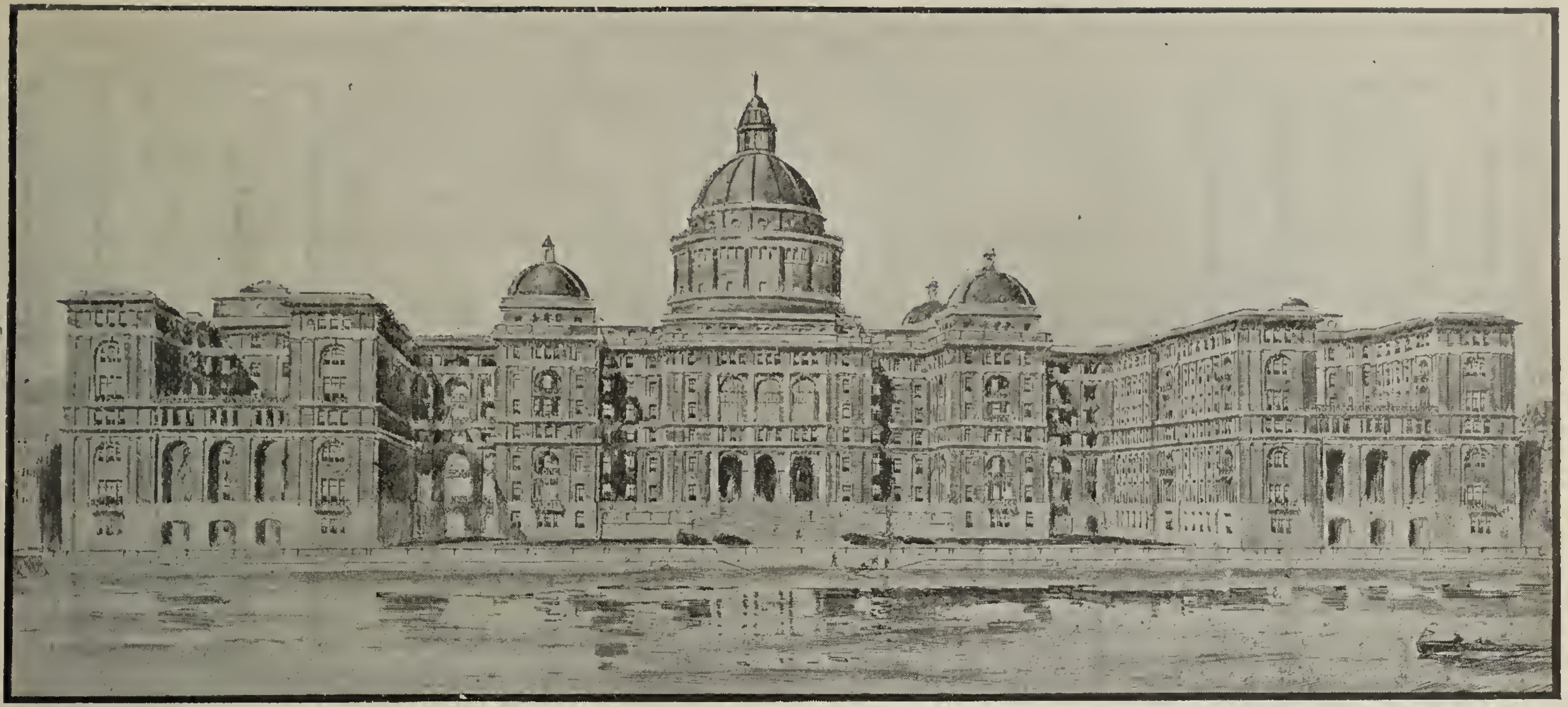
CHEMIST TO THE DEPARTMENT OF PUBLIC CHARITIES OF THE CITY OF NEW YORK, AND CONSULTING CHEMIST TO BELLEVUE AND ALLIED HOSPITALS.

Appreciating the keen interest which would be taken by the medical profession in a description of any new and accurate method for the determination of uric acid in urine, especially when it is known that the older methods are generally faulty, I venture to call attention to the Hopkins-Folin method, which is asserted to be accurate and is now in use in several of the pathological laboratories connected with the hospitals of the Department of Public Charities of the City of New York.

The following reagents are necessary: (1) A solution of 1 litre volume containing 500 grammes of ammonium sulphate; 5 grammes of uranium acetate; 60 c. c. of ten per cent. acetic acid; and distilled water to bring the bulk up to 1 litre. (2) A one twentieth normal solution of potassium permanganate.

The method of procedure is as follows: Place 300 c. c. of urine in a beaker, add 75 c. c. of the ammonium sulphate reagent, and mix thoroughly. After the precipitate has settled sufficiently (say in about five minutes) filter through a double folded filter. When 250 c. c. of the filtrate has passed through, this volume is divided into two portions of 125 c. c. each, to serve as a duplicate. To each portion add 5 c. c. of concentrated water of ammonia, mix thoroughly, and allow to stand over night. The precipitated ammonium urate is then transferred to a filter and washed with a ten per cent. solution of ammonium sulphate. Then wash the precipitate with about 100 c. c. of water into the same beaker, add 15 c. c. of concentrated sulphuric acid, and immediately titrate with $\frac{N}{20}$ solution of potassium permanganate until the first permanent tinge of pink color appears. One c. c. of potassium permanganate solution equals 3.75 milligrammes of uric acid. From this calculate the amount in twenty-four hours.

A shorter process, but one which is less accurate, consists in the precipitation of uric acid with ammonium chloride (30 grammes for each 100 c. c. of urine), allowing it to stand over night, then filtering off the ammonium urate, washing with cold saturated solution of ammonium chloride, and dissolving in hot water (about 100 c. c.), containing about 15 c. c. of concentrated sulphuric acid, and titrating as before.



Architects' Elevation of the New Bellevue Hospital Building.—View from the East River.

THE PROPOSED NEW BELLEVUE HOSPITAL.

The plans for the magnificent new buildings of Bellevue Hospital, which are described in detail below, were first made public by Dr. John Winters Brannan, President of the Bellevue board of trustees, in an address to the students of Columbia University on Friday, April 22nd. The preliminary work of the architects, McKim, Meade & Co., in drafting, represented a single outlay of $75,000, and the construction calls for an expenditure of $15,000,000.

DETAILS OF THE PLANS.

This magnificent building, of which it is hoped the city of New York will approve, is designed to occupy three full city blocks, from Twenty-sixth to Twenty-ninth Streets, and First Avenue to the East River. The extra land alone will cost $1,000,000 and a conservative estimate of the total cost of the institution is $14,000,000. It will be the largest, handsomest, and most completely equipped hospital in the world, and will accommodate some 2,500 patients. Quarters are to be provided for over 100 physicians.

The building material is to be Harvard brick, with light stone trimmings. In the centre will be a dome, 100 feet in diameter and 200 feet in height, which may be utilized to provide apartments for some of the resident staff. It will be surmounted by stone pillars supporting a bronze figure.

In addition to the city property to be purchased, the total structure will require two additional acres to be acquired by changing the bulkheads along the water front. The board of trustees of the hospital has permission from the war department at Washington to make this change and the street cleaning department would aid in filling in the space. The driving of piles would be an expensive item. The building is to be H shaped and, from the prospectus that has been prepared by the architects, is not, in general outline, unlike the Capitol in Washington.

The main part of the building will be 150 feet or more back from the river, and the wings running out on each side will form a large court.

Of course, it is not expected that there will be a demand on the hospital's full capacity as soon as it is built. On the contrary, it is expected that the new institution will meet the demands made by the city's growing population for a considerable time, and, besides, it will, it is said, be possible, with the present plans, to add four more pavilions when they are needed.

It would also be possible to leave off two pavilions of the thirteen that are contemplated in the present plans, and still accommodate 2,000 patients. Under such circumstances the building would probably cost between $8,000,000 and $9,000,000.

The long arms of the building running east and west from the main part will front on Twenty-sixth and Twenty-ninth Streets. The thirteen pavilions will all be under one roof, but between them will be covered arcades to allow a free circulation of air. Only four of the pavilions will face on First Avenue, and they will be used for the alcoholic, insane, and other psycopathic patients, leaving to the others the benefit of the view and the air on the river.

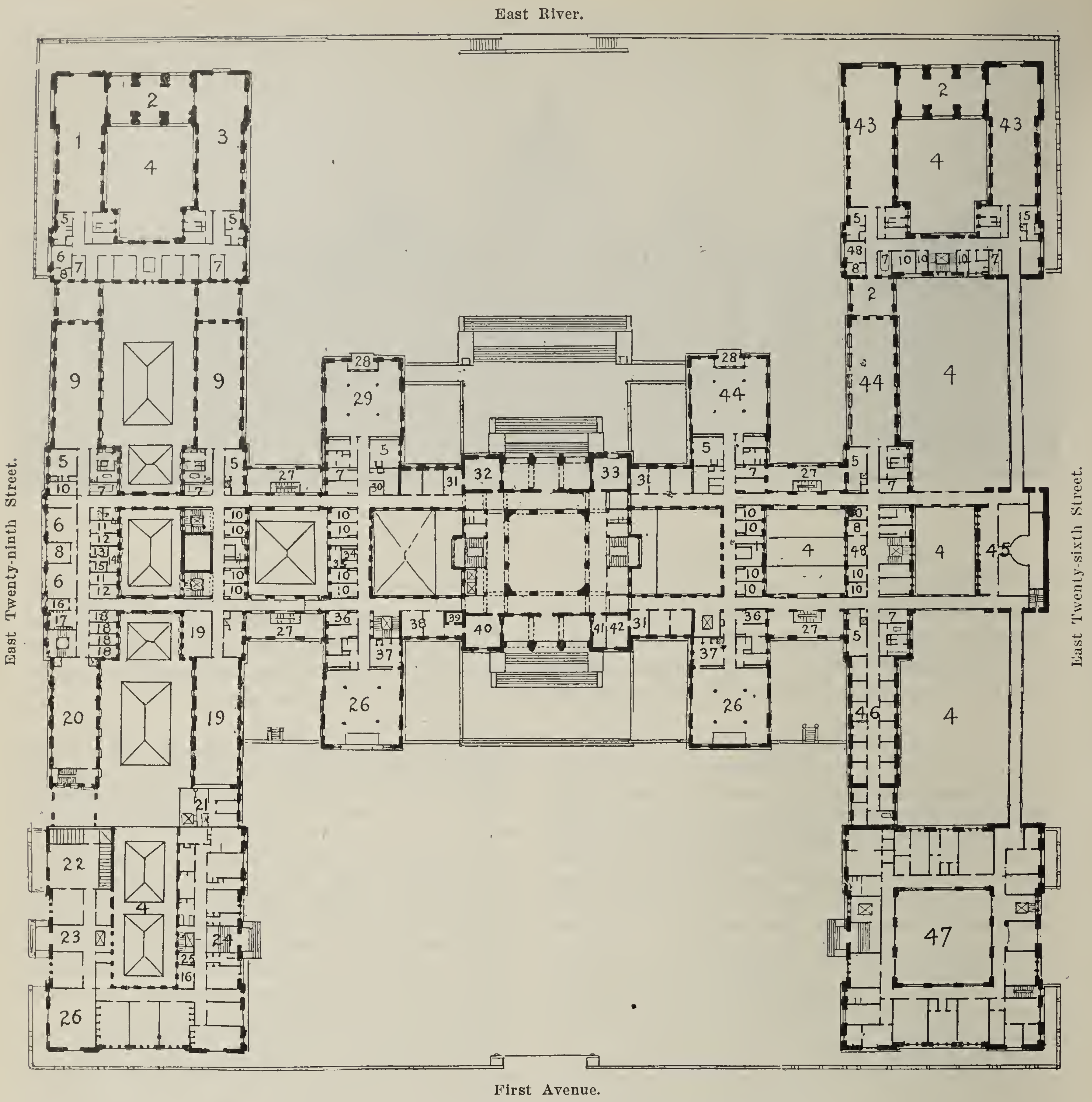
The appearance of the hospital from the river and from First Avenue, where the main entrance will be, will be practically identical, except that, owing to the slope toward the river, the building will be one story higher on that side. It will be seven stories high on the river side. It will be 715 feet from east to west and 712 feet from north to south.

With the exception of the dome over the main part of the building and the curved roofs over four of the pavilions, which the architects, it is said, have added to accentuate the pavilions and lend architectural support to the dome, all the roofs are flat.

Roof gardens will be used by convalescent patients, who will be carried directly to the roof in seven elevators. These roof gardens will have temporary wards accommodating 100 patients. The roof will be surrounded by a four foot parapet.

In the front, as well as in the rear of the hospital, there will be grass plots 300 by 500 feet, on which additional pavilions may be added if necessary.

The administration building, which will contain all the executive offices and libraries of the hospital and will provide quarters for 100 male nurses in the lower portion of



GROUND PLAN OF THE PROPOSED NEW BELLEVUE HOSPITAL.

1. Male orthopædic ward.
2. Open vestibule.
3. Female orthopædic ward.
4. Courts.
5. Diet rooms.
6. Operating rooms.
7. Linen rooms.
8. Clinical laboratories.
9. Wards.
10. Quiet rooms.
11. Preparation rooms.
12. Etherizing rooms.
13. Bandages.
14. Sterilizing room.
15. Instrument room.
16. Toilet.
17. Doctors' dressing room.
18. Recovery rooms.
19. Doctors' dining rooms.
20. Nurses' dining room.
21. Kitchen receiving department.
22. Mortuary.
23. Pathological department.
24. Male servants' dormitories.
25. Bathroom.
26. Chapels.
27. Balcony.
28. Loggia.
29. Male surgical ward.
30. Portable tubs.
31. Stenographers.
32. Supervising engineers.
33. Superintendent.
34. Nurses' closet.
35. Nurses' toilet.
36. Chaplains' rooms.
37. Libraries.
38. Auditor.
39. Vault.
40. Bookkeeper.
41. Visitors.
42. Assistant superintendent.
43. Female medical wards.
44. Male medical wards.
45. Medical amphitheatre.
46. Female suspects' wards.
47. Outpatient department.
48. Teaching room.

the dome, will be reached on both sides by a series of broad stone steps,

Spacious quarters for 100 doctors are provided along the corridors between the central pavilions. The pavilion at the northeast corner of Twenty-sixth Street and First Avenue will have its three lower floors devoted to the out patient department, and will also include the office of the registrar. The three upper floors will contain quarters for 200 women employees.

Directly east will be the ambulance entrance through which patients will be taken at night to receiving wards, accommodating 100, on the ground floor in the centre of the long south wing.

The five upper floors of the south wing will contain the medical wards. The limit of each ward will be twenty-five patients, but several rooms will be connected with each, and may be filled with beds if necessary. The service rooms connected with every ward will be complete and modern in equipment.

A pavilion which will be near the present entrance to the hospital will have the three lower floors given over to the ambulance department and carriage house. The upper part will contain the medical amphitheatre, with accommodations for 200 students.

The west part of the long north wing will have quarters for 350 male employees on the three lower floors, while the upper floors will be devoted to the pathological department. Further east on the ground floor will be the kitchen, storerooms, and the boiler room.

The five upper floors of the north wing will contain the surgical wards. The surgical amphitheatre will be equipped with ten small operating rooms, all within easy access of the various wards and complete in every detail.

The hydropathic department, designed to surpass that of any public, or, probably, even private institution, and to contain bathrooms for both employees and patients, will be on the ground floor of the central pavilion. It will be equipped with all modern apparatus for the treatment of disease by water, and will be one of the most remarkable new features of the hospital.

There will also be an elaborate system of balconies on all sides of the hospital. Each of the ninety-two wards will have either an open or an enclosed balcony of sufficient size to accommodate all the patients in each ward at one time. Two enormous covered arcades facing the river will accommodate all the patients in the hospital at one time, if necessary.

Besides the approval of the board of trustees of Bellevue and Allied Hospitals and the Board of Estimate and Apportionment, it is not altogether improbable that the plans for the new hospital will have to be passed on by the State Board of Charities before they are accepted.

This board will probably request the trustees to submit their plans for approval.

The Bellevue trustees have contended that the city charter and the statutes required them to submit plans for buildings under their jurisdiction to the Board of Charities merely "for advice," which they could follow or not, and not for "approval."

The plans for the new Bellevue Hospital were drawn by Messrs. McKim, Mead, and White, to whom we are indebted for the foregoing illustrations and specifications.

St. Mary's Hospital, Cincinnati, O.—Dr. J. H. Landis, of 815 Race Street, was elected on April 16th to the chair of general medicine and Dr. Park Gilmore was elected pathologist of St. Mary's Hospital to fill the vacancies created by the death of Dr. H. T. Terlinden, of 740 Laurel Street, and the resignation of Dr. H. Freundenberger, of 1418 Race Street. Dr. Carroll W. DeCourcy, of 827 West Eighth Street, and Dr. S. U. Swing, of 123 West Ninth Street, Ohio Medical College graduates, were appointed internes to succeed Dr. Park Gilmore and Dr. Claude Youtsey.

Therapeutical Notes.

For Burns of the First Degree.—*'Ιατρικὴ Πρόοδος* for November 15, 1903, gives the following (a sort of modified "Carron oil"):

℞ Thymol ....60 centigrammes (9 grains);
Linseed oil...............120 grammes (4 ounces);
Sodium bicarbonate........60 grammes (2 ounces);
Lime water...............120 grammes (4 ounces).
M. The mixture is well shaken before use and the burnt surfaces are fully anointed with it, and covered with absorbent cotton.

Or this:

℞ Extract of opium....30 centigrammes (4½ grains);
Ichthyol } of each......12 grammes (3 drachms).
Lanolin
Petrolatum
M. For an ointment.

Anal Fissure.—*Presse médicale,* for March 9, 1904, gives the following:

℞ Extract of belladonna......4 grammes (1 drachm);
Poplar ointment...........8 grammes (2 drachms);
Cacao butter.......enough to make 15 suppositories.
M. One at bedtime; watch for mydriasis, etc.

(The *unguentum populeum* of the French Codex is prepared as follows: Poplar buds, 400 parts; fresh poppy leaves, belladonna leaves, hyoscyamus leaves, fresh leaves of black nightshade, of each 250 parts; lard, 2000 parts; it is much used as a sedative for hæmorrhoids).

Eczema.—*Journal de médecine de Paris,* for January 17, 1904, gives Lassar's formula:

℞ Salicylic acid..............................2 parts;
Zinc oxide } of each.....................25 parts;
Starch
Petrolatum ....50 parts.
M. For an ointment.

Lassar also uses:

℞ Salicylic acid..............................2 parts;
Petrolatum } of each.....................24 parts;
Zinc oxide
Starch.....................enough to make a paste.
M. Use as an ointment.

Besnier's formula is:

℞ Salicylic acid..............................1 part;
Precipitated sulphur........................4 parts;
Petrolatum ....20 parts.
M. Ointment.

The same journal gives, without citing any authority, a fourth formula containing salicylic acid:

℞ Salicylic acid..............................1 part;
Tincture of benzoin..........................2 parts;
Lanolin ....50 parts.
M. Ointment.

The Diet in Epilepsy.—*Journal de médecine de Paris,* for January 17, 1904, gives Schnitzer's views which forbid the use of more than 30 grains of common salt in the 24 hours. The bread should contain, instead of salt, sufficient sodium bromide to supply the patient with 90 grains daily in some thirteen ounces of bread. In addition, the diet allows 3 pints of milk, one and a half ounce of butter, and three eggs without salt. This régime is endurable for about six weeks and often leads to an increase in bodily weight.

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FRANK P. FOSTER, M.D., Editor. KENNETH W. MILLICAN, M.R.C.S., Associate Editor.

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THE NEW BELLEVUE HOSPITAL.

Happily no new argument is now needed to demonstrate the absolute necessity of demolishing the old rookery known as Bellevue Hospital, originally an almshouse, and replacing it with a large hospital, thoroughly modern and well equipped. If any such argument were needed, it would be found at once in the recently reported outbreak of tuberculous disease among the young men of the house staff. It may be said that this was not necessarily due to saturation of the old house with the germs of the disease, but was perhaps a mere incident in the chapter of accidents, favored by the depression of the young men's bodily powers by severe study and overwork. This we do not believe, but, admitting it for the sake of argument, we surely cannot pretend that the infected house officers are so situated in Bellevue as to be able to take advantage of the measures now known to be almost invariably efficient for the arrest of incipient consumption. If they would prolong their lives they must leave their present environment, thereby sacrificing the educational advantages for which they have toiled hard, although we learn that since the outbreak occurred temporary quarters have been provided in the old Bellevue Hospital Medical College building. Let us hope that provision will be made for their reinstatement in office when the new Bellevue is opened.

It is not alone the patients that suffer by the overcrowding of the present hospital; the quarters of the house staff are miserably restricted. Several young men are compelled to occpy the same sleeping room by night after having passed the day in arduous work among the sick. Few, indeed, are the paid domestic servants who would brook such treatment as is given to these young men who, without the slightest pecuniary recompense, are putting forth their best efforts in the saving of life and the alleviation of suffering, animated by the resolve to equip themselves as thoroughly as possible for like work in the field of private practice. No doubt the municipality is now giving them the best treatment possible under existing circumstances, but the circumstances are abominable and it is within the power of the city to change them vastly for the better. The duty to do so is imperative.

We trust it will not be long before the new Bellevue will not only rear its stately front on the East River, but afford to its resident medical officers as well as to the sick and injured all the care that modern appliances are meant to provide. We believe that this will be the case, that the immense new hospital will equal in its resources any like institution now in existence, a boon to the patients and a fitting place of abode for the young men upon whom its work will largely fall.

CAMPHOR, ANOTHER PRODUCT OF ORGANIC SYNTHESIS.

The synthetic feats of chemical experts have, for nearly a century, arrogated to themselves a foremost position among the most impressive records of the achievements of human intellect. When Wöhler, in 1824, announced the synthesis of urea, he forever broke down the consecrated limiting wall which had, throughout all recorded ages of human history, marked off the boundary of the organic and inorganic kingdoms of Nature. He thereby laid the foundation stone of the most advanced and most uncompromising materialism of recent times. His followers recognized no reason why a scientific system which had blown to atoms the previously imagined limitations between living and non-living matter should not progressively proceed to the mechanical manufacture of all the organized products of animal and vegetable existence. And, although such scientific aspirations still lag far in the rear of the desired consummation, the wonders which have from time to time been performed in the department of synthesis since Wöhler's epoch-making achievement might, in former centuries, have well been palmed off as miraculous. Many organic products which are of the greatest value in medicine have been successfully prepared in the chemical laboratory from inorganic materials. Still, it must be acknowledged that the sceptical have in nearly all such purely artificial products discovered—that there was something which was not there; some indescribable quality the absence of which limited the fulfilment of the characteristic functions of the specimen of Nature manufacture. However, the synthetic process advances year by year—almost day by day; and among its latest conquests is the synthesis of camphor on a commercial scale—by special good fortune, it would appear, as the present Russo-Japanese war is likely to interfere seriously with the supply of the natural product. Oil of turpentine is heated with oxalic acid, which forms an oxalate with pinene, the chief constituent of the oil. A formate is also produced, which, when heated with alkalies, yields camphor, carbon monoxide, and water. The camphor is separated by sublimation, from which it condenses in the form of snow-white crystals.

MILKING THE KIDNEY.

If some simple procedure can be substituted for the operation of ureteral catheterism for diagnostic purposes, a considerable advance will have been made. There are two good reasons for making this statement. In the first place, catheterism of the ureter requires special skill; in the second place, the passage of a catheter into a healthy ureter after it has traversed an infected bladder involves grave danger, we may well believe, of carrying the infection deeper, as is pointed out in the *Semaine médicale* for March 30th, in an interesting account of certain procedures proposed and practised by Giordano, of Venice, and Nicolich, of Trieste, for taking the urine from either kidney without the difficulty and danger of ureteral catheterism.

It seems that Giordano's manipulation was devised several year's ago, but it does not appear to have met with much attention. In performing nephrectomy Giordano noticed that when the kidney was gently drawn into the operation wound the urine contained in it was in some way pressed out, so that the first urine passed after the operation contained morbid products. He therefore conceived the idea of mediate renal expression for diagnostic purposes, and carried it out by massage of the kidney. He found that the feasibility of this sort of expression was proved by the presence of blood in the urine after massage of a kidney containing angular calculi. In the diagnostic procedure, after the patient has rested in bed for a few hours, the bladder is emptied, and then one of the kidneys, together with its ureter, is subjected to combined massage of the lumbar and lateral abdominal aspects. The urine that enters the bladder in consequence of this manœuvre is withdrawn, the bladder is washed out, and the procedure is applied to the other kidney.

Nicolich's method differs from Giordano's in the fact that he leaves a catheter in the bladder during the massage, and the urine that trickles from it as the manipulation proceeds shows the differences between the products of the two kidneys. In two instances a diagnosis arrived at on the strength of this device was confirmed by nephrectomy. There appears good reason, therefore, to expect that massage of the kidneys may be made to take the place of ureteral catheterism. As it is simple of application and, properly carried out, probably free from all danger, one would think that it ought to become the recognized diagnostic resource as a preliminary to nephrectomy. The credit of it, of course, belongs to Giordano, Nicolich's procedure being only a modification.

THE MENTAL DISEASES OF CHILDHOOD.

II.

The second great group of mental diseases of childhood are the acute and subacute forms which in many respects most nearly simulate the adult forms. As a rule, these are all acquired and depend upon some acute ætiological factor, such as traumatism, infection, or mental shock. At present there is no satisfactory subclassification of these troubles. Their nomenclature is still largely symptomatic and their pathogenesis involves mostly a toxic or traumatic disturbance of the cortex. Heredity plays but a minor rôle in these cases. The acute manias and deliria are by far the most frequent among them. Next come the acute melancholias, and after these a long list of psychoses described, for want of more accurate knowledge, as choreic, hysteric, cataleptic, and epileptic insanity, transitory psychoses, pavor nocturnus, and all forms of acute delirium and mental aberration provoked by fright, reflex irritations, traumatic injuries, febrile diseases, masturbation, etc. The prognosis of these cases is usually good. The treatment involves the removal of the obvious cause and a change of environment, with appropriate medicinal tonics, sedatives, stimulants, and the special remedies called for by the underlying ætiological factor. In some cases psychic and disciplinary treatment is of the highest value. It is this great group of acute insanities that add especially to the responsibility of the family physician. His management of them may be the means of turning the scale in favor of ultimate mental health or hopeless invalidism.

A third group of the mental diseases of childhood may be classified under the general head of dementia præcox. Heredity as a causative factor here plays a most significant rôle. It partakes more especially of the nature of a neuropathic taint. The exciting causes are usually psychic traumata and mental strain. Unlike the idiots and imbeciles, the precocious dements do not so uniformly reveal gross physical stigmata, a fact which oftentimes assists most materially in making a diagnosis. Moreover, there is a difference in the hereditary history between this third and the first class of infantile insanities. Prenatal injuries and fœtal troubles of a more or less gross character are found in the causation of the latter, while the finer, intangible influences spoken of under the terms racial and familial traits, temperament and nervous constitution are found in the former. Most of these cases used to be referred to as cases of moral insanity, as the insanity of puberty and of adolescence. These children are usually born apparently normal. For a few years they seem to live the healthy life of all children. Ere long, however, they begin to manifest a marked degree of precocity. They are the brilliant, and therefore the pampered, ones of the family circle. They soon tyrannize over or live solitary apart from their playmates. They are great readers and memorizers, and are often regarded as intellectual wonders. They are sensitive and egotistical, and so become moody and unsocial. Not infrequently they show marked talent, almost genius, for music, mathematics, versification, and drawing. They are not particularly inventive. In fact, close examination demonstrates that they are rather automatic, at least in the higher planes of mental activity. They are singular, eccentric, impulsive, and wayward, a fact which sometimes gives them the appearance of being original. They are highly emotional, and hence artistic; they are strenuous, but not intellectually industrious and systematic. They seem to have plenty of initiative force, but very little staying quality. Their enthusiasm is intense, but temporary and flighty. At times they are positively whimsical and silly, which by fond parents is mistaken for being "cute," brilliant, and shrewd. Sexually they develop early, and thus manifest all the good and bad symptoms of premature love. They are at times really shrewd and keen-witted, and this, added to their selfishness, fosters lying, cheating, stealing, and other forms of deception. They are often cruel. Being at an age before the full development of conscience is possible, they ofttimes seem to be absolutely devoid of all moral attributes. They are decidedly immoral at times. They are given to violent impulses and sometimes violence of the most heartless sort. These impulses frequently pass into acute mania with persistent and impulsive ideas like those of pyromania, kleptomania, nymphomania, "'phobias," and other obsessions. As they are often on the borderland of insanity, it is extremely difficult at times to decide whether to send them to a penal institution or an asylum. When they approach puberty, or when some unwonted mental strain falls upon them, such, for example, as the cares of married life, they soon develop a condition of dementia which rapidly deepens until in the course of three or four years death puts an end to it. Early in the period of dementia there are alternations of melancholia with mania, delirium, or excited silliness. Stupor, indifference, and drooling quietude usually appear toward the end.

At present there are recognized three varieties of these precocious dements. The first are classified under the name of hebephrenia, and answer pretty nearly to the foregoing description. The second class includes the katatonias, which are notable for their great motility and activity in association with the dementia. The third variety, classified under the head of dementia paranoides, includes the adolescent paranoiacs who are possessed with more or less systematized delusions.

The prognosis of dementia præcox is, generally speaking, bad, for it is a congenital, degenerative trouble. The subjects are always troublesome and dangerous. The only treatment that is of any avail is the prophylactic. This is primarily nutritive and disciplinary. In some cases, when it is instituted early enough, such treatment may check the progress of the disease and transform the individual into a useful, or at least a safe, member of society. The supreme duty of the practitioner in regard to these cases is to recognize them early, so that proper measures may be suggested to the parents concerning nourishment, discipline, and education. Later on, the majority of the subjects should be sent to an asylum, both for their own good and for the good of society.

L. Harrison Mettler.

THE ARMY MEDICAL DEPARTMENT.

We are glad to be able to state that the bill to increase the efficiency of the medical department of the army (S. 4838) has made progress, since its introduction into both houses of Congress, although the action of that body has not been as prompt as the medical profession of the country had a right to expect. In the Senate the bill was approved by the secretary of war, it has received a favorable report from the military committee, and its passage may be considered a matter of course, although it will probably not be taken up before next fall.

An effort was made by friends of the bill in the Senate to incorporate its main features as a rider to the military academy bill, but this was thrown out on a point of order. In the house, the committee on military affairs has given a hearing to the surgeon general in advocacy of the measure, and, in view of the early adjournment of Congress, which will probably occur before this copy of the *Journal* reaches its readers, action on the part of the committee is improbable.

As, therefore, this session of Congress does not terminate until the fourth of March next, it retains its position in the calendar, and the prospects are auspicious for its passage during the first two months of next year.

The fact that the medical reorganization bill is approved without change by the Senate military committee, whereas the bills recently considered for increasing the number of the engineers and ordinance corps of the army, which had likewise been approved by the general staff and secretary of war, received considerable pruning at the hands of the committee, would seem to indicate that the medical department had made out a strong case in favor of their bill.

"RADIUM FROM A SILVER COIN."

A London dispatch to the *Sun* says that the *Pharmaceutical Journal* suggests that "chemists follow the example of one who obtained a small tube of five milligrammes of radium bromide series out of half a crown in an hour." This is probably an accidental perversion of the announcement that a London "chemist" (apothecary) was letting out a tube of radium to physicians at 2s. 6d. an hour.

AN ALLURING OFFER.

We have received a letter in which the writer asks us to coach him as to the treatment of all his difficult cases and to advise him as to a course of study. He says (taking it for granted that we will accept his proposition): "I will subscribe for your journal and read it all the time I can spare." This is indeed a flattering offer, but, as we are not in the business of teaching medicine by correspondence, we have felt constrained to decline it. We presume the writer is a "hold over" from the period antedating the medical practice act of his State.

THE XIPHOID CARTILAGE IN SYMPTOMATOLOGY.

It is well known that the ensiform cartilage is often misshapen or misdirected, but we fancy that M. Sabrazès (*Gazette hebdomadaire des sociétés médicales de Bordeaux,* November 15th; *Journal des praticiens,* April 9th) brings forward a novelty when he connects these deviations with certain diseases. He says that in myelogeneous leucæmia the cartilage is hook-shaped, and pressure on it is very painful; that in gastric affections with fermentation and in dilatation of the stomach it is exquisitely sensitive; and that xiphoidalgia is a veritable obsession with certain subjects of hysterical neurasthenia.

News Items.

Society Meetings for the Coming Week:

Monday, *May 2nd.*—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society.

Tuesday, *May 3rd.*—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City) (annual meeting); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

Wednesday, *May 4th.*—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; New York Genitourinary Society; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

Thursday, *May 5th.*—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

Friday, *May 6th.*—Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; the Manhattan Cilnical Society.

Saturday, *May 7th.*—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

Change of Address.—Dr. J. J. McPhee, to 124 West Seventy-seventh Street.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending April 23, 1904:

	Week end'g April 16.		Week end'g April 23.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	1,416	34	1,630	37
Diphtheria and croup	415	56	391	53
Scarlet fever	466	28	436	32
Smallpox	1	..	2	..
Chickenpox	73	..	83	..
Tuberculosis	481	210	381	202
Typhoid fever	16	6	29	5
Cerebrospinal meningitis	..	45	..	55
Totals	2,868	379	2,952	384

The Coney Island Emergency Hospital was formally opened on April 17th.

St. John's Hospital, Long Island City, netted about $5,000 from the benefit matinee of *The Shepherd King* at the Knickerbocker Theatre on April 21st.

The Swedish Hospital Society, of Brooklyn, at its fair in the Fourteenth Regiment Armory, which closed on April 23rd, netted nearly $15,000 for the hospital.

New York County Medical Association Election.—At the annual election of the New York County Medical Association on April 18th at the Academy of Medicine, Dr. Francis J. Quinland was elected president, Dr. H. A. Dodin first vice-president, Dr. S. Busby Allen second vice-president, Dr. W. R. Stone secretary, Dr. J. J. Nutt corresponding secretary, and Dr. Charles E. Denison treasurer. Dr. Alexander Lambert was elected to the executive committee.

The Concert at Manhattan State Hospital, West, on May Day, Monday, May 2, 1904, comprises the following programme. The exercises will begin at 10 a. m., as follows: March, *Jersey Carnival,* by Lieberfelt, Orchestra; May Song, *Chorus with Orchestra Accompaniment,* by Mozart; Cornet Solo, *Remembrance of Liberati,* by Casey, Mr. John J. Miller; May Pole Dance; Song, *May* (Folk Song); Calisthenic Drill; Waltz, *O Lovely May,* by Strauss; March, *King Carl,* by Unrath, Orchestra; Dancing; Refreshments. Music by Orchestra of the Manhattan State Hospital, West, under the direction of Mr. George Kazamek.

Dr. Darlington Desires Reports of Cases of Malarial Fever.—On April 20th, Dr. Darlington in a communication regarding anopheles, said in part:

> Special efforts will be made in the boroughs of the Bronx, Queens, and Richmond, where the little pests breed. It is greatly desired that all members of the medical profession will at once notify the department of health of all cases of malarial fever which come under their observation. It has been proved beyond peradventure that cases of malaria are transmitted by means of the bite of the anopheles mosquito. In most instances the occurrence of a case of malarial fever in a certain locality means the existence of a breeding place of the anopheles close by.
>
> It is now a part of the routine work of the Department of Health to make free microscopical examination of the blood of the malaria parasites, and any physician can have such an investigation made on request.
>
> Mosquitoes require for their development from the egg stagnant water. A single crop soon dies and disappears, unless the female finds water on which her eggs may be laid. In order to prevent, therefore, the breeding of mosquitoes, no water should be allowed to stand uncovered where mosquitoes can breed.
>
> Where tanks, cisterns, wells or springs must be had to supply water, the openings to them should be covered with wire gauze. When neither drainage nor covering is possible, a thin film of kerosene oil should be spread over the surface. This checks and kills the larvæ. An ounce of oil is sufficient to cover fifteen square feet. The oil, owing to evaporation, should be renewed once every five or six days during warm weather.
>
> It is earnestly desired that any standing water may be dealt with as above outlined, or information at once furnished to the board of health of its locality that it may be inspected, and a legal remedy, if possible, be applied against its continuance as a menace to health and comfort.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g April 16.		Week end'g April 23.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	25	5	32	9
Diphtheria	79	14	83	14
Scarlet fever	84	2	88	3
Typhoid fever	359	29	352	14
Consumption	..	71	..	88
Cerebrospinal fever	..	..	..	..

The Jewish Maternity Association of Philadelphia will hold its thirtieth annual meeting at the Jewish Maternity Hospital on May 1st.

Leprosy was recently discovered in Philadelphia, and has stimulated interest in the proposed bill for the establishment of government retreats for those afflicted with the disease.

Dr. Ranale C. Rosenberger, of the Jefferson Medical College, has been appointed pathologist to the Phipps Institute for the Study, Prevention, and Cure of Tuberculosis.

Illegal Practitioners of Medicine will soon be rigidly prosecuted in Philadelphia. It is stated that about one hundred cases are being investigated by the county medical society.

Philadelphia Hospital.—Inmates of the insane department have prepared some embroideries and needlework, which are being offered for sale on the boardwalk, Atlantic City.

Typhoid Fever is still prevailing in virulent form in Philadelphia, and exists to an almost alarming degree in the section of the city lying west of the Schuylkill river.

The Philadelphia Home for Incurables, the managers of which have appealed for funds to erect an annex for the treatment of cancer, has been the recipient of donations aggregating $22,000.

Appointment of an Assistant Medical Inspector.—Dr. Martin J. Nevinger, of 215 West Dauphin Street, was appointed on April 18th an assistant medical inspector, vice Dr. Arthur Hartley, resigned.

Violation of Food Laws.—Six men were prosecuted in Philadelphia last week for selling adulterated port wine, blackberry brandy, vanilla extract, and raspberry extract, and for violation of the oleomargarine law.

Philadelphia Diphtheria Hospital.—Plans for the diphtheria annex to the new Municipal Hospital have been approved, and the erection of the building will soon begin. It will have the latest appurtenances for disinfection and isolation.

The Pasteur Method for the treatment of persons bitten by dogs was employed last week for the first time in Philadelphia. It was through the courtesy of the State Board of Health of New York that the treatment was inaugurated.

A Case of Hæmorrhagic Smallpox, which was said to have been incorrectly diagnosticated as scarlet fever, caused the inhabitants of two blocks in Philadelphia to be vaccinated. It was found that smallpox existed within a radius of one block of the infected house. There has been a slight increase of cases this week.

Dr. George I. McLeod, of Philadelphia, who was injured last fall by being run over by a train at Ardmore, Pa., was heartily welcomed and made the recipient of many congratulations on his recovery at the thirteenth annual reunion of the class of '91 of the University of Pennsylvania, held at the University Club of Philadelphia last week.

Bequests to Hospitals and Asylums.—The testament of George Huster, who died at St. Joseph's Hospital recently, leaving property valued at about $23,000, admitted to probate on April 21st, contains the following devices to charities: St. Vincent's Orphan Asylum, Tacony, $1,000; Little Sisters of the Poor, Eighteenth and Jefferson Streets, $5,000; Little Sisters of the Poor, Germantown, $500; St. Mary's Hospital, $1,000; St. Joseph's Hospital, $1,000; St. Vincent's Home, $500; St. Vincent's Home Maternity Hospital, $500; Catholic Home for Destitute Children, $500; St. Agnes's Hospital, $1,000.

GENERAL

Statement of Mortality in Chicago, Ill., for the Week Ending April 23, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on the United States Census Bureau's estimated midyear populations of 1,873,880 for 1903, and of 1,932,315 for 1904:

	April 23, 1904.	April 16, 1904.	April 25, 1903.
Total deaths, all causes	643	616	639
Important causes of death—			
Acute intestinal diseases	24	24	24
Apoplexy	19	17	11
Bright's disease	54	39	30
Bronchitis	21	28	28
Consumption	75	78	64
Cancer	23	23	21
Convulsions	16	16	15
Diphtheria	8	6	14
Heart disease	57	50	38
Influenza	5	3	7
Measles	1	1	19
Nervous diseases	24	29	26
Pneumonia	141	111	163
Scarlet fever	6	9	11
Smallpox	0	0	2
Suicide	11	7	7
Typhoid fever	7	10	8
Violence (other than suicide)	28	36	23
Whooping cough	0	1	7

The pneumonia mortality has already broken all April records. During the first twenty-three days of the month 403 deaths were reported—a daily average of 22.1. The April daily average for the previous fourteen years had been 12.4. For the current month the daily deaths from pneumonia have been 78 per cent. higher than usual.

Following are the figures for the cities of New York and Chicago during the present season, November 1, 1903, to April 23, 1904, inclusive—175 days:

	New York.	Chicago.
Total deaths, all causes	38,364	14,229
Deaths from consumption	4,299	1,498
Deaths from pneumonia	7,091	3,109
Proportion per cent. of all deaths—		
From consumption	11.2	10.5
From pneumonia	18.4	21.8

Scott County, Ky., Medical Association.—This association was organized recently with the following officers: President, Dr. Levi McClain; vice-president, Dr. Thomas Close; secretary, Dr. J. E. Blery.

The Tri-State Medical Society of Iowa, Illinois, and Missouri will meet in St. Louis, June 15th, 16th, and 17th. An interesting programme is being prepared, and some of the most distinguished physicians and surgeons of the country will attend the meeting. The president is Dr. W. B. La Force, of Ottumwa, Iowa; and Dr. Louis E. Schmidt, of 1003 Schiller Building, Chicago, is the secretary. Dr. James Moores Ball, of 3509 Franklin Avenue, St. Louis, is chairman of the committee of arrangements.

Dr. Anita Newcomb McGee and her party of American volunteer nurses arrived at Yokohama, Japan, April 23rd, en route for the seat of war.

The Physicians of Clinton County, Ky., have organized a medical society with the following officers: Dr. W. F. Cartwright, president; Dr. J. A. Grider, vice-president; Dr. J. A. Sloan, secretary and treasurer.

Sullivan County, Ind., Medical Society.—The officers of this society for the current year are: President, Dr. E. D. Thistun; vice-president, Dr. Arbaces Cushman; secretary-treasurer, Dr. C. F. Briggs.

Jefferson County, Ky., Medical Society.—At the seventh stated meeting of this society on April 19th officers were elected as follows: President, H. Horace Grant, M. D.; vice-president, Joseph Hopson, M. D.; treasurer, Sidney J. Meyers, M. D.; secretary, Henry Enos Tuley, M. D.

The Georgia Medical Society, at its recent meeting in Macon, elected the following officers for the coming year: President, Dr. W. D. Travis, of Covington, Ga.; vice-president, Dr. J. D. Dabney, of Birmingham, Ala., and secretary and treasurer, Dr. J. R. Burdette, of Tennille, Ga.

Licensed to Practise in Minnesota.—The following gentlemen were licensed to practise in Minnesota on April 22nd: Adolph E. Voges, of St. Paul; Harvey J. Forbes, of New Hampton, Iowa; Rasmus V. Williams, of Minneapolis; M. W. H. Bockman, of St. Paul; Albert W. Skelsey, of Fargo, N. D.

The Mississippi State Medical Association, before adjourning at Jackson on April 22nd, elected the following officers: President, Dr. T. J. Mitchell, of Jackson; vice-presidents, Dr. W. C. Spencer, of Verona; Dr. H. Chrismas, of Tchula, and Dr. C. M. Murnay, of Ripley; secretary, Dr. J. J. Harralson, of Forest; treasurer, Dr. J. F. Hunter, of Jackson.

The Florida Medical Association closed its annual session at Live Oak on April 22nd, after electing the following officers: President, Dr. E. N. Liell, of Jacksonville; first vice-president, Dr. J. W. Jackson, of Miami; second vice-president, Dr. J. F. McKinstry, of Gainesville; third vice-president, Dr. J. S. Holmes, of Tampa; secretary and treasurer, Dr. J. D. Fernandez, of Jacksonville.

New Hospital at Rosedale, Miss.—The Virginia McGuire Circle of the King's Daughters at Rosedale have just completed their new charity hospital and expect to dedicate it some time next week. It is a neat two story ten room cottage, with bathroom, operating room, and all necessary conveniences. The building cost about $2,000 and is very creditable to the good women who have labored so faithfully for its construction.

Tulane University, La., Receives One Million Dollars.—Under a decision rendered by the State Supreme Court on April 25th, Tulane medical college receives the bulk of the estate of the late A. C. Hutchinson, who at the time of his death was President of Morgan's Louisiana and Texas road. Mr. Hutchinson's estate was valued at nearly $1,000,000, and most of it was left to Tulane University for the use of its medical college in the establishment and maintenance of a clinic and hospital for the sick.

Shelby County, Ky., Medical Society.—At a meeting of the Shelby County Medical Society, at Shelbyville, Ky., Dr. T. E. Bland was elected president for the ensuing year. Dr. Frank M. Beard was elected delegate to the State Medical Association, which meets in Lexington, Ky., May 18th.

German Hospital, Buffalo, N. Y.—The following officers have been chosen by the staff of physicians and surgeons of the German Hospital: President, Dr. Charles H. W. Auel; vice-president, Dr. Marcello Hartwig; treasurer, Dr. John G. Meidenbauer; secretary, Dr. Frederic Zinzsheim. This makes the fourth successive time Dr. Auel has been elected president of the staff.

Internes for the Jewish Hospital of Cincinnati, O., were elected by the staff of that institute on April 16th, as follows: Dr. O. D. Barker and Dr. Charles D. Heisel, of the Ohio Medical College, and Dr. Rufus Southworth, of the Miami Medical College. The following were elected alternates: Dr. Harry A. Greenwald and Dr. B. W. Chidlaw, both graduates of Miami Medical College.

Christ Hospital, Cincinnati, O.—Dr. Fannie M. Hollingshead, a student of the Miami Medical College, was the successful competitor for the interneship for Christ Hospital recently. Miss Hollingshead is the granddaughter of the late famous actor, James E. Murdoch, and is a graduate of the University of Cincinnati, and will graduate from the Miami Medical College in a few months.

New Wisconsin Medical Society.—The physicians of the tenth congressional district have organized a district medical society at Rhinelander, Wis. The cities represented at a recent meeting in that city were Tomahawk, Minocqua, Antigo, Three Lakes, Hazelhurst, Ashland, Hurley, and Rhinelander. Officers were elected as follows: President, Dr. Steffins, of Antigo; secretary and treasurer, Dr. Landau, of Hurley. The next meeting will be held in Ashland, September 15th.

Central District, I. T., Medical Society.—The Central District Medical Society has closed a two days' session at Krebs, I. T. Officers for the ensuing year were elected as follows: President, Dr. David Gardner, of Lehigh; vice-president, Dr. F. L. Watson, of Alderson; secretary-treasurer, Dr. LeRoy Long, of South McAlester. Each of the district societies in the Territory is appointing a committee on public health and legislation, which expects to do considerable work in the early legislation of the State.

Minnesota State Board of Health.—Dr. Henry Hutchinson, of St. Paul, was elected president of the State board of health and vital statistics on April 12th, to fill the vacancy caused by the death of Dr. Franklin Staples. Dr. Hutchinson was appointed a member of the State board of health in 1895, and since January 12, 1897, has served continuously as vice-president. Dr. W. H. Rowe, of St. James, was, on the same date, chosen vice-president of the board to succeed Dr. Hutchinson.

Nurses Graduate at Alma, Mich.—The graduating exercises of the Alma training school for nurses was held at Alma sanitarium on April 15th. The graduates are: Misses Elizabeth A. Walker, Esther L. Nash, of Marlette, Mich.; Sarah A. McBryan, of Jura, Ont.; Harriet MacBrawn, of Nashville, Mich.; Mary A. Schultz, of Johnstown, Pa.; Linda Brady, of Clifford, Mich.; Alice M. Blackwell, of Detroit, Mich.; Martha R. Kirker, of Owosso, Mich.; Maude Campbell, of Forest, Ont. Dr. David Inglis, of Detroit, delivered the address before the graduates.

A Tuberculosis Hospital for Ohio.—A bill appropriating $35,000 for purchasing ground for a tuberculosis sanitarium has been passed by the Ohio legislature. Ohio has State hospitals for several other prevalent diseases, but has never made a move before for the treatment of lung troubles. It is claimed that the air is just as good there as in other States, and that the treatment of this disease should be successful. Cincinnati physicians are said to be making plans to secure the location of the sanitarium near that city, but it is not known as yet what will be done in regard to this matter. It is probable that some point will be chosen with a high altitude and pure dry air.

Civil Service Examinations for New York State and County Service.—The State Civil Service Commission announces general examinations to be held May 21, 1904, including the following positions: Apothecaries in State hospitals and institutions, resident physician and superintendent of nurses at the State hospital for tuberculosis, assistant in the State library, physicians in State hospitals and institutions for both regular and homœopathic schools. Applications for these examinations must be made on or before May 16th. General examinations for stenographers will be held from May 25th to June 30th. Full particulars of the examinations and blank applications may be obtained by addressing the Chief Examiner of the Commission at Albany.

Nurses Graduated from Ohio State Hospital, Cleveland.—Graduation exercises for fifteen young men and women who have finished their course as nurses at the State hospital were held in the assembly room of the hospital at 7.30 o'clock, April 19th, in the presence of a large assemblage. The graduates have concluded a two years' course at the hospital, in which rigid instruction in the various branches of the profession has been given. The members of the class are: Clifford J. Berry, Emma J. Ford, Charles O. Jones, George H. Justice, James C. Bates, Ida A. Kauffman, Perry T. McNeil, Sophia A. Willey, James C. Callahan, Charles Gamber, Wiliam B. Santry, Frances Addleman, William N. Martin, and George H. Graham.

Graduates of Kansas City, Mo., Medical College.—The thirty-third annual commencement of the Kansas City Medical College was held in Central High School auditorium, on April 13th, at 8 o'clock. The address was made by the Reverend C. S. Nussbaum, secretary of the Kansas Chautauqua assembly at Ottawa. After the commencement exercises a banquet was held at the Coates house. Included among the speakers were Chancellor Strong, of the University of Kansas; Professor Ernest McAfee, of Park College; Father Dalton, and Howard M. Holden. The graduating class numbers thirty-four. The members of the class are:

William E. Abrams, Alonzo R. Adams, William E. Albright, Charles M. Bertholf, Frank R. Blake, William Brumm, David B. Buhler, Leland G. Brentlinger, William H. Carter, Lewis Carthrae, Jr., Heaton G. Daughters, Harry W. Edgerton, Henry Z. Ewing, Herman E. Gimler, Charles S. Hershner, Ralph W. Holbrook, Franklin T. Johnson, Hiram S. Lambdin, Louis A. Milne, Joseph A. Mollison, Charles E. McKittrick, William H. Neel, Walter J. Nichols, John H. Powers, William Richardson, John H. Saylor, Frank W. Shelton, Thomas E. Smith, Frank B. Taggart, Marion Trueheart, Floyd E. Wallace, Walter L. Wilson, Ozra Wright, Douglas Wyatt, Jr.

The Associated Health Authorities and Sanitarians of Pennsylvania, whose annual meeting will take place at Gettysburg on May 26th and 27th, have arranged the following programme: Annual Address before the State board of health, by Dr. Cressy L. Wilbur, How Can Pennsylvania Secure Effective Registration of Mortality Statistics? This will be followed by an illustrated address by Morris Knowles, chief engineer of the department of public works, Pittsburgh, Observations on the Relation of Water Supplies to Typhoid Fever in the Cities in the Western Part of Pennsylvania. Papers will be read by Dr. George G. Groff, chairman of the committee on preventable diseases, of the State board of health, on Our State Sanitarium for Consumptives, and on Notes on a Year's Work with Smallpox; by Dr. Benjamin Lee, secretary of the State board of health, on Butler's Lessons; by Dr. Wilmer R. Batt, quarantine officer-at-large, detailing his experiences in the suppression of smallpox in the western part of the State; by Dr. Robert S. Maison, county quarantine officer of Delaware county, on The Practical Control of Smallpox Epidemics; by Dr. H. B. Bashore, county quarantine officer of Cumberland county, on The Growing Needs of Suburban Sanitation. Other representative sanitarians will speak.

University Medical College, Kansas City, Mo.—The following gentlemen graduated from this institution on April 7th:

Wilson R. Adams, Delbert C. Adcock, Harry C. Antle, John B. Armstrong, Weldon H. Ball, George W. Belshe, Richard L. Bills, William I. Benson, Benjamin Belove, Claude E. Burtch, Guy N. Coonrad, Frederick L. Dod, J. N. Dieter, Charles H. Fortner, George N. Fleming, Theodore N. Foster, John Fowlston, J. M. Francke, J. Dale Graham, William F. George, Benjamin E. Garrison, George W. Green, Joseph W. Greene, Sheldon B. Hewett, William W. Hobbs, Albert Huber, Carroll A. Johnson, Paul A. Johnstone, John D. Jordaan, Harry N. Krohn, John T. Kennedy, Noel E. Lake, Joseph A. Lamb, Charles W. Lawrence, Clemens C. Lewis, John A. McMaster, John F. Mackey, Alva B. Mulvany, James H. Morgan, Lon C. Morrison, Francis J. Moffett, August A. Meyer, Thomas W.

Meyers, Henry A. Nave, Arthur H. Nossaman, Joseph L. Owens, Michael J. Owens, John Z. Parker, Edward M. Palmer, William J. Pigg, Lester D. Riggs, W. J. Robinson, James M. Robinson, Joseph H. Robinson, William A. Shelton, Dwight C. Smith, Ernest G. Simon, John H. Schrant, Nehemiah I. Stebbins, William F. Schoor, Benjamin F. Staver, Clifford D. Taylor, Ralph E. Weller, Sanford E. Wells, Harry J. Willey, William J. Lynn, William Beckmann.

The following nurses graduated from the training school:

Edna D. Henry, Anna Anderson, Myrtle A. Badger, Etta Lee Gowdy, Magdaline Igel, Laura E. Miller, Frances A. Gates, Josephine Worley, Myrtle E. Wright.

Mercy Hospital, Denver, Col.—Ground was formally broken, March 29th, for the erection of the new addition to Mercy Hospital, Sixteenth Avenue and Milwaukee Street. The improvement will cost $50,000. It will be a three story modern building, brick and stone furnishings, and will contain seventy-five spacious rooms off large halls. The equipment and furnishings will be of the most modern. Everything was in readiness for the ceremony at 8 o'clock, when Mother Xavier, sister superior of the institution, and Sisters Mary Ann, Mary John, Gregory, Anthony, and Stanislaus, also Dr. F. W. Kenney, Dr. C. B. James, Dr. R. A. Moser, house physician, and Dr. Dennis Murto, member of the advisory board, repaired to the site of the proposed new structure and went through the formal ceremony of throwing out the first shovelfuls of dirt from the foundation. The dimensions of the buildings will be 75 by 125 feet. The contract for the improvement was let by the board of the institution, according to the plans that had already been accepted. Work was inaugurated March 29th. It is proposed to have the addition completed and in readiness for occupancy before the summer closes. While this institution is comparatively young, it has grown so rapidly as to require an extension in point of space.

Presbyterian Hospital, Allegheny, Pa.—Greater Pittsburgh is to have a hospital, on the top of which will be a solarium or roof garden. It will be the only institution of the kind in that section of the country having this feature. The innovation and improvement will be embraced in the proposed new building of the Presbyterian Hospital, which will be located on the northwest corner of Sherman and Montgomery Avenues, Allegheny. The new building must be ready for occupancy by April 1, 1905, as the institution must vacate the premises it now occupies on Walker Street. In a short time the plans will be drawn and work on the building will begin early in the summer. The building will be five stories high and equipped with all the latest accessories of a hospital. The number of patients will be limited to 100, but the efficiency of the service will be of the best. It will cost $200,000. The annual meeting and commencement exercises of the training school for nurses of this hospital were held April 24th. Etta E. Watters, Clara E. Steur, and Harriet M. Beekman were the graduates. The exercises were held in the North Presbyterian Church, Lincoln Avenue, Allegheny. An address was delivered by the Reverend T. Ross Paden and an address to nurses by Dr. William M. Beach. After the exercises a reception was held in the new annex on Walker Street.

The Medical Department of the Army.—In the opinion of congressmen interested in military legislation, according to the *Army and Navy Journal* for April 23rd, there is not the slightest hope for the passage this session of the bills for the reorganization of the ordnance and medical departments of the army. The bills have been considered by the Senate committee on military affairs and may, both of them, receive favorable reports before adjournment. In view of the fact, however, that it is known in congress that the general staff of the army is at work on a bill meant to remedy any existing defects in the organization of the various staff departments and corps, it seems to be the opinion of the chairmen of the congressional military committees that the entire matter should be postponed until the next session. There is at present some objection among the members of the Senate committee on military affairs to the bills, but it is believed and hoped at the war department that this objection will be removed before another session. Then, again, in view of the fact that congress will undoubtedly adjourn by the end of the present month, it is felt that with the rush of other work incidental to an early adjournment these matters can wait another year. The war department does not agree with congress as to the expediency of delay. An attempt will be made in the Senate to incorporate the two measures mentioned above in the military academy appropriation bill, but its chances of success are slim.

The Graduating Class of Baltimore University Medical Department.—The faculty of the Baltimore University School of Medicine have announced this year's graduates. They number 52, and are as follows:

Charles L. Bates, of West Virginia; Clarence S. Bates, of West Virginia; Leonard B. Bean, of Florida; George W. Bell, of New Jersey; S. J. Benoit, of Massachusetts; David Nathan Bloom, of Maryland; Frederick Starr Bootay, of New Jersey; Andrew J. Bowen, of Georgia; T. J. C. Brennan, of New York; Paul Chester Bridgham, of Massachusetts; Harry Fred Bushey, of New Jersey; Samuel Butler, of New Jersey; William R. Culbertson, of Virginia; James Joseph Curran. of Pennsylvania; Harry E. Duffey, of Pennsylvania; Frederick G. Field, of Maine; William Edmund Geisregen, of New Jersey; Charles Henry Glover, of Connecticut; William F. Harrison, of Pennsylvania; Thomas Marlin Kelly, of Pennsylvania; Walter E. Knickman, of Maryland; Louis P. Knoll, of New York; George J. P. Koch, of New Jersey; John Ignatius Kuhn, of Maryland; Marie Geraldine Langdon, of Maryland; Lloyd Thomas Lancaster, of West Virginia; Edward Joseph Lavin, of Rhode Island; James Edward Lynch, of Connecticut; Joseph MacDonald, Jr., of New York; Cardinal Claude McCormick, of Pennsylvania; Thomas James McKeary. of New Jersey; Abner W. S. Mills, of New York; John J. Mowry, of Rhode Island; Elbert Arthur Norton, of New York; Robert Lee O'Brien, of West Virginia; Austin F. O'Mally, of Massachusetts; William Lucius Orr, of Georgia; Nicholas J. P. Phelan, of New Jersey; David Nathan Rappaport, of New Jersey; James Truman Reeves, of Louisiana; Erwin Reissman, of New York; Charles Taylor Schwatka, of Maryland; John Scott, of Pennsylvania; William F. Smith, of Tennessee; Frederick Starr Stapp. of Pennsylvania; Winfield Missimer Thome, of Pennsylvania; Michael Francis Tierney, of Pennsylvania; Charles F. Wilinsky, of Massachusetts; Louis Joseph Wirtz, of New Jersey; Harper Ancel Wright, of Pennsylvania; Charles H. Zellner, of Pennsylvania.

Pith of Current Literature.

SEMAINE MEDICALE.

March 9, 1904.

The Heart in Spinal and Thoracic Deformities,
By Ernest Barié.

The Heart in Deformities.—Barié discusses 8 cases of deformity, 7 of which were accompanied by serious heart lesions, 5 resulting fatally. Kyphosis is least likely to entrain heart and lung lesions, lordosis follows, and in scoliosis we find the gravest lesions, it being immaterial toward which side the curve may be. In rickets heart trouble is proportionate to the amount of thoracic deformity. When growth has been rapid there is often an apparent hypertrophy of the heart that disappears when the lateral diameters of the chest resume their normal relations to the longitudinal. The condition known as "pigeon breast" acts on the heart usually by displacing it. Emphysema, pleurisy with effusion, pneumothorax often cause deviations, and congenital lesions of the heart are not infrequently associated with thoracic deformities of various kinds.

PRESSE MEDICALE.

March 9, 1904.

1. Isolation of the Tuberculous in Paris,
By M. Letulle.
2. Lancereaux and Paulesco's *Treatise on Medicine.* Nosology; Pathology,
By L. Landouzy.

1. **Tuberculosis in Paris.**—Letulle publishes the letter of the presidents of the council to the prefects on this subject, recommending the separation of tuberculous patients from others, and tells what has been accomplished in present institutions and the plans for new buildings. One danger lies in depriving the nontuberculous poor of several localities of their hospital advantages.

2. **A Treatise on Medicine.** — Landouzy quotes approvingly from the preface of the new work by Lancereaux and Paulesco: Medicine, when allowed to repose on a basis of ætiology, is of extreme simplicity. It is the science of disease. Disease is a congeries of organic and functional disorders, with a single cause and of special evolution. To understand disease, we must lay aside specialties . . . and adopt the general principles which illumine medicine, render it interesting, facilitate its study and prove it to be a homogeneous structure from which no part may be removed. The fundamental laws, according to the authors, are three: 1. There is a constant relation between the pathogenic agent, the anatomical lesions or the functional disorders, and the evolution of a disease. 2. Each pathogenic agent localizes its effects always on the same tissues. 3. Agents of the same nature especially affect tissues derived from the same blastodermic layer. Landouzy wonders if the authors may not neglect some important details or modify them in an illegitimate manner to fit into their grand generalization.

ZENTRALBLATT FUER CHIRURGIE.

February 13, 1904.

1. Prevention of the Evil Results of Pneumothorax in Intrathoracic Operations,
By F. Sauerbruch.

1. **Prevention of Pneumothorax in Intrathoracic Operations.**—Sauerbruch enumerates the evil results upon the respiration and circulation of the induction of a pneumothorax by reason of surgical intervention upon the thoracic organs. He has devised a chamber for these operations in which the air pressure can be diminished and in which the chest alone is accommodated. By this means he has performed many intrathoracic operations upon animals without the production of a pneumothorax and without, consequently, the bad results attending this condition. The chamber is fully described in the original article.

February 20, 1904.

1. Hepatocholangeioenterostomy,
By Hans Kehr.
2. Decapsulation of the Kidney and Nephrolysis,
By G. M. Edebohls.
3. Aseptic Catheterization,
By J. Swiatecklo.

1. **Hepatocholangeioenterostomy.** — Kehr says that the general view to-day is to drain the hepatic duct in cases of cholangeitis due to calculi in the ductus choledochus and the hepatic duct. In other cases of occlusion of the choledochus, as in cases of cancer, the choledochus can be resected and the flow of bile reestablished by circular suture or by hepatoduodenostomy. In those instances, in which the hepaticus and choledochus are closed close to the liver, and in which the cystic duct is obliterated, it becomes impossible to bring about the anastomosis of the gallbladder and the larger biliary passages. In these cases, the smaller passages only are available and the liver substance itself must be employed. Following the suggestion of Baudouin and Langenbuch, Kehr performed an hepatocholangeioenterostomy on a woman fifty-four years of age, who presented the above conditions, with very gratifying result.

3. **Aseptic Catheterization.**—Swiatecklo suggests that the introduction of the Nelaton catheter has the disadvantage of requiring to be seized with the finger at its very tip. To overcome any error in technics, he advises that the tip of the catheter be caught in a forceps and thus introduced into the urethra when its further insertion can be easily brought about by the hand.

ZENTRALBLATT FUER GYNAEKOLOGIE.

February 13, 1904.

1. Double Vagina with Single Uterus,
By F. Marchand.
2. Decapitated Head in the Parametrium,
By C. Weber.
3. Popular Medical Books,
By G. Burckhard.

1. **Double Vagina with Single Uterus.**—Marchand was able to observe this case and to prove the clinical diagnosis by autopsy. It seems that the dictum of Küstner that a double uterus cannot exist without a double vagina, is not necessarily true of the reverse condition. Marchand says that quite a number of cases similar to his have been found in the literature, and he cites ten of them from Fürst's collection. The condition is certainly unusual, although it can be easily explained by the modern embryological views.

2. **Decapitated Head in the Parametrium.**—Weber reports the case of a woman who, undergoing an abortion in the fouth month, was delivered of the fœtus by a physician who pulled on the legs

with the result of leaving the head behind. It could not be found in the uterus, however, and when laparatomy was performed, the head was found lying between the layers of the broad ligament, having reached its location through a rent in the uterus. The patient recovered from the accident and the operation.

3. **Popular Medical Books.**—Burckhard discusses two books just issued on obstetrical and gynæcological subjects and intended for lay readers, containing diatribes against the profession as well as directions for the diagnosis and treatment of the most varied conditions. Burckhard condemns this sort of literature severely and enters a plea for its suppression in the interest of humanity.

BERLINER KLINISCHE WOCHENSCHRIFT.

March 14, 1904.

1. Some Disputed Questions in Tuberculosis, By J. ORTH.
2. Von Behring's Theory of the Ætiology of Tuberculosis. By C. SPENGLER.
3. Serum Treatment of Hay Fever, By A. LUEBBERT, and C. PRAUSNITZ.
4. Tabes, Aortic Aneurysm, and Syphilis, By H. RUGE.
5. Least Demands to Be Made of Artificial Food for Infants, By C. S. ENGEL.
6. Diagnosis and Treatment of the Cardiac Form of Insomnia, By L. FEILCHENFELD.
7 and 8. Diphtheria Epidemic in Frankfort, By M. NEISSER, and HENIUS.

2. **Ætiology of Tuberculosis.**—Spengler disputes von Behring's view that bovine and human tuberculosis are similar in a pathogenic sense. He also asserts that in many instances, in children, tuberculous meningitis is derived from a pulmonary tuberculosis. He also asserts that von Behring ignores the law of tuberculous localization in the human species, and assumes the untenable position of a prolonged latency belonging to the bacilli. Spengler also says that he has never observed the phthisical habitus in persons who did not have the disease. He regards the habitus as a clinical and anatomical manifestation of pulmonary tuberculosis already rather advanced.

4. **Tabes, Aortic Aneurysm, and Syphilis.**—Ruge found an aortic aneurysm three times, and syphilis eighteen times, in sixty-four cases of locomotor ataxia. In 132 cases of aneurysm there were three cases of tabes, and seventeen of the patients had had syphilis. The author is very careful in his deductions, and believes that syphilis is more frequent in tabes and aneurysm than his figures show.

5. **Artificial Feeding.**—Engel states that purer but dearer milk is at the disposal of the well to do rather than of the poor. For milk for feeding infants he demands that the milking shall be clean, that the cows shall not be tuberculous, and insists on a knowledge of the bacterial contents of the milk. To reduce the latter, the milk must be kept cool until it reaches the consumer. Milk sold in the open market should not contain more than two and seven tenths per cent. of fat. The author describes his method of making cow's milk approach human milk by adding the half of a raw egg and a little butter.

6. **Diagnosis and Treatment of Cardiac Insomnia.**—Fielchenfeld describes the form of agrypnia often seen in cardiac diseases, in which the patient after a few hours of sleep, awakes with sensations of anxiety. These are usually instances of disturbed compensation due to weakened heart muscles. The cause of the awakening the author thinks lies in a temporary dilatation of the heart due to changes in position. The author treats cases of this kind with very small doses of morphine combined with minimal doses of digitalis in powder form.

7 and 8. **Diphtheria Epidemic in Frankfort.**—Neisser and Henius speak of this epidemic of last year in which, in the majority of cases, bacteriological examinations were made, and in which, by the prompt use of diphtheria antitoxine, the mortality was almost *nil.* Of 135 patients injected in the first three days of the disease, none died. The epidemic was peculiar, in that many adults were affected among the better classes, and that the infection seemed to be carried by means of articles of food.

March 21, 1904.

1. Fetron Salve, By O. LIEBREICH.
2. Diagnosis of Gastric Cancer (*To be concluded*), By J. SIGEL.
3. Disputed Questions in Tuberculosis (*To be concluded*), By J. ORTH.
4. Serum Treatment of Hay Fever, By H. LUEBBERT, and C. PRAUSNITZ.

1. **Fetron Salve.**—Liebreich says that the anilid of stearic acid forms a substance of high melting power when combined with paraffin and vaseline. He has called this substance fetron. It absorbs water, and as a salve stands between lanolin and vaseline in its property of being absorbed. It is very stable and is well borne, while no ill effects from its use have been observed.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

February 7, 1904.

1. Brown-Séquard's Syndrome, By OTTAVIO LOLLIS.
2. On Tomaselli's Disease, By ROCCO FESTA.
3. On the Sterilization of Catgut According to the Method of Claudius, By NICOLA GIANNETTASIO.
4. Interscapulothoracic Amputation for a Wrenched Arm. By TULLIO TOZZANI.
5. Clinical Contribution to the Use of Iodized Catgut in Surgery, By CARLO MENONI.
6. A Case of Epilepsy Treated with Cerebrine, By TEOFILO MONTAGNINI.
7. Some Cases of Pulmonary Tuberculosis Treated by Mouth with Sofos's Hæmoantitoxine, By F. FIGARI.

2. **Tomaselli's Disease.**—Festa reports a case in which he was in doubt as to the diagnosis between pernicious malaria with jaundice and hæmoglobinuria and Tomaselli's disease, which is an intoxication with quinine giving rise to fever, hæmaturia, jaundice, three or four hours after the administration of quinine. A subcutaneous injection of quinine showed no benefit after two hours; on the contrary, the fever increased, and the urine became more bloody. The quinine was stopped and the treatment was changed to aromatic water, and a milk diet, purgatives, etc. The

fever gradually diminished and the urine cleared up. After three days of this treatment the patient of his own accord took 30 centigrammes of quinine bisulphate. Within a few hours he developed chills, vomiting, marked jaundice, and pains in the loins. The urine became black, the temperature rose and the pulse increased. The quinine was immediately stopped and saline irrigations of the colon were ordered with the result of abating the symptoms in a short time. It is difficult to make a diagnosis in these rare cases and often difficult to convince the patient's friends that quinine is contraindicated. A remarkable fact in Tomaselli's disease is that the dose of quinine does not influence the gravity of the symptoms. Therefore, a subcutaneous injection of quinine should be given in order to distinguish these cases from pernicious malaria. If Tomaselli's disease is present, the symptoms will increase in severity, while in true pernicious malaria they will abate. If this is the case the treatment with quinine may be continued. The mechanism of this form of intoxication with quinine is mysterious. The only way to account for it is by assuming an idiosyncrasy.

3. **Claudius Method of Sterilizing Catgut.**—Giannettasio recommends the method of sterilizing catgut which was recently introduced by Claudius, of Copenhagen. This method has been used with success in a large number of operations by Maiglini and by Dalla Rosa, as well as by other surgeons. The strands of commercial catgut are wound in the usual way, loosely upon glass spools and are immersed in the following solution: Iodine, 1 gramme; potassium iodide, 1 gramme; sterile distilled water, 100 grammes. This solution is kept in widemouthed bottles with glass stoppers, which can be boiled or sterilized by steam. The catgut is left in this solution 8 or 10 days, during which time the receptacles must be carefully stopped to prevent evaporation of iodine. At the end of this time the catgut is ready for use. The spools are taken out, when needed, by means of long forceps, and the excess of iodine is wiped off from the catgut by means of sterilized gauze. The catgut is then of a lustrous black color, and has all the properties of silk, being elastic, plastic, and tied with great facility. The strength of this catgut is such that operations requiring commonly the larger numbers (3 to 5) may be performed with relatively small numbers (0 to 2). Catgut thus prepared is less quickly absorbed than the ordinary catgut, and is very useful for skin suture in which the antiseptic action of the iodine guarantees against stitch abscess. Giannettasio prefers to remove the excess of iodine from this catgut before using it, by immersing it in an antiseptic solution.

5. **Iodized Catgut.**—Menoni also advocates the employment of the Claudius method of sterilizing catgut described in the previous article. He used this catgut in 25 operations, and controlled his result by numerous experiments. Menoni found this catgut not only absolutely sterile, but so saturated with an antiseptic that it cannot harbor the ordinary germs. The resistance as to absorption and the plasticity of this catgut are superior to those of the catgut prepared by the more common methods. The process of sterilization does not produce any shortening or shrinking of the strands. No local irritating effects and no toxic general effects were observed after the use of this catgut. Menoni found that this catgut could be kept for nine months without losing its properties, and does not think that an alcoholic solution of iodine should be substituted for the watery solution recommended by Claudius.

7. **Hæmoantitoxine (Sofos) in Tuberculosis.**—Figari, of Maragliano's clinic, reports a few cases in which he used the new form of antitoxine against tuberculosis, styled hæmoantitoxine, which is administered by mouth. This substance was given in doses of a tablespoonful before meals four times a day. No comment is made upon the clinical histories presented, but in general, the results seem to have been very satisfactory. The appetite increased, the patients gained in weight, the fever and night sweats disappeared, and other symptoms were favorably affected. Interesting notes were made as to the gradual increase of the agglutinating power and the antitoxic power of the serum of these patients.

RIFORMA MEDICA.

March 2, 1904.

1. On the So Called Pericarditic Pseudocirrhosis of the Liver, By F. SCHUPFER.
2. A Case of Typhæmia Without any Widal Reaction, By C. BATTIGNANI.
3. A Case of Inflammation of the Deep Crucal Ganglia Accompanied by Strangulated Hernia and Simulating an Intestinal Obstruction, By L. NICOMEDE.

1. **Pericarditic Pseudocirrhosis of the Liver.**—Schupfer says that patients with pericardial adhesions may show either the clinical picture of asytolia, or that of cirrhosis of the liver with ascites. In the first class of cases, the ascites is not marked and is associated with œdema, resembling in every respect that resulting from other diseases of the heart. In the cases in which the ascites is marked it may be due to a variety of causes. Very rarely it is due to cirrhosis of the liver, and in the majority of cases it is the result of a chronic and slowly progressive peritonitis. The vessels of the peritonæum are predisposed to transudation, as the result of the disease of the heart. A great deal of weight must be given in the causation of this ascites to the changes in the capsule of the liver, and in the tendinous centre of the diaphragm. In these cases the pleura may also be affected with the same slow progressive exudative process.

2. **Typhoid Infection Without the Presence of the Widal Reaction.**—Battignani reports a case of typhoid fever in a young man of eighteen years of age in whom infection was demonstrated bacteriologically, although the Widal reaction was negative. The typhoid bacillus was found in the blood of this patient. Cases of this sort in which the Widal reaction is absent are very rare. Among the 98 patients with typhoid fever which were treated during the last three years in the medical clinic at Siena, none failed to give this reaction in

whom the presence of a true typhoid infection could be assumed.

ROUSSKY VRATCH.

January 17, 1904.

1. The Treatment of Urinary Fistulæ in Women, By V. S. GRUZDIEFF.
2. Diffuse Peritonitis, Caused by Diseases of the Female Generative Organs, By J. H. ZELDOVITCH.
3. On the Technics of the Quantitative Determination of Albumin in the Urine, According to Brandburg, By A. F. JAGERSTEGT.
4. The Operative Treatment of Prolapse of the Rectum (*Concluded*), By F. K. WEBER.
5. A Case of Natural Malarial Infection in a Military Hospital in the Month of November, By B. C. OSTAPTCHUK.
6. The Cryoscopy of Milk and Its Practical Applications, By I. S. BAUMSTEIN.

1. **Treatment of Urinary Fistulæ in Women.**—Gruzdieff says that Russia, especially its Eastern portion, may be truly called the country of urinary fistulæ. The absence of a sufficient number of trained midwives, the ignorance of the population, the untaught assistance of ignorant women, result in the neglect of proper and timely aid in cases of narrow pelvis transverse positions, etc., and these abnormal labors give rise very frequently to the formation of fistulæ. He relates the history of a young Tartar woman who appeared in the clinic with the symptoms of urinary fistula, and in whom the vagina had become transformed into a short and narrow conical bag about four cm. long, ending in an opening admitting a lead pencil which lead directly into the bladder. Neither the uterus nor the annexa could be felt, but in their place masses of adhesions could be made out through the rectum. It seemed that this woman had an undeveloped uterus, and had remained sterile for several years after marriage. She applied to a clairvoyant who "introduced" something into the front passage which caused a terrible pain, and the discharge of pus and of "sloughing flesh," whereupon incontinence of urine developed. The position of these patients among the Russian peasant families is unbearable, as they excite disgust and their husbands threaten to abandon them. The gynæcological clinic in Kazan is literally besieged twice a year,—in the spring, when navigation opens; and in the fall, when the school year begins—by women with urinary fistulæ who come there from all parts of Eastern Russia.

February 7, 1904.

1. On the Treatment of Cancer of the Uterus, By B. N. ORLOFF.
2. The Pharmacology of Veronal (*To be continued*), By N. I. BOTCHAROFF.

1. **Cancer of the Uterus.**—Orloff has studied 190 cases of cancer in the uterus which had been operated upon in his clinic. Of these, 44 were cases of cancer of the vaginal portion of the uterus; 126 of cancer of the cervix, and 20 cancer of the body of the uterus. The surgical treatment consisted in excision of the vaginal portion, abdominal hysterectomy, vaginal hysterectomy, or combined abdominal and vaginal hysterectomy. The first two operations were often performed with the aid of Paquelin's cautery, or the galvanocautery, in order to avoid loss of blood and to remove a wide zone of healthy tissue around the lesions. In 25 cases there was a recurrence of the disease, and of these 6 had cancer of the body of the uterus, and the rest an involvement of the tissues surrounding the organ. In 23 cases no recurrence occurred three years after the operation; in 9 cases none was found five years, and in 4, ten or eleven years after the removal of the diseased parts. The author concludes as follows as regards the indications for treatment: Excision or amputation of the vaginal portion gives good results in cancer involving this portion only. High amputation of the cervix gives a large percentage of recoveries in the initial forms of cancer of the vaginal portion and of the cervix. An abdominal hysterectomy is to be preferred to a vaginal in cases of cancer of the cervix with extensive involvement, especially when the parametrium is affected. In these cases, the lymphglands and the cellular tissue of the pelvis should be removed around the uterus. The abdominal method should be employed more and more frequently as the methods of operation improve.

BOSTON MEDICAL AND SURGICAL JOURNAL.

April 21, 1904.

1. Introductory Lecture at University Bellevue Hospital Medical College, By BEVERLEY ROBINSON.
2. Resection of Nasal Sæptum with Report of Fifteen Cases, By LEON E. WHITE.
3. Some Clinical Observations on Care of Septic Wounds, By ARTHUR L. CHUTE.

2. **Resection of the Nasal Sæptum.**—White describes the instruments he has devised for facilitating the excision of the nasal sæptum. This operation, the author asserts, is a practicable one in all forms of deviation. The author claims the following advantages for the procedure: (1). Accuracy, the work being done under the eye of the operator. As every part of the deflected portion can be seen, and then removed, the position of the sæptum will be uniformly good. In no other operation is there such a certainty as to the result. (2). Splints do not have to be worn. These at the best are a great nuisance to both operator and patient. (3). Rapidity of recovery; three or four weeks as against six or eight by other methods. (4). Lack of pain due largely to the absence of traumatism. (5). Short after-treatment. (6). Freedom from sepsis. (7). Free respiration forty-eight hours after the operation. (8). It is available for either bony or cartilaginous deflections. (9). It creates the utmost possible space by not only straightening the sæptum but by reducing its thickness to that of the two layers of the mucosa. (10). The lumen of the concave side is never lessened. A brief review is given of the results obtained by the author in fifteen cases.

3. **Septic Wounds.**—Chute discusses the various methods that have been suggested for the treatment of septic wounds. He concludes that, in all cases where strict asepsis can be obtained, dry sterile dressings will give the best results. If, however, asepsis is not to be hoped for, then a moist antiseptic dressing will probably give the best results.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

April 23, 1904.

1. The Surgical Treatment of Goître, By C. H. Mayo.
2. More Local and Less General Anæsthesia in Gynæcologic Operations, By J. Clarence Webster.
3. The Ultimate Results of the Bloodless Replacements of Congenitally Dislocated Hips (*Concluded*), By John Ridlon.
4. The Use of Ether as an Anæsthetic at the Battle of the Wilderness in the Civil War, By W. T. G. Morton.
5. The Intracellular Toxine of the *Bacillus Pyocyaneus*, By Donald R. MacIntyre.
6. The Effect of Putrefactive Bodies on the Chemical Tests for Morphine, By M. W. Clift.
7. The Extraction of a Toxine from Liver Cells. A Preliminary Report, By V. C. Vaughan, J. F. Munson, and Frank R. Spencer.
8. A Method of Microscopic Observation by Means of Lateral Illumination, By D. J. Davis.
9. The Dangers of Potassic Chlorate, By Paul Bartholow.

1. **The Surgical Treatment of Goître.**—Mayo reviews the advances made in Europe in the treatment of goître. He devotes considerable space to the anatomy and pathology of the thyreoid gland. The paper ends with an account of the author's experience in the surgical treatment of thyreoid disease and with an account of his technics. In the past fifteen years the author has operated on one hundred and ten patients for the relief of some type of thyreoid tumor. Thirty-four of these patients had exophthalmic goître and six of them died owing to the operation. "The exophthalmic cases which recovered from the operation were all benefited within a period of three months; about 50 per cent. became free from exophthalmic symptoms within from three to six months following the operation. In 25 per cent. the improvement was continuous during a year. In 25 per cent. the improvement was partial, the exophthalmus being slow to disappear. None were made worse who lived, and those in whom death occurred were the most severe types of Graves's disease, especially presenting tachycardia of from 130 to 150."

2. **Local Anæsthesia.** — Webster has performed a large number of operations under what he calls local anæsthesia, but under what would really seem to be no anæsthesia. The author's practice is to infiltrate only the line of the skin incision; after that, apparently, no anæsthetic is really needed. The following quotation will show to what lengths the author has gone: "In opening the abdomen, the skin may be infiltrated for a distance of four or five inches in the line of the incision to be made. Thereafter, in the majority of cases, I rarely inject any more of the anæsthetic solution. . . .

"Various operations may be carried out after the abdomen is opened, e. g., removal of diseased tubes and ovaries, shortening of the round ligaments, myomectomy, supravaginal amputation of the uterus, appendectomy, resections of the intestine, etc. . . .

". . . The largest operation I have performed without general anæsthesia was an abdominal hysterectomy for the removal of a cystic fibromyoma of the uterus weighing 87 pounds. It was performed in the Presbyterian Hospital, Chicago, December 16, 1902. The abdomen was opened after Schleich infiltration of the skin. After working for an hour, the patient became somewhat restless and she was allowed to inhale a few drops of chloroform. During the remaining hour and a half this procedure was repeated from time to time, six drachms of the drug being used in this way. The patient was conscious throughout the whole operation, and frequently engaged in conversation; no reflexes were abolished."

The paper concludes with a record of observations the author has made regarding the sensibility to handling and exposure of various abdominal structures.

3. **Bloodless Reduction.**—Ridlon attempts to show the exact value of the so-called bloodless operation for the replacement of congenitally dislocated hips. He has succeeded in following the after history of 94 operations. To date only ten cases show perfect anatomical results. The remainder of the cases are yet wearing splints. The final results will probably be somewhat as follows: Perfect anatomic results, 10; "good results," 61; poor results and failures, 23. We must add that though this showing seems rather poor, yet the author is in favor of the method in all suitable cases.

5. **Bacillus Pyocyaneus.**—MacIntyre concludes as follows: (1) *Bacillus pyocyaneus* does contain an intracellular toxine. (2) This toxine cannot be extracted from the cell by physiological salt solution. It is in part extracted by dilute sulphuric acid. (3) Heat to 120° C. in the autoclave continued for thirty minutes only slightly diminishes the toxicity of the cell substance. (4) The cell substance of *Bacillus pyocyaneus* contains a hæmolysin, which may be extracted from the cell, either in the fresh state or after treatment with alcohol and ether by physiological salt solution. (5) The minimum lethal dose of the cellular toxine is for guinea-pigs when given intraperitoneally about 1 part of the cell substance to 50,000 parts of body weight. (6) When injected subcutaneously in guinea-pigs in the proportion of 1 part of the cell substance to 10,000 parts of body weight or less no permanent ill effect results. (7) Subcutaneous injections do not give immunity to subsequent intraperitoneal injections.

6. **The Chemical Tests for Morphine.**—Clift calls attention to the fact that certain products of putrefactive fermentation respond to the various chemical tests for morphine. The best method of extracting morphine from tissues, in medicolegal cases, is the one advanced by Kippenberger. The author has conducted a series of experiments which show that even Kippenberger's method is not to be relied upon.

MEDICAL RECORD.

April 23, 1904.

1. Acute Infectious Osteomyelitis of the Spine and Acute Suppurative Perimeningitis, By J. Ramsay Hunt.
2. Observations Upon the Protective Value of the Inspection of Public Women as Carried Out in Paris, By Frederic Griffith.

3. Some Points on the Diagnosis and Drug Treatment of Pneumonia in Infants and Young Children, By LOUIS FISCHER.
4. Prophylaxis of Puerperal Sepsis, By GEORGE L. BRODHEAD.
5. Preliminary Notes on Transillumination of the Stomach with Fluorescein, By H. W. LINCOLN.
6. Supplementary Note on a Case of Typhoid Spine, By LEONARD W. ELY.

1. **Osteomyelitis and Perimeningitis.**—Hunt reports two cases in considerable detail. The history of the affection is gone into quite thoroughly and a table is given of the bibliography and clinical history of twenty-one cases of acute infectious osteomyelitis of the spine. This collection includes all the cases recorded since the publication of Hahn's monograph, in 1899, and in addition all recorded cases which had been overlooked in previous tabulations. The paper is quite pretentious in scope and cannot be summarized.

4. **Puerperal Sepsis.**—Brodhead says that it has been definitely shown that the vagina is sterile in healthy women. Therefore, if they get infected at labor it is through some intravaginal manipulation. Prophylaxis reduces itself to two measures. (1) Clean hands and instruments. (2) Avoidance of vaginal examinations. With regard to the sterilization of the hands, Stewart's method is the best. Vaginal examinations can usually be dispensed with. It is to be regretted that this practice is not more usual.

5. **Transillumination of the Stomach.**—Lincoln strongly advocates transillumination of the stomach as a valuable diagnostic aid in determining the true size and position of the stomach. The following method is recommended: "Give the patient 10 or more grains of quinine during the day of examination or the day previous. Introduce the lamp. Have the patient drink a glass of water into which has been dissolved 30 to 40 grains of sodium bicarbonate, to render the gastric contents alkaline. Allow another glass of water to be taken, into which has been placed ⅛ grain of fluorescein, 1 drachm of glycerin, and 20 or more grains of sodium bicarbonate." Then observe the patient's bared abdomen in a dark room.

MEDICAL NEWS.

April 23, 1904.

1. The Behavior of the Costal Arch in Diseases of the Abdominal Organs and Its Importance as a Diagnostic Symptom (*To be continued*), By ELLSWORTH ELIOT, JR.
2. The Pulse as a Guide to the Life Insurance Examiner, By ROBERT. H. BABCOCK.
3. Some External Diseases of the Eye Due to Rheumatism, By RICHARD KALISH.
4. Rupture of the Spleen: Report of Two Cases, By CHARLES F. CRAIG.
5. Some Features of Renal Tuberculosis, By F. TILDEN BROWN.
6. Hookworm Disease and Miners' Anæmia in the Anthracite Coal Fields, By JONATHAN M. WAINWRIGHT, and HENRY J. NICHOLS.
7. When and How Shall We Operate for Obstructing Hypertrophy of the Prostate Gland? By PAUL THORNDIKE.
8. Reflections on the Surgery of Prostatic Hypertrophy, By JOHN G. SHELDON.

2. **The Pulse.**—Babcock discusses the great importance placed by life insurance companies upon the records of the pulse. He points out that while they lay great stress upon the rate and the rhythm they pay little or no attention to the pulse tension. He asserts his belief that every life insurance examiner should use routinely some such instrument as the Gärtner tonometer, since the use of such an instrument would beyond question save the insurance companies many dollars and the examiner much mortification.

3. **Diseases of the Eye Due to Rheumatism.**—Kalish asserts that there are a number of external diseases of the eye due to rheumatism which are not recognized as being of such ætiological origin. It is to these affections alone that he wishes to call attention. These diseases are: (1) Marginal blepharitis of the young adult; (2) recurrent hordeoli or styes; (3) recurrent chalazia; (4) circumscribed bulbar conjunctivitis; (5) limited circumscribed bulbar conjunctivitis, and (6) striated keratitis. Unless patients with these affections are placed on proper antirheumatic treatment and regimen they will become the victims, usually, of irremediable injuries.

4. **Rupture of the Spleen.**—Craig discusses briefly rupture of the spleen in general and then reports two cases. Case 1.—Man, 23 years of age, while in the fourth week of typhoid fever, developed symptoms of hæmorrhage and collapse. Shortly afterwards the patient died. The autopsy showed, in addition to the usual lesions of typhoid, a ruptured spleen. Case 2.—Man, sixty years of age, was admitted to hospital for what, at the time, was thought to be hypertrophic cirrhosis of the liver. Patient died about one month later. The autopsy showed a primary carcinoma of the liver and metastatic involvement of the lungs. The spleen was found ruptured.

6. **Hookworm Disease.**—Wainwright and Nichols attempted to determine how prevalent hookworm diseases was among American miners of foreign birth. The stools of 400 miners were examined and it was found that 37 of them were infected with at least one kind of parasite. In all, 44 different kinds of infection were made out. The varieties found were: Hookworm, 1; ascaris lumbricoides, 15; trichuris trichiuria, 24; oxyuris vermicularis, 3; strongloides intestinalis, 1; total, 44. From these figures it appears that hookworm disease does not exist among the miners in America to the frightful extent it does in Europe.

7. **Hypertrophied Prostate.**—Thorndike summarizes his answer to the question that serves as the title of his paper with the following conclusions: (1) The catheter has as wide a range of usefulness as it ever had, in the palliation of obstructing prostatic hypertrophy. (2) The various operative procedures at present at our command are to be resorted to, with few exceptions, after the catheter has ceased to palliate. (3) The time for operative intervention is at the moment when the catheter has ceased to palliate and not after months or years of further and unavailing struggle to make it do so.

(4) The more radical operation of enucleation, on the one hand, and the Bottini operation with its various modifications on the other, are not procedures of the same kind, do not have the same object in view, and are in no sense to be weighed in the balance, the one class against the other. They should rather be contrasted, the one class as radical operations aiming at a cure, and the other as efficient palliating procedures, each having its own distinct indications for its appropriate use.

AMERICAN MEDICINE.

April 23, 1904.

1. The Rational Treatment of Malignant Tumors, By Homer Wakefield.
2. Personal Observations on the Advantages of Certain Arctic Localities in the Treatment of Tuberculosis, By Frederick Sohon.
3. An Investigation of Certain of the Reflexes and Sensory Phenomena and the Condition of the Eye Grounds, Based on a Study of 103 Healthy Young Men. Knee Jerks, Achilles Jerks, Conjunctival and Pharyngeal Reflexes, Pupillary Reflexes, Stereognostic Appreciation, Muscular and Spacing Senses, By Theodore Diller.
4. The Surgical Treatment of Hallux Valgus and Bunions, By James Newell.
5. Malignant Growth in the Abdominal Wall Following Abdominal Ovariotomy, By George W. Kaan.
6. Summary of an Experimental Research Into Digitalis in Shock and Collapse, with Illustrative Protocols, By G. W. Crile.
7. The Importance of Considering the Element of Vasomotor Instability in Estimating the Significance of Irregularity of Cardiac Rhythm, By Louis Faugeres Bishop.

1. **Malignant Tumors.**—Wakefield's paper is a further contribution to his theory of "catabolic stasis." The rational treatment of malignant tumors must be based, according to the author, on an understanding of this theory. Malignant tumors are due primarily to a general, that is, to a constitutional, subcatabolic state, and it is this state which perpetuates and insures the malignant character of the new growth. The local causes of malignant tumors serve only to focus the trouble at one point rather than at another. It is for this reason that purely local treatment must always result in failure unless, to be sure, the general condition has been accidentally improved.

2. **Arctic Localities in the Treatment of Tuberculosis.**—Sohon has made two trips to the Arctic, and has been greatly impressed with the advantages offered by certain localities in Greenland as possible residences for tuberculous patients. Even the most favored localities, however, are only possible during three of the summer months. The chief advantages claimed are freedom from dust and dirt, uniform mild winter climate, and perpetual sunshine.

3. **Reflexes and Sensory Phenomena.**—Diller has very completely set forth in his title the contents of his paper. We will therefore only give his conclusions. "Of young men in health it may be said: (1) The knee jerks vary greatly in their range and rapidity, being often difficult to elicit. (2) The achilles jerk is constantly present, varies much less than does the knee jerk, and is seldom difficult to elicit. (3) The conjunctival reflex is extremely variable, being absent or faintly present in half of the cases. (4) The same may be said of the pharyngeal reflex. (5) The pupils are equal. (6) The pupils vary greatly in size, ranging from 2 mm. to 4.5 mm. and averaging 2.76 mm. in the light. The pupillary light reflex varies greatly, the range of the excursion being from scant 0.5 mm. to 3 mm. and the average 1.39 mm. (7) In the accomodation reflex the range of the pupillary excursion also varies greatly and is occasionally absent, the average range being 0.967 mm. (8) Convergence is more or less defective in fully half the cases. (9) The eye grounds exhibit more or less deep or extensive cupping of the optic nerve with gray stippling in about an eighth of the cases; and in a few of these the appearance is suggestive of beginning gray atrophy. (10). The stereognostic appreciation is uniformly keen. (11). The same may be said of the muscular and spacing senses.

4. **Hallux Valgus and Bunion.**—Newell obtains good results in hallux valgus and bunion by performing the "Tubby operation." The author gives his technics in detail. Briefly stated the operation consists of two steps: (1) Excision of the bursa over the joint, and (2) Excision of the head of the metatarsal bone just behind its articular cartilage.

6. **Digitalis in Shock and Collapse.**—Crile reports a number of experiments performed on dogs and undertaken to determine the effect of digitalis in shock and collapse. The experiments do not warrant very sweeping conclusions. It would seem, however, that if digitalis has any influence in shock and collapse, its influence is for the worse.

BRITISH MEDICAL JOURNAL.

April 9, 1904.

(Reports to the Scientific Grants Committee of the B. M. A., Nos. lxxxiii, lxxxiv, and lxxxv).

1. Some Experiments on Enterica, Scarlet Fever, and Measles in the Chimpanzee, By A. S. Grünbaum.
2. Experimental Nephritis Followed by Decapsulation of the Kidney, By I. W. Hall, and G. Herxheimer.
3. Some Further Observations on the Life History of Filaria Immitis, Leidy, By T. L. Bancroft.
4. Digestion and Absorption of Hæmoglobin, By W. D. Halliburton.
5. Notes on Recent Cancer Mortality in the Thames Valley, By A. Urquhart.
6. On the Action of the Blood Serum from Cases of Acute Mental Disorder on *Bacillus Coli Communis*, By A. V. Johnson, and E. Goodall.
7. Cases of Lateral Sinus Pyæmia, By W. Sheen.
8. The Physical Development of the London Schoolboy; 1890 Examinations, By L. T. Thorne.
9. Epidemic Sore Throat from Suppurative Mammitis in Cows, By R. French.
10. Papilliferous Cyst from An Axillary Sudoriparous Gland, By H. B. Robinson.
11. Traumatic Rupture of the Small Intestine, By R. L. Knaggs.
12. A Note on Perineal Litholapaxy. (Keith's Modification), By A. Hooton.

1. **Animal Experiments.**—Grünbaum has attempted to infect monkeys and chimpanzees with

typhoid, scarlet fever, and measles. Monkeys, when given typhoid bacilli by mouth, show no clinical evidence of the disease, nor are enteric lesions present. But a well marked serum reaction subsequently appears. The chimpanzee, however, shows clinical signs and typical lesions—swelling and ulceration of Peyer's patches and enlargement of the spleen—together with a serum reaction. The temperature curve is not characteristic. Various modes of infection by scarlet fever and measles were tried, but the results were very unsatisfactory. But the results in the chimpanzee with the typhoid bacillus fulfil Koch's third postulate as applied to the typhoid bacillus.

2. **Renal Decapsulation.**—Hall and Herxheimer produced an acute degenerative nephritis in rabbits by injections of a solution of neutral ammonium chromate, and then performed decapsulation of the kidneys, this being followed in turn by removal of the kidneys after varying periods of time, and by their microscopical examination. From the anatomical standpoint yielded by their experiments, decapsulation offers no advantages. So that there must be another explanation of the rapid flow of urine, the increased excretion of urea, and the disappearance of albumin and casts. Simple relief of congestion does not account for it; the improvement may be due to the action upon the sympathetic ganglia. So that there is a question as to whether complete denudation of the renal cortex is necessary. Would not renipuncture or a number of incisions answer equally well as a sufficient stimulus to the sympathetic centres?

4. **Digestion of Hæmoglobin.**—Halliburton's conclusions are as follows: 1. The administration in the form of powdered hæmoglobin to rats leads to an increase in the number of their red corpuscles, and the amount of hæmoglobin in their blood. 2. The hæmoglobin is probably actually absorbed; the main situation for absorption is the extreme pyloric end of the stomach and the first few inches of the duodenum. The spleen is the principal organ for storage. 3. Hæmoglobin in the stomach is converted into acid hæmatin—the "coffee-grounds" of hæmatemesis. It is slowly precipitated and is indiffusible, so that not much of it is absorbed. 4. By the pancreatic juice, however, acid hæmatin is rapidly dissolved and forms alkaline hæmatin, which is diffusible and readily absorbed. Lower down in the intestine, where the reaction is again acid, absorption ceases.

6. **Serum Reaction in Insanity.**—Johnson and Goodall have examined the agglutinating power of the blood serum in one hundred cases of acute mental disorder upon the *Bacillus coli communis*. Their conclusions are as follows: 1. In 50 per cent. of the total cases of acute insanity there was agglutination, whereas this was present in only 15.5 per cent. of the controls. 2. The agglutination was partial in the great majority of the cases (39 per cent.). 3. In those forms of the disease in which the cases were sufficiently numerous to permit of percentages being taken (mania and melancholia), the preponderance of partial over good agglutination was also obvious. 4. The percentage of agglutination (good and partial) was greater (58.5) in the cases of melancholia than in those of mania (45.2). 5. The percentage of good agglutination was greater in melancholia than in mania. 6. Even when the disease is quite recent in duration there is as often as not a failure to agglutinate.

6. **Lateral Sinus Pyæmia.**—Sheen reports six cases of this most serious affection, with three recoveries, and urges the necessity for prompt and radical surgical interference. After summarizing the symptoms, he describes the operation in detail. The jugular should be tied when the sigmoid sinus is definitely thrombosed, when the symptoms of toxæmia do not disappear after a simple mastoid operation, when there is evidence of severe systemic infection, and when the thrombosed jugular itself can be felt. Antistreptococcus serum may be used, but its value is uncertain.

LANCET.

April 9, 1904.

1. Fractures of the Skull. (Hunterian Lectures: I), By L. B. RAWLING.
2. On the Use of Dr Marmorek's Antituberculous Serum, By A. LATHAM.
3. The Mental Condition in Epilepsy in Relation to Prognosis, By W. A. TURNER.
4. The Cardiac Dulness in Cases of Cancer, By W. GORDON.
5. A Case of Removal of a Polypoid Growth from the Base of the Skull After a Preliminary Excision of the Upper Jaw, By F. A. SOUTHAM.
6. A Case of Carcinoma Probably Originating in Retained Testis, By W. S. DARBY.
7. Dilatation of the Heart, By E. H. COLBECK.
8. Intralaryngeal Growths Treated by Means of the Galvanocautery, By J. D. GRANT.
9. A Non-toxic Preparation of Iodine, By V. H. W. WINGRAVE.

1. **Fractures of the Skull.**—Rawling states that in many respects the weakest part of the skull is the base, as it is hollowed out and perforated by numerous foramina. Basic fractures are produced by direct and indirect violence. Hitherto the large majority of basic fractures have been thought to be due to indirect violence, but the author holds the opposite view. The bursting and compressing theory and the contrecoup theory are both untenable. Aran's irradiation theory, on the other hand, with certain modifications, accounts satisfactorily for those basic fractures which result from blows on the vertex. Most basic fractures, however, result from forces applied directly around the basic level, and are the result of a splitting force, the line of fracture tending to travel across the base, parallel to the original direction, but not necessarily in the same straight line. Separation along certain sutural lines is very common, and is most frequent during middle life. Sutures tend to deaden a force and also to divert its path. Only in the more simple sutures does the separation follow the irregular sutural line. The mastooccipital, petrooccipital, and lambdoid sutures are the ones most commonly implicated. The air sinuses are fre-

quently involved, especially the sphenoidal sinus. Contrary to Battle's view, the author holds that foramina have no tendency to arrest the line of fracture, though its direction may be somewhat diverted. An excellent table is given, showing the resultant fracture according to direction of the applied force.

Fractures of the vault of the skull may be limited to that region, but they usually coexist with a basic fracture. The author discusses them under the headings of fractures of the external and internal table, and explosive fractures. In the latter, the passage of a bullet through the brain may have such an explosive effect as to lift the vault from the base. In children it must be remembered that the bones are very elastic, the diploic tissue is absent, and the air sinuses nonexistent. As regards mortality those fractures involving the posterior fossa of the base are the most dangerous. The general mortality of fractures of the base is about 40 per cent.: of the vault about 20 per cent. Recovery can take place in the most severe cases.

2. **Antituberculous Serum.**—Latham reports his experience with Marmorek's antituberculous serum, the technics used, etc. As he has limited its use to advanced cases of the disease, he cannot state that it will effect a cure. But in carefully graduated doses, with proper precautions, and in suitable cases it does no harm. Further, it does produce a specific antitoxic effect. It should be injected subcutaneously under the abdominal wall. Ten cubic centimetres should be given every day for seven or eight days, followed by an intermission of a week. After this smaller doses should be given, the intervals being shorter and nearer together.

3. **Mental State in Epilepsy.**—Turner has investigated 161 cases of epilepsy with special reference to what he calls the interparoxysmal mental state. Sex has little influence, but a family predisposition to epilepsy and insanity favors the supervention of some degree of mental impairment. The duration of the disease also influences the mental condition—the shorter the case the better the mind. The earlier in life the onset, the less the probability of an unimpaired mental state. The profoundest degrees of dementia are most common when major and minor attacks coexist. The lower grades of mental impairment are usually associated with *petit mal.* The more frequent the seizures, the more severe the mental impairment. In conclusion, it may be said that the interparoxysmal mental condition seen in most cases of epilepsy is one expression of the neurosis of which the fits constitute another; the former is not therefore directly dependent upon the seizures and the frequency and character. Combination of the paroxysms in association with the degree of mental failure indicate the severity and intensity of the disease.

4. **Physical Sign of Cancer.**—Gordon has noted that in many cases of gastric cancer there is a marked reduction in the area of cardiac dulness. Putting aside cases where special causes exist, either for the obliteration of the heart dulness or for the prevention of such obliteration, the following are his conclusions: 1. Great reduction or obliteration of the normal cardiac dulness is common in cases of cancer, particularly in cancers of the alimentary canal, and in their late stages. 2. This loss of cardiac dulness does not seem to be found in the earliest stages of a cancerous case, but may precede cachexia, marked wasting, and loss of skin elasticity. 3. It is rarely observed in non-cancerous cases. 4. It is rarely absent in the later stages of cancer of the alimentary canal. 5. It does not seem to occur in sarcoma. 6. In doubtful cases its presence is highly suggestive of cancer; its absence is slightly suggestive of the absence of cancer if the symptoms have lasted for several months.

7. **Dilatation of the Heart.**—In this paper Colbeck attempts to show that all forms of cardiac dilatation have fundamentally a common mode of origin; all depending primarily on an absolute or relative diminution or loss of the muscular tone of the organ. Further, the application of this theory in the pathogenesis of many forms of dilatation of the heart adds materially to the simplification of the problem of causation.

Letter to the Editor.

THE TEASPOON A MEASURE FOR MILK SUGAR—A CORRECTION.

1539 Pine Street,
Philadelphia, *April* 18, 1904.

To the Editor,

Sir: I address you to correct the statement made by Dr. Miller, on page 545 of your *Journal,* issue of March 19, 1904, that "Judson and Gittings put 60 grains as the capacity of one teaspoonful and a half" of milk sugar. The reader is left to infer that the quantity of sugar in the spoon might be indefinite—that is, 1½ level, rounded, or heaping teaspoonful might be used and still the quantity of sugar equal one drachm. Since the author's right to accurate quotation is generally conceded, let me apologize for referring to page 297 of *The Artificial Feeding of Infants,* where it is stated that "For practical purposes . . . one and a half *even* teaspoonfuls of lactose equal one drachm. . . . For greater accuracy, *receptacles of known capacity must be procured.*" An *even* teaspoonful of milk sugar—that is, filled level to the edge of the spoon—is a fairly definite quantity, and weighs about 45 grains, varying above and below this figure more or less (from 40 to 50 grains), according to the care with which the corners are filled, and the lactose is packed down. The half of an *even* teaspoon is easily estimated by any one of ordinary intelligence, and weighs from 20 to 25 grains. Measured in this way, 1½ *even* teaspoonful of lactose is a close equivalent to 60 grains by weight, near enough for ordinary purposes, if an extra drachm needs to be measured out. On the other hand, a heaping teaspoonful of lactose may hold 120 or even 180 grains of milk sugar, on account of the cohesion of the sugar. When all is said, the sole accurate measure is the scales.

Charles F. Judson.

Book Notices.

Blood Pressure in Surgery. An Experimental and Clinical Research. The Cartwright Prize Essay for 1903. By George W. Crile, A. M., M. D., Professor of Clinical Surgery, Western Reserve Medical College, etc. Cleveland, Philadelphia, and London: J. B. Lippincott Company, 1903. Pp. 422.

Crile's successful prize essay on blood pressure is here embodied in book form, printed in large type with wide margins—a style of book making in keeping with the high character of this work, the excellent teachings of which are so necessary in the daily routine of surgical practice. Of interest in the prefatory remarks are the assurance of the very humane way in which the animal experiments were conducted and the respectful consideration meted out to each assistant for his share of the work.

The questions of practical import discussed are that of which drugs are best suited to combat shock and that of the time, quantity, and method of their administration. The results seem to caution us against overstimulation.

As the question of lowered blood pressure is the main topic of this essay, the choice of drugs to restore the lowered pressure, due to exhaustion of the peripheral vessels, the heart, and the vasomotor, cardiac, and respiratory centres, is discussed. Furthermore, the advisability of stimulating in the face of exhaustion or of allowing the tired centres to rest is elaborately dwelt upon. Hereupon follows an investigation of the mechanical means to restore pressure.

Finally we are favored with research as to whether the centres governing the circulation are not automatically stimulated, and, if so, whether they are not stimulated to the point of exhaustion prior to a breakdown. In view of this, should the attitude be one of *laissez faire* or drug stimulation?

These questions are dealt with in connection with the 251 animal experiments recorded in as many pages. In the remaining half of the book there are a summary of the experimental data, clinical observations on blood pressure, and a study of the changes in the blood pressure during surgical operations on various parts of the body.

The gist of the whole work and its clinical significance are finally given in a few pages. It amounts to a corroboration of the opinion that shock is an exhaustion of the vasomotor centre, best combated by continuous intravenous saline infusion, thoracic pressure over the heart, and artificial respiration. This may be still further supplemented by the intravenous infusion of adrenalin. Collapse is due to a suspension of the vasomotor or cardiac mechanism or to hæmorrhage. Stimulants may be in place in the latter, but not in shock. Last, but not least, while saline infusion may raise the pressure, it cannot maintain it; for this adrenalin is effective. This combination, aided by external mechanical pressure effected by a pneumatic rubber suit, was capable of maintaining life for thirty-two minutes in a patient pronounced conventionally dead.

Ninety-four illustrations and an alphabetically arranged index render complete this most original and far reaching research, the perusal of which is strongly recommended to every surgeon.

Modern Surgery: General and Operative. Fourth Edition, Greatly Enlarged and Entirely Reset. By John Chalmers DaCosta, M. D., Professor of the Principles of Surgery and of Clinical Surgery in the Jefferson Medical College, Philadelphia. With Over 700 Illustrations, some in Colors. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Pp. 1,099. Cloth, $5.00; Sheep or Half Morocco, $6.00.

It is indeed gratifying to note in the new edition of an already widely accepted textbook a revision that is as sincere and as thorough as is here evident. Every part of the third edition has been subjected to careful scrutiny. Much has been altered or entirely rewritten, and a great deal of new matter has been added. The work is "up to date" in more than the usual sense of this hackneyed phrase. It contains references to articles whose appearance in print antedated by but a few weeks its own publication, and little of what is best that is new appears to have been overlooked. As in the earlier edition, the section on orthopædic surgery is quite brief. Nevertheless, the work, in its present form, is an admirably balanced one. It seems especially well adapted as a student's book.

Pregnancy, Labor, and Childbed, with Ovarian Tumor. By R. G. McKerron, M. A., M. D., Physician to the Maternity Hospital, Aberdeen, etc. London: Rebman, Limited, 1903. Pp. viii-281.

Heretofore we have had but scattered journal articles on ovarian tumors observed during pregnancy or the puerperium. In the monograph before us the author has taken up this branch of gynæcological surgery in all its minute details, discussing ovarian growths from the standpoints of their location, their symptoms, their diagnosis, and the effect of ovariotomy upon the pregnant woman and the possibility of its interrupting the pregnancy. Other details, such as the effect of the operation upon the puerperium, and statistical tables as to the morbidity and mortality of the operation, are also included.

The author's main conclusions are to advise an operation during pregnancy as soon as the diagnosis has been made, anticipating complications, as pregnancy favors the formation of adhesions and the dangers of subsequent operation are thereby increased. For the mother equally good results are obtained at any month during the pregnancy, while for the child the difference in the risks is inappreciable. Tapping of a cyst should be resorted to only when ovariotomy is refused and symptoms of distress arise. Exception is made by the author in these cases in which the tumor is discovered late in pregnancy, and is densely surrounded by adhesions.

In the puerperium the conditions are not changed. If the growth offers an obstruction to birth, it must be removed, and when grave complications arise from the tumor, even if the case seems hopeless, an operation should be undertaken, as experience has shown that desperate cases sometimes have a successful termination.

We think that one of the author's radical statements will be seriously questioned. He urges laparotomy in cases of severe puerperal peritonitis, for occasionally an unsuspected ovarian growth has been thus discovered, the removal of which has brought about a cure. Such instances must be very rare indeed, and, secondly, the patient must be the victim of very poor diagnostic ability. An abdomen tensely held may make the diagnosis very difficult, but a few whiffs of an anæsthetic will settle the matter easily before so hazardous an undertaking as an abdominal section is resorted to.

The monograph is decidedly interesting and represents a great amount of research and study. To every man interested in obstetrics and its complications this study is invaluable.

The Nutrition of the Infant. By RALPH VINCENT, M. D., Member of the Royal College of Physicians, Physician to the Infants' Hospital, etc. New York: William Wood & Co., MDCCCCIV. Pp. xviii-295.

In his preface this English author acknowledges himself a convert to the percentage, or American, method of adapting milk to the infant's digestion, and very fittingly the book is dedicated to Dr. T. M. Rotch, of Boston. He says of the method that it is undoubtedly more complicated in some respects than any other, and that it demands of the physician using it a knowledge of his materials, careful diagnosis, and the exact use of an instrument of precision; but that the complexity is no greater than facts demand and that in actual practice the method is simpler than any other.

The opening chapter is devoted to a consideration of the average composition of human milk, as affording a standard for both breast milk and any substitute. Nothing is said about the specific biological character of the milk proteids. Lactation, together with its abnormities and contraindications, is discussed in the second chapter. With regard to allowing fruit, salads, and green vegetables to the nursing woman, the author says that the experiment should be made with a small quantity of the different articles and the effect noted; he does not think they should be universally interdicted. Next are considered the chemical composition of cow's milk and the methods of approximating human milk. Here the percentage method is explained together with the use of divided proteids. Dr. Vincent is an enthusiast on the subject of laboratory modification, and does not think that the results of home modification, in England at least, are satisfactory.

Then follows a consideration of the methods of producing milk and of the rules adopted by various American milk commissioners. Of the regulations of the Philadelphia commission, the author says that they are in advance of those of New York in requiring a bacterial standard of not more than 10,000 germs per c. c., and a microscopical examination for pus cells.

Chapters follow on pasteurization, sterilization, the bacteriology of milk, the chemistry of infantile digestion, and the relation of diet to growth and health. The author is particularly impressed with the importance of an adequate amount of fat in the infant's dietary. The dietary recommended is much more generous than that usually allowed in this country, the author stating that at the age of eighteen months practically all the simple natural foods are permissible, and forbidding only pastry and rich puddings.

The remainder of the book comprises chapters on normal development, gastrointestinal disorders, inanition, malnutrition and marasmus, rickets, and scurvy, and finally a statistical consideration of mortality and disease in infants. Many valuable lessons are drawn as to the means of preventing disease and lowering infantile mortality.

Prostatic Hypertrophy from Every Surgical Standpoint. By GEORGE M. PHILLIPS, M. D., and Forty Distinguished Authorities. Edited and Compiled by S. C. MARTIN, JR., M. D. St. Louis: Lewis S. Matthews & Co. Pp. 167. (Price, $1.75.)

In this small handbook we have a kaleidoscopic picture of the treatment of prostatic hypertrophy in all its shades and differences from the hands of fifty foremost surgeons of America. The utterances embodied in this precise form are the concise answers of these surgeons to fifteen questions put to them by the author. The questions pertain to the ætiology of the enlarged gland, the value of cystoscopy in diagnosticating it, and the respective merits of the various operations proposed and performed within the last decade for the relief and cure of this disease.

This publication reminds one strongly of a quiz compend, and the diversity of opinions brings back memories of the ancient controversy of the merits of suprapubic and perineal section, for instance. A few of the introductory pages are devoted to the anatomy, physiology, and pathology of the prostate. A well arranged index at the close of the book makes it a *vade mecum.*

A Non-Surgical Treatise on Diseases of the Prostate Gland and Annexa. By GEORGE WHITFIELD OVERALL, A. B., M. D., Formerly Professor of Physiology in the Memphis Hospital Medical College. Chicago: Marsh & Grant Company. Pp. 207.

This little work might better have been named "A Dissertation on the Diseases of the Prostate Gland and Annexa, and Their Non-Surgical Treatment." The author is to be commended for emphasizing the importance of distinguishing congestive enlargement of the prostate and hypertrophy, for giving weight to sexual irregularities and local irritations as causes of prostatitis, without, however, failing to dwell fully upon the rôle of the gonococcus, and for urging against undue instrumentation and unnecessary surgery. To that extent any reader will concur in Dr. Overall's conservatism, but beyond that the author fails to make out a clear case. He rails against all surgical procedures in prostatic hypertrophy (except, apparently, in rare instances), most especially against Bottini's operation, although he uses a flat-bladed cautery of his own design to remove an obstruction caused by a projecting enlarged "middle lobe." His enthusiasm for the treatment of prostatic hypertrophy by cataphoresis and electrolysis might be more convincing if it were not that his very report of cases so treated rather indicates the superiority of prostatectomy. This we say, too, without meaning to discuss the value of prostatic electrotherapy, except as presented in this little volume.

Diseases of the Eye. By L. Webster Fox, A. M., M. D., Professor of Ophthalmology in the Medicochirurgical College of Philadelphia, etc. With Five Colored Plates and 296 Illustrations. New York and London: D. Appleton & Co., 1904. Pp. xix-584.

It is a pleasure to read a book which departs so freely from the traditions of textbooks, as to present original thought and work interwoven with knowledge which has been hashed and rehashed and served up in a little different form by each succeeding author. True, this original work has not stood the test of time, and for that reason the reviewer could hardly recommend the book to students, but it gives its readers something to think about. Its originality and the piquancy of its presentation make the book a very welcome addition to the working library of the specialist. In nearly everything the work is up to the times, but there is one exception in the description of the operation of discission, on page 326. This should have been written years ago, not later than the eighties. Bowman's stop needle was then, but is not now, "almost universally used by ophthalmologists." Its use has been almost universally abandoned. If the author prefers this antiquated operation, he should add a description of the simpler modern method. The author's style is clear and bright, and the numerous illustrations are excellent.

Medical Union Number Six. By William Harvey King. New York: The Monograph Press, 1904. Pp. 58. (Price, boards 35 cents; paper 15 cents.)

Medical Union Number Six is the *reductio ad absurdum* of trades unionism. Yet there is not a single thing in it which is not a logical development of trades unionism as practised to-day. Briefly, a young physician returns to New York in 1940, after an absence of thirty years as a castaway on a South Sea island, and on his return finds the entire medical profession throughout the country organized into a union—the last of all the crafts to take that step. How the physician, driven by the need of making a living, takes employment as one of the trust's physicians; his qualms of conscience at the inhumanities which are the necessary results of strict compliance with the union hours of labor and the union delimitation of specialties; his gradual outgrowing of his qualms; the struggle between the public and the medical trust; and the final measures successfully taken by the trust to coerce the public into acquiescence form the subject of the story. It is brightly written, and we commend a perusal of it to all supporters of unionism and trusts, as indicating the purely logical outcome of their methods, from the adoption of which there is no sound reason for excluding the medical profession, viewing it from a solely commercial standpoint.

Traité de radiologie médicale. Publié sous la direction de Ch. Bouchard, Membre de l'Institut, Professeur de pathologie générale à la Faculté de médecine. In 80 jésus de 1,100 pages, avec 357 figures dans le texte et 7 planches hors texte. Prix: 30 francs. Préface de M. Ch. Bouchard. Historique par MM. Imbert et Bertin-Sans. Livre I. Etude générale des rayons x. I—Notions générales sur les sources d'électricité et les mesures électriques. Sources de courant continu; piles, accumulateurs, dynamos à courant continu; sources de courant alternatif, transformateurs, bobines de Ruhmkorff; sources de courant de haute fréquence. Par M. Bordier.

This is an exhaustive and an eminently scientific work. It covers the entire range of the subject—experimental and practical—and treats in great detail its every aspect—electrophysical, mechanical, chemical, optical, diagnostic, and therapeutic. It is written in the form of a system, each article being contributed, one might say, by a specialist. The work is divided into two books, comprising 1,100 octavo pages. Without attempting even to mention some of the very many interesting subjects treated, we content ourselves with the statement that this is an invaluable reference book and the most complete treatise upon radiology that has come to our notice.

Mammalian Anatomy, with Special Reference to the Cat. By Alvin Davison, Ph. D., Ex-Fellow of the Princeton University; Professor of Biology in Lafayette College. With Over 100 Illustrations Made by W. H. Reese, A. M., from the Author's Dissections. Philadelphia: P. Blakiston's Son & Co., 1903. Pp. xi-242. (Price, $1.50.)

For a small manual of comparative anatomy of the mammal, this book amply fulfills its purpose. For actual laboratory work and for reference it answers every indication. The author has selected the cat for his main type, and his preparations and dissections represent in excellent manner the typical distribution and arrangement of mammalian organs. Embryological facts have wisely, we think, been left for special works on the subject.

The illustrations are almost entirely original and are well reproduced. At the end of each chapter is a series of questions and suggestions which cover the contents of the chapter. All in all, the book is exceedingly satisfactory.

Atlas and Epitome of Operative Gynæcology. By Dr. O. Schaffer, of Heidelberg. Edited by J.

Clarence Webster, M. D. (Edin.), F. R. C. P. E., F. R. S. E., Professor of Obstetrics and Gynæcology in Rush Medical College, in Affiliation with the University of Chicago. With 42 Lithographic Plates and Many Text Illustrations, some in Colors. Pp. 138. Philadelphia, New York, London: W. B. Saunders & Company, 1904. (Price, Cloth, $3.00.)

In our opinion, this is one of the best of this series of atlases. The illustrations are especially well executed and depict, it is very plain, precisely what the author wished to convey. The greater number of classical operations are well pictured, although some of those described and illustrated are not the operations commonly practised in this country. The text is uncommonly readable and is admirably edited by Dr. Webster, who has inserted a number of explanatory notes which amplify the text.

BOOKS, PAMPHLETS, ETC., RECEIVED.

L'Entéro-colite muco-membraneuse. Par Le Dr. Froussard, Ancien Interne Des Hôpitaux De Paris. Médecin Consultant à Plombières-Les-Bains. A. Maloine, Editeur, 25-27, Rue de L'école-De-Médecine, Paris. 1904. Pp. 104.

Obstetrics for Nurses. By Jopseh B. De Lee, M. D., Professor of Obstetrics, Northwestern University Medical School; Obstetrician to Mercy, Wesley, Provident, Cook County, and Chicago Lying-in Hospitals, etc. Fully Illustrated. W. B. Saunders & Company, Philadelphia, New York, London. Pp. 460. [Price, Cloth, $2.50 net].

Atlas and Epitome of Operative Gynæcology. By Dr. O. Schaffer, of Heidelberg. Edited by J. Clarence Webster, M. D. (Edin.), F. R. C. P. E., F. R. S. E., Professor of Obstetrics and Gynæcology in Rush Medical College, in Affiliation with the University of Chicago. With 42 Lithographic Plates and Many Text Illustrations, some in Colors. Pp. 138. Philadelphia, New York, London: W. B. Saunders & Company. 1904. [Price, Cloth, $3.00 net].

Diseases of the Intestines. A Textbook for Practitioners and Students of Medicine. By Max Einhorn, M. D., Professor of Medicine at the New York Post-Graduate Medical School and Hospital, and Visiting Physician at the German Hospital, New York. Second, Revised Edition. New York: William Wood & Company. MDCCCCIV. Pp. xiv-397.

Nouveau Formulaire Magistral. Précédé D'Une Notice Sur Les Hôpitaux De Paris, de généralités sur l'Art de formuler; D'Un Précis Sur Les Eaux Minérales Naturelles et Artificelles, D'Un Mémorial Thérapeutique, de Notions sur l'emploi des contrepoisons, sur les secours à donner aux Empoisonnés et aux Asphyxiés, et d'un Précis d'hygiène thérapeutique, etc. Par A. Bourchardat, Professeur d'hygiène à la Faculté de Médecine de Paris, etc., G. Bouchardat, Membre de l'Académie de medicine. Trentetroisieme édition. Revue et Augmenté de Formules Nouvelles, Et De La Liste Des Mets Permis Aux Glycosuriques. Félix Alcan, Editeur, 108, Boulevard Saint-Germain, 108, Paris. 1904. Tous droits réservés.

Bullettino Della Reale Accademia Medica, Di Roma. Compilato dai Consiglieri Accademici Delegati per la Stampa Professore G. Sergi, e Professore L. Concetti. Anno XXIX—Fascicoli IV, e V. Tipografia Fratelli Centenari, via degli Avignonesi, 30-31, Roma. 1903. Pp. xviii-134.

Les Infections à Trypanosomes au Congo. Chez l'homme et les animaux. Communication Préliminaire par A. Broden, Directeur du Laboratoire. Laboratoire De Bactériologie de la Société D'Etudes Coloniales à Léopoldville (Etat du Congo). Extrait du Bulletin de la Société D'Etudes Coloniales, Février. 1904. L'Imprimerie Nouvelle, société anonyme, 25-27, rue de l'Artichaut, Bruxelles. Pp. 28.

Lectures, Chiefly Clinical and Practical on Diseases of the Lungs and Heart. By James Alexander Lindsay, M. A., M. D., F. R. C. P. (Lond.), Professor of Medicine, Queen's College, Belfast; Physician to the Royal Victoria Hospital, Belfast, etc. New York: William Wood & Company. 1904. Pp. 447. [Price $3.50 net].

A Manual of Clinical Diagnosis. By Means of Microscopical and Chemical Methods for Students, Hospital Physicians, and Practitioners. By Charles E. Simon, M. D., of Baltimore, Md. Fifth Edition, Thoroughly Revised and Enlarged. Illustrated with 150 Engravings and 22 Plates in Colors. Lea Brothers & Co., Philadelphia and New York. 1904. Pp. 695. [Price, Cloth, $4.00 net].

The International Medical Annual. A Year Book of Treatment and Practitioner's Index. New York: E. B. Treat & Company, 241-243 West Twenty-third Street. Pp. 770. [Price $3.00].

Treatise on Diseases of the Skin. For the Use of Advanced Students and Practitioners. By Henry W. Stelwagon, M. D., Ph. D., Clinical Professor of Dermatology in the Jefferson Medical College and Woman's Medical College, Philadelphia, etc. Third Edition. With 220 Illustrations in the Text, and 26 Full Page Lithographic and Half-tone Plates. Philadelphia, New York, and London: W. B. Saunders & Company. 1904. Pp. 1115. [Price, Cloth, $6.00 net; Sheep, or Half Morocco, $7.00 net].

Proceedings of Societies.

THE OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, December 3, 1903.

(Concluded.)

Dr. John G. Clark said that from the historic standpoint the treatment of puerperal infection has gone through three epochs: (1) The purely medical treatment, which was practically, so far as limiting the infection was concerned, a "do nothing" policy; (2) curettage, which was only successful when there were retained secundines; (3) hysterectomy, which had been urgently advocated by a few surgeons, but which had never gained widespread advocacy, because it was not based upon good surgical principles, and therefore had given very poor results. The treatment which Dr. Pryor had so earnestly advocated this evening marked the fourth epoch. This plan, like all others, could only be proved trustworthy by a much more widespread adoption than it had thus far had. With the array of cases which Dr. Pryor had presented to sustain it, the method must necessarily appeal to us. The resort to hysterectomy in these cases was open to two radical objections: First, if it was to be of avail it must necessarily be performed early, and who among us was able to say in the beginning of any infection that it was of such a lethal type as to demand such radical measures? Secondly, if temporizing measures were employed until the fatal character of the infection was clinically evident, the removal of the uterus would seldom avail, because that was locking the stable after the horse was stolen. In Dr. Pryor's method of treatment, even if it was instituted in the beginning of the case, it was not open to the same serious objections, for it was neither mutilating nor attended with excessive operative dangers; therefore, without doubt, it must appeal to us as a remedy which might at least be applied without reluctance and with a hope of cure, which cannot be said of hysterectomy. His impression was that too sweeping assertions had been made as to the route of infection. There were but two ways in which Douglas's cul-de-sac could be infected from the uterus: first, by direct continuity from the uterine mucosa out through the Falloppian tube; second, the direct penetration from the uterine mucosa through the uterine muscle and peritonæum into this cavity. That the streptococcus, which was a non-motile organism, should be so marvellously transported, even by the blood or lymph streams, as had been described by Dr. Pryor, was scientifically inconceivable. Only by careful serial sections of the uteri in infected cases could this assumption be proved.

If the treatment depended for its efficacy upon the evacuation of infectious matter from Douglas's cul-de-sac, then it was entirely rational; but if Dr. Pryor expected directly to affect the lymph stream flowing through the broad ligaments and retroperitoneally along the line of the iliac vessels, it would appear that his assumption was open to serious question. In conclusion, he would repeat his first statement, that the plan Dr. Pryor had pursued in these 35 cases appealed to him as commendable, and he would unhesitatingly adopt it in properly selected puerperally infected cases. As to iodoform gauze, plain sterile gauze would, he believed, effect quite as satisfactory results.

Dr. C. P. **Noble** would like to ask Dr. Pryor how he was certain that the results he got were due to iodoform and not to drainage? He had used iodoform gauze years ago, but not for the past six or eight years. He could not see the slightest difference in his results, since the iodoform was left out, save that the smell of iodoform in the hospital was avoided. He thought that Dr. Pryor's results would have been as good or better if most of the cases had been treated medically, and those in which an abscess formed had been treated by drainage.

Dr. J. M. **Baldy** agreed with Dr. Norris that, so far as the bacteriological standpoint was concerned, it had proved of little use to the general practitioner in his routine work. Dr. Pryor's theory of treatment was based largely on what he believed as to the passage of streptococci directly through the wall of the uterus into the peritoneal cavities. He had no faith in that theory. Almost certainly the infection was through the Falloppian tube, the lymph channels, or the blood vessels into the general circulation, as it was in all other cases. There had been nothing advanced by Dr. Pryor to prove the contrary. If the infection passed directly through the walls of the uterus, or the infection of the peritonæum occurred in the ordinary way through the Falloppian tube, he could not see how packing and isolating the uterus on its posterior aspect could have much effect, so far as isolating the infected organ was concerned; when the anterior face toward the bladder and the top of the uterus was not also packed around and isolated. It did not seem rational to isolate a portion of the uterus, leaving the rest fully exposed and not isolated, and attribute the results to simple isolation.

As to the iodine, there was not a scintilla of proof that it did good, that it ever did in the hands of the old obstetricians in England, by the appendicular surgeons or the gentlemen who packed the pelvis and, Dr. Pryor himself in his paper did not claim to explain it. Dr. Pryor thought that calomel was not a good drug to use in puerperal infection. But combined with a saline it eliminated; there was intravenous elimination, elimination from the peritoneal cavity. He believed it was elimination and stimulation by every measure that did the good in these cases. Dr. Pryor eliminated the septic serum from the pelvis by opening the cul-de-sac. He continued this by his gauze packing, practically a very large drain of gauze and his result was got by first cutting off the original source of feeding of the infection, by cleansing the interior of the uterus (curettage), and keeping it clean, by emptying out the free products of sepsis from the pelvis (the serum), by drainage (the gauze packing) and then by supporting his patient. His treatment was good, but it had but one new feature, that of draining away the serum. Even that has been practised long since. The only difference between the treatment presented by Dr. Pryor and what many had long practised in some cases was that he adopted it as a routine method in these advanced cases and failed absolutely to recognize how he obtained his results. Hysterectomy was rarely called for in this class of cases; it was going more and more into disrepute.

Dr. **Deaver** said that the same condition existed in the right iliac fossa in certain cases of appendicitis as in the pelvis in puerperal sepsis. To illustrate, this (drawing on blackboard) represented the cæcum and appendix; here we had the right iliac fossa. Take these cases of streptococcic appendicitis and we had the same condition of the peritonæum of the right iliac fossa that we had of the appendix, the lizard green appearance. He never saw that at an operation that he did not make a very guarded prognosis. He had seen, time and time again, a case of that kind followed in three or four days by death, and at the autopsy gangrene of the entire ascending colon has been found. The bacteriologist had made cultures from peritonæum. Oftentimes there was no or little fluid in these so called "dry cases," these fearful lethal cases; that was the condition of affairs if you did not thoroughly pack with iodoform gauze and leave your wound open. Science was one thing, practice another. The science that did not cure the patients was a science better left at home. He believed iodoform acted in two ways, locally and systemically by absorption. He thought Dr. Pryor's idea was the same. As to the question of calomel, he thought it a bad practice to give calomel always after abdominal operations. Oftentimes the patients suffered more from the calomel than from the operation. Calomel excited a painful peristalsis, while salines as a rule did not.

Dr. **Baldy** said that, though our surgical friends might see 500 or 600 appendicular cases in a year, they saw possibly only four or five acutely infected uteri in the same period; at least, one would think so from the comments. If any one compared the vermiform appendix with the uterus and believed that the same thing occurred in the two organs in acute infections, he could only say that he differed. He never saw in the puerperal condition this green appearance of the uterus Dr. Deaver spoke of. He saw Dr. Pryor nod his head "Yes." He would say "No." He would make him a wager not 1 in 100; and even then only in case the patient was practically dead. It was a common thing in appendicitis. In the appendicular incision you had to protect your whole abdominal cavity; you had to pack with gauze and protect the general peritonæum. The anatomical relations were different. In the pelvis there was not the same necessity for isolating the pelvis. In operation on the appendix Dr. Deaver, on the other hand, did not pack gauze on one side only, but he packed well and thoroughly around and above, and completely isolated. The conditions were too dissimilar to make it worth further discussion. To compare drainage of appendicitis with one of these cases was simply absurd.

Dr. Pryor, in closing, said that Dr. Norris had hit the hardest of all. That the head obstetrician of the Preston Retreat did not believe in the value of bacteriology in obstetrics was indeed a shock. If you examine the discharges of a woman, and you find no streptococci and curette her, she will get well. If she has streptococci, curette her, and you will lose 22 per cent. of cases. There has been a great deal of antistreptococcus serum sold. You did not make bacteriological examination, and in 251 cases there was a mortality of 15.85 per cent., while with bacteriological examination that showed streptococci you had 33 per cent. mortality. When these cases came to us, what were we to do? Hysterectomy was not indicated. Leave them alone and the mortality was tremendous. He was not willing to go back to empiricism and let go of all the beautiful scientific work that had been done. Streptococci did not travel by continuity of tissue; they did not travel along mucous membrane. They proceeded through the veins and lymphatics. There was no better term to apply than lymphangeitis. The parallel was absolute.

Miscellany.

Volunteer Medical Officers.—An important decision of interest to volunteer medical officers has been recently rendered by the comptroller of the treasury in the case of Major William Duffield Bell, of New York city, who served in the Seventy-first New York Volunteers in the Spanish war and then as assistant surgeon in the Forty-second United States Volunteers. On the muster out of the latter organization, says the *Army and Navy Journal*, he was appointed a major and surgeon under the reorganization act of February 2, 1901. He rendered this service for the two years provided by that act and was then mustered out without extra pay. The treasury department at that time held that the extra pay act of January 12, 1899, and its amendment of May 26, 1900, were limited to officers and men of the Spanish war who were in service when the first act passed. This view was overruled by the court of claims in the Pierson and Beale test cases and the payment of extra pay to the Philippine volunteers began. Major Bell was not able to recover extra pay as of the Forty-second United States Volunters, because, in the Hull case, the court of claims held that extra pay was lost by immediate reappointment as surgeon of volunteers. His appeal to the comptroller was based upon the contention that he was entitled to extra pay as a major of volunteers. The argument in his behalf was presented by his attorneys, the Messrs. King, of Washington, D. C., who took the position that the court of claims had held that the acts of January 12, 1899, and May 26, 1900, were permanent and applied to future as well as to past service. The comptroller approved this view, accepting the decision of the court of claims in the Pierson and Beale cases, which had been also argued by the Messrs. King. The result is that the surgeons and assistant surgeons of volunteers who were appointed under the act of February 2, 1901, are all entitled to extra pay. This is subject to the condition that they were not immediately, upon muster out, reappointed in the regular army. Whether immediate reappointment of contract surgeons bars the right to the extra pay will probably require a final determination in the courts. It is possible that a discrimination may be drawn between accepting a contract and accepting an appointment in the army.

Official News.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending April 23, 1904:

Arnold, W. F., Surgeon. Retired from active service, April 19, 1904.

De Valin, C. M., Passed Assistant Surgeon. Detached from the *Rainbow* and ordered to the *Albany*.

Holcomb, R. C., Passed Assistant Surgeon. Detached from the Naval Hospital, Newport, R. I., and ordered to the *Mayflower*.

Lowndes, C. H. T., Surgeon. Detached from the Naval Academy, Annapolis, Md., and ordered to the *Chesapeake*.

Pryor, J. C., Passed Assistant Surgeon. Ordered to the Naval Hospital, Newport, R. I.

Stone, E. P., Surgeon. Detached from the *Mayflower* and ordered to the Naval Academy.

Strite, C. E., Acting Surgeon. Appointed acting assistant surgeon from April 13, 1904.

Traynor, J. P., Assistant Surgeon. Detached from the *Albany* and ordered to the *Rainbow*.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending April 23, 1904:

Banta, William P., First Lieutenant and Assistant Surgeon. Upon being relieved from temporary duty at the target range, Leon Springs, Texas, will proceed to Kerrville, Texas, for duty at the artillery camp at that place.

Bingham, E. G., First Lieutenant and Assistant Surgeon. Upon arrival at San Francisco, Cal., *en route* to Manila, P. I., the Commanding General of the Department of California is authorized to assign him to duty with troops going from the Presidio of San Francisco, Cal., to Yosemite and Sequoia National Park, Cal., for duty during the season of 1904.

Brown, O. G., First Lieutenant and Assistant Surgeon.

Will proceed to San Francisco, Cal., for transportation to Manila, P. I.

BUCK, CARROLL D., First Lieutenant and Assistant Surgeon. Reports arrival at the Louisiana Purchase Exposition, St. Louis, Mo., with Battalion Philippine Scouts.

DE WITT, WALLACE, First Lieutenant and Assistant Surgeon. Granted leave of absence for seven days, to take effect about April 22, 1904.

EDGER, BENJAMIN J., JR., First Lieutenant and Assistant Surgeon. Ordered to report in person to Lieutenant-Colonel George H. Torney, Deputy Surgeon-General, President of the Examining Board, Presidio of San Francisco, Cal., for examination for promotion.

EWING, CHARLES B., First Lieutenant and Assistant Surgeon. Left Columbus Barracks, Ohio, with recruits to Angel Island, Cal.

JONES, PERCY L., First Lieutenant and Assistant Surgeon. Left Fort Monroe, Va., *en route* to Washington Barracks, D. C., for temporary duty.

MCANDREW, P. H., First Lieutenant and Assistant Surgeon. Leave of absence extended fifteen days.

PIPES, HENRY F., First Lieutenant and Assistant Surgeon. Upon arrival at San Francisco, Cal., *en route* to Manila, P. I., the Commanding General of the Department of California is authorized to assign him to duty with troops going to Yosemite and Sequoia National Park, Cal., from the Presidio of San Francisco, for duty during the season of 1904.

RUTHERFORD, HENRY H., First Lieutenant and Assistant Surgeon. Granted sick leave of absence for thirty days.

WATERHOUSE, SAMUEL M., First Lieutenant and Assistant Surgeon. Will report in person to Lieutenant-Colonel George H. Torney, Deputy Surgeon-General, president of the examining board at the United States General Hospital, Presidio of San Francisco, for examination for promotion.

WOODSON, R. S., First Lieutenant and Assistant Surgeon. Returned to Fort Clark, Texas, from leave of absence.

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending April 21, 1904:

ALTREE, G. H., Acting Assistant Surgeon. Granted leave of absence for five days from April 19th.

ASHFORD, F. A., Assistant Surgeon. Leave of absence for ten days from March 28, 1904, granted Assistant Surgeon Ashford, amended so that said leave shall be for eleven days.

BAILEY, C. W., Acting Assistant Surgeon. Granted leave of absence for eleven days from April 22nd.

BLUE, RUPERT, Passed Assistant Surgeon. Granted leave of absence for three days from April 19th.

BROWN, B. W., Passed Assistant Surgeon. Granted leave of absence for two days from April 25th.

DUKE, B. F., Acting Assistant Surgeon. Granted leave of absence for six days from April 18th.

GREENE, J. B., Passed Assistant Surgeon. Relieved from duty at Havana, Cuba, and directed to report to the Medical Officer in command at New York (Stapleton) for duty and assignment to quarters. April 20, 1904.

HOLT, J. M., Assistant Surgeon. To report to Medical Officer in command at San Francisco, Cal., for duty and assignment to quarters. April 20, 1904.

ILTIS, G. W., Pharmacist. Granted leave of absence for twenty-five days from May 5th.

MCLAUGHLIN, A. J., Assistant Surgeon. Granted leave of absence for four days from April 20th.

MARSH, W. H., Acting Assistant Surgeon. Granted leave of absence for five days from April 26th.

MONCURE, J. A., Acting Assistant Surgeon. Department letter of March 31, 1904, granting Acting Assistant Surgeon Moncure leave of absence for thirty days from April 10th, 1904, amended so as to read thirty days from April 12th.

WARREN, B. S., Assistant Surgeon. Granted extension of leave of absence for one day from April 17th.

Births, Marriages, and Deaths.

Married.

BALLENGER—GORMAN.—In Baltimore, Maryland, on Wednesday, April 20th, Dr. Edgar Garrison Ballenger and Miss Nora C. Gorman.

CUMMINGS—KOLAR.—In St. Paul, Minnesota, on Wednesday, April 13th, Dr. J. H. Cummings and Miss Augusta Kolar.

GRISMORE—WITTICH.—In Lima, Ohio, on Thursday, April 14th, Dr. O. Grismore and Miss Martha Wittich.

JOHNSON—FISKE.—In Port Chester, N. Y., on Tuesday, April 12th, Dr. Philip Van Kuren Johnson and Miss Martha Therese Fiske.

MITCHELL—WEBB.—In Washington, D. C., on Wednesday, April 20th, Dr. James Fernandez Mitchell and Miss Eliza Hutchinson Webb.

RICE—RIDGEWAY.—In Kansas City, Missouri, on Tuesday, April 12th, Dr. O. W. Rice and Miss Katherine Ridgeway.

SATER—TEAL.—In Cincinnati, Ohio, on Tuesday, April 12th, Dr. Clifford Sater and Miss Louella Teal.

SHELTON—GILMAN.—In Independence, Missouri, on Thursday, April 14th, Dr. Frank M. Shelton and Miss V. Gilman.

SPEED—BROWN.—In Chicago, Illinois, on Tuesday, April 12th, Dr. Kellogg Speed and Miss Bertha A. Brown.

STEWART—CARPENTER.—In Philadelphia, Pennsylvania, on Wednesday, April 20th, Dr. Thomas Summerville Stewart and Miss Ada Carpenter.

Died.

ALGER.—In Coldwater, Michigan, on Tuesday, April 19th, Dr. Isaac Alger, in the eighty-fifth year of his age.

ALLEN.—In Minneapolis, Minnesota, on Wednesday, April 13th, Dr. L. B. Allen, in the seventy-seventh year of his age.

BAKER.—In New York, on Thursday, April 21st, Dr. William Baker.

BANGE.—In Cincinnati, Ohio, on Mondoy, April 18th, Dr. Theodore Bange, in the forty-ninth year of his age.

CAREY.—In Mount Vernon, N. Y., on Thursday, April 21st, Dr. Joshua M. Carey, in the seventieth year of his age.

HIMOE.—In Kansas City, Missouri, on Tuesday, April 19th, Dr. Stephen O. Himoe, in the seventy-third year of his age.

HITE.—In Kokomo, Indiana, on Friday, April 15th, Dr. Edward A. Hite.

JENKINS.—In Palatka, Florida, on Monday, April 18th, Dr. E. E. Jenkins.

JONES.—In Newark, New Jersey, on Monday, April 18th, Dr. S. Wasson Jones, in the fifty-sixth year of his age.

KOHNSTAMM.—In New York, on Monday, April 18th, Dr. Lorenzo J. Kohnstamm, in the forty-fifth year of his age.

LLOYD.—In Bay City, Michigan, on Monday, April 18th, Dr. Daniel S. Lloyd.

MANKER.—In Chattanooga, Tennessee, on Tuesday, April 19th, Dr. John P. Manker.

MATAS.—In New Orleans, Louisiana, on Tuesday, April 12th, Dr. Narcissus Hereu Matas, in the sixty-eighth year of his age.

MOURNING.—In Louisville, Kentucky, on Saturday, April 16th, Dr. Charles Norton Mourning, in the twenty-eighth year of his age.

PAINE.—In Boston, Massachusetts, on Monday, April 18th, Dr. Sumner Paine, in the thirty-fifth year of his age.

PEARSALL.—In Saratoga, N. Y., on Monday, April 18th, Dr. John A. Pearsall, in the fifty-fourth year of his age.

PREVOST.—In Rochester, N. Y., on Saturday, April 16th, Dr. Isadore Prevost, in the ninety-seventh year of his age.

TALBERT.—In Beaver Dam, Wisconsin, on Saturday, April 16th, Dr. George E. Talbert, in the seventy-fifth year of his age.

TATE.—In Elberton, Georgia, on Monday, April 18th, Dr. Albert M. Tate.

VOGEL.—In Baltimore, Maryland, on Thursday, April 14th, Dr. Bernhard Vogel, in the fifty-ninth year of his age.

WINTERS.—In Lansing, Michigan, on Tuesday, April 5th, Dr. Thomas M. Winters, in the thirty-ninth year of his age.

New York Medical Journal
AND
Philadelphia Medical Journal.
CONSOLIDATED.

A Weekly Review of Medicine

VOL. LXXIX, No. 19. SATURDAY, MAY 7, 1904 WHOLE No. 1327.

Original Communications.

THE SIGNIFICANCE OF PARENCHYMATOUS CHANGE IN THE KIDNEYS.*

By H. A. TOMLINSON, M. D.,
ST. PETER, MINN.,
SUPERINTENDENT, ST. PETER STATE HOSPITAL.

In discussing the general subject of renal inadequacy, in a paper read before the Minnesota Academy of Medicine, five years ago, I called attention to some points in connection with parenchymatous involvement of the kidneys and its results, which did not, at the time, meet with much credence. Since then we have given considerable attention to the pathology of the kidney function, and recently have supplemented the clinical and pathological study of parenchymatous change in the kidneys with some experimental work in verification of the conclusions reached.

As what I stated, in the paper referred to, concerning the function of the kidneys, and especially the inadequacy of this function, is as applicable now as it was then, I will take the liberty to repeat what I then said:

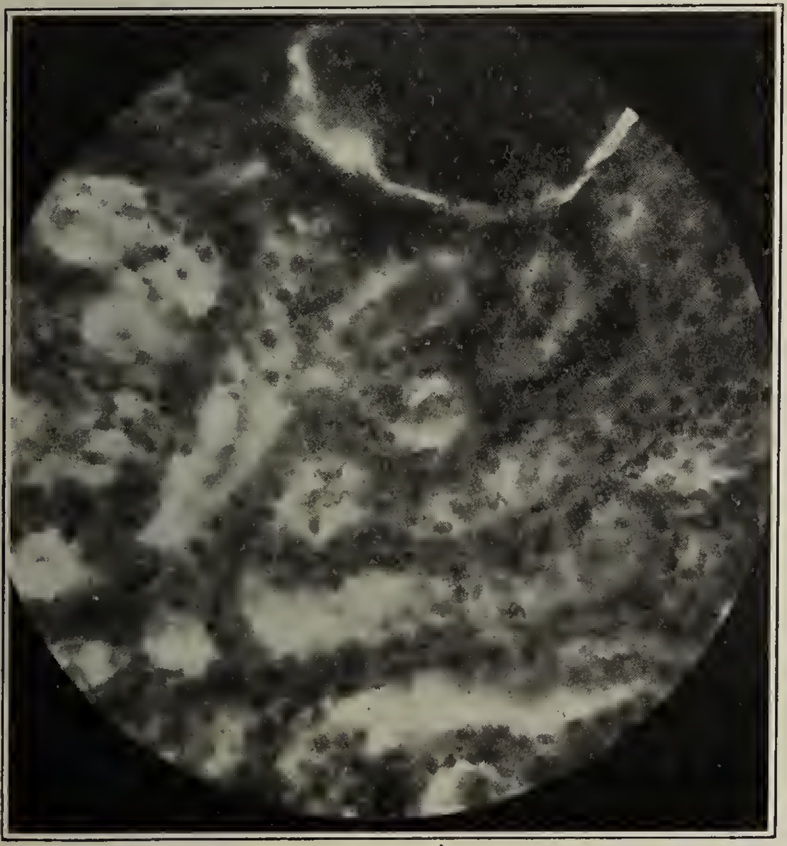
FIG. 1.—Healthy renal tubules and glomerulus. Heifer, ¼ in. O.

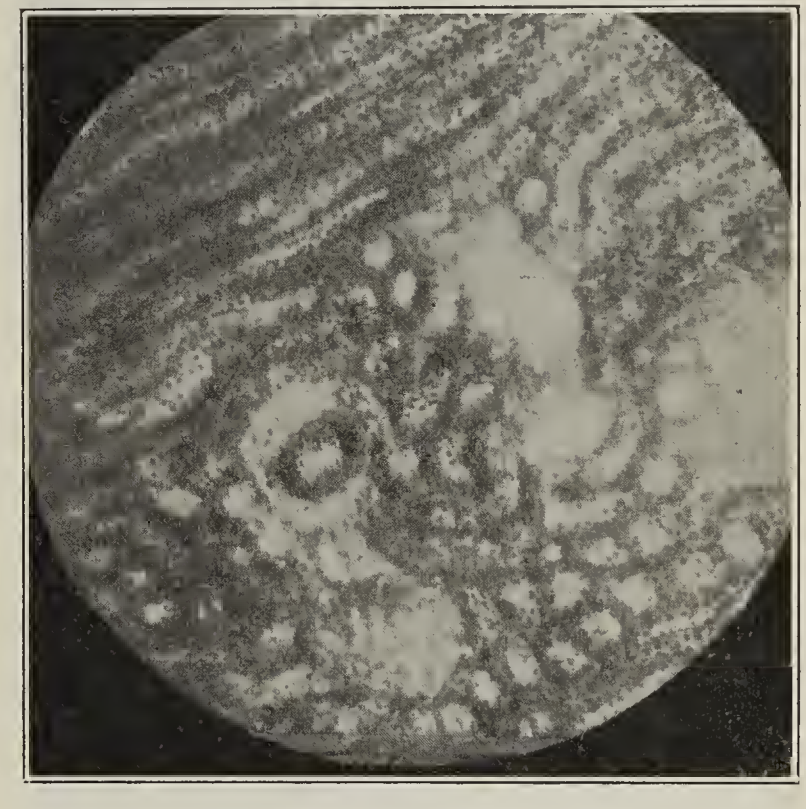
FIG. 2.—Normal renal convoluted tubes. Rabbit No. 8, ½ in. O.

This condition of the kidneys I believe to be represented in the inability of these organs to completely eliminate the waste products of the body; either because they are themselves the seat of disease, or because the products of destructive metabolism come to the kidneys in such form chemically as to be unable to pass through the renal epithelium or to complete their elaboration into those compounds which can be secreted and excreted by the functional portion of the tubules. There are many ways in which this inadequacy may be brought about, but let us first consider the function of the kidney and its relation to the welfare of the rest of the organism. If we accept the current teaching as to the structure and function of the epithelial lining of certain portions of the tubule, the kidney is a secretory as well as an excretory organ, and has something to do with the elaboration and reduction of the compounded elements which are brought to it by the blood. Next to the brain, the kidney receives a proportionately larger and more direct blood supply than any other organ, and the blood vessels are so arranged in their final distribution as to expose the largest possible surface in contact with the functional part of the organ. It receives its nerve supply from the same sources, both ganglionic and spinal, as the other abdominal viscera, and is thus intimately associated with the other vegetative organs. Finally it is important to remember that each pyramid, with the cortex above it, is practically a separate kidney, capable, so long as its blood supply is not cut off, to perform all of the functions of the organ as a whole. Like the brain, the kidney has a function which is absolutely essential to existence, and this function cannot be vicariously performed except to an extremely limited extent. Besides, from the nature of the secretion and excretion from the kidney, any interference with the normal performance of its function will necessarily have a more disastrous effect on the rest of the organism than would disturbance of any other one of the vegetative processes. Furthermore, the intimate association of the kidney through its nerve supply, not only with the abdominal viscera, but also with the more directly vital processes of circulation and respiration, shows how important its function is to the general welfare of the organism. Without going into the details of the chemistry of the urine and the nature of its constituents it suffices for my purpose to state that, in both health and disease, those constituents whose elimination is most essential to the welfare of the organism appear in combination with uric, phosphoric, sulphuric, and hydrochloric acids, and as urea representing nitrogenous waste, the relative amounts of these substances eliminated during the twenty-four hours, and their proportion to each other, indicating not only the degree of functional activity of the kidneys, but also the nature and completeness of the changes going on in the organism as a whole. When we take into consideration the intimate association of the function of the kidneys with the vegetative organs, as shown by their intimately related nerve supply, and indirectly by their association with the general nervous system, we can realize how important the function of these organs is to the welfare of the general organism, and conversely how they in their turn must necessarily be subject to disturbance of their function and normal rate of activity by extra demands resulting from derangement of some one of the vital functions due to visceral disease, excessive somatic change resulting from overwork or overstrain, involvement of the nervous system through impaired nutrition or excessive mental activity, or all of these causes acting together to interfere with metabolism and render incomplete the formative process in the products of retrograde change which it is the function of the kidneys to eliminate. It is a well known fact in physiology that the activity of the function of the kidneys is greatly influenced by the amount of blood circulating through them, and that the amount of blood in them may be so considerable as to materially increase the size of the organ; while at the same time the tension of the bloodvessels may be so great as to seriously reduce the functional activity of the kidney or check it altogether. The same result may also be produced by vasomotor paresis. It has also been shown experimentally that the functional activity of the kidney may be checked or arrested by disturbance in the nervous system, without the presence of any diseased condition in the kidney. The aberration and sometimes abeyance of function in the kidneys as seen in hysteria, is well known, in some cases the secretion of urine being completely suppressed for considerable periods, while in others there will be polyuria, and both of these conditions occurring without apparent physical cause adequate to produce them, unaccompanied by any of the symptoms usually associated with anuria or polyuria.

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* Read before the Hennepin County Medical Society, October 5, 1903.

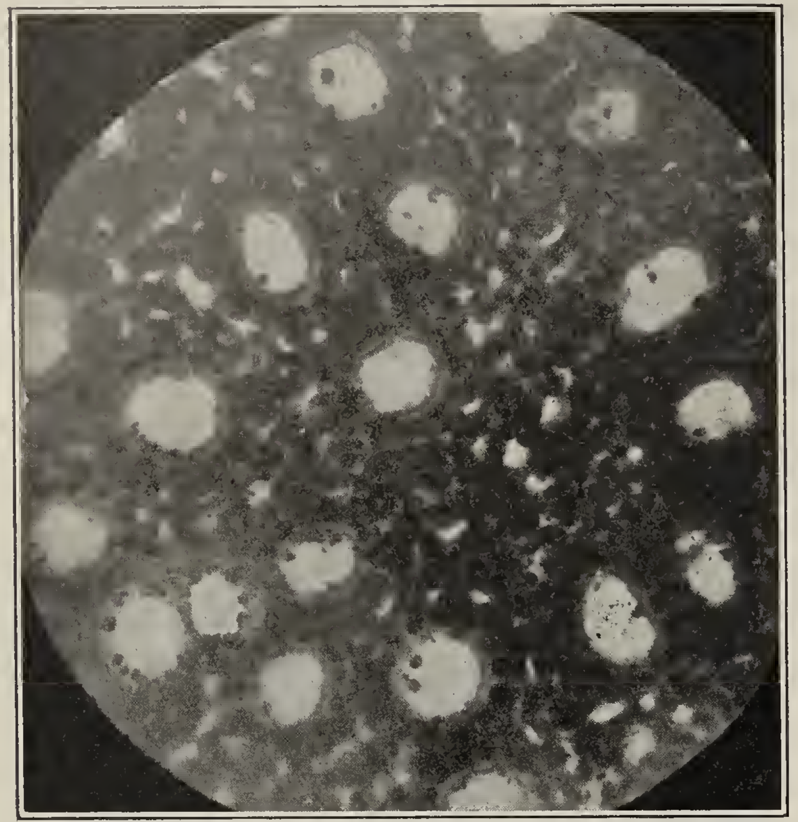

FIG. 3.—Normal renal pyramid, transverse section. Rabbit No. 8. ¼ in. O.

It has been determined experimentally that there is some division of function between the different parts of the tubules of the kidney; and the fact that there is a marked separation in the blood supply of the glomerulus from the rest of the tubule, further suggests this separation of function. Besides, the

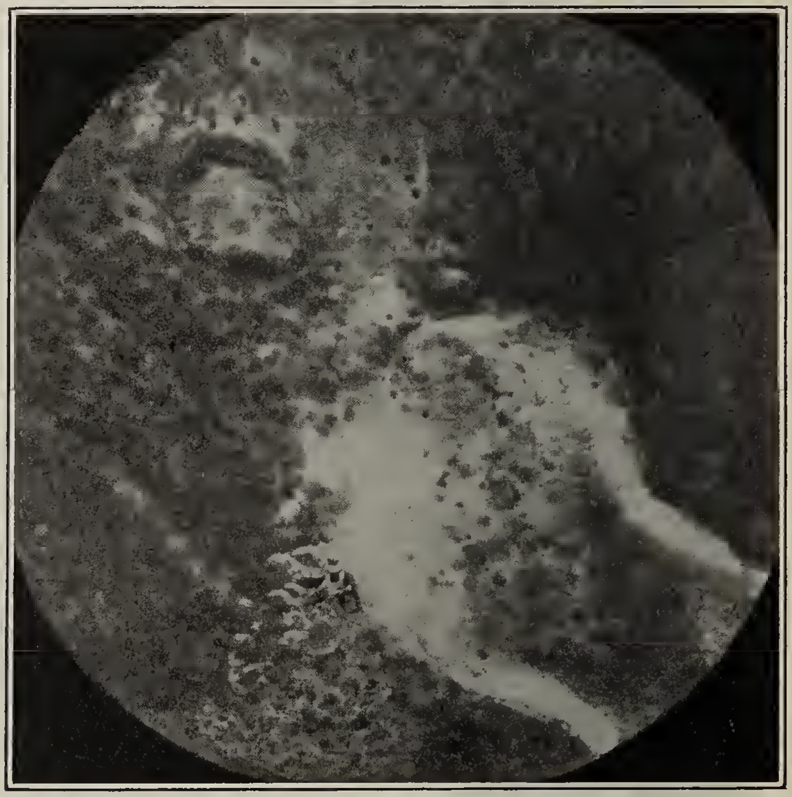

FIG. 4.—Accumulation of leucocytes in renal capillary hæmorrhages. Rabbit No. 1. ¼ in O.

blood goes to the glomerulus before it is distributed to the looped and convoluted tubules. Normally, then, it is probable, from what has been determined experimentally as to the distribution of function in the different parts of the tubule, that the bulk of the water, with the organic salts, is secreted through the glomerulus; and we have negative proof of this in the results which follow chronic interstitial change in the kidney, where the degenerative process extends from the capsule inward. The urine is diminished in amount, and contains a progressively smaller quantity of the salts of sodium and potassium; while there is very little reduction in the urea and other constituents representing the processes of destructive metabolism.

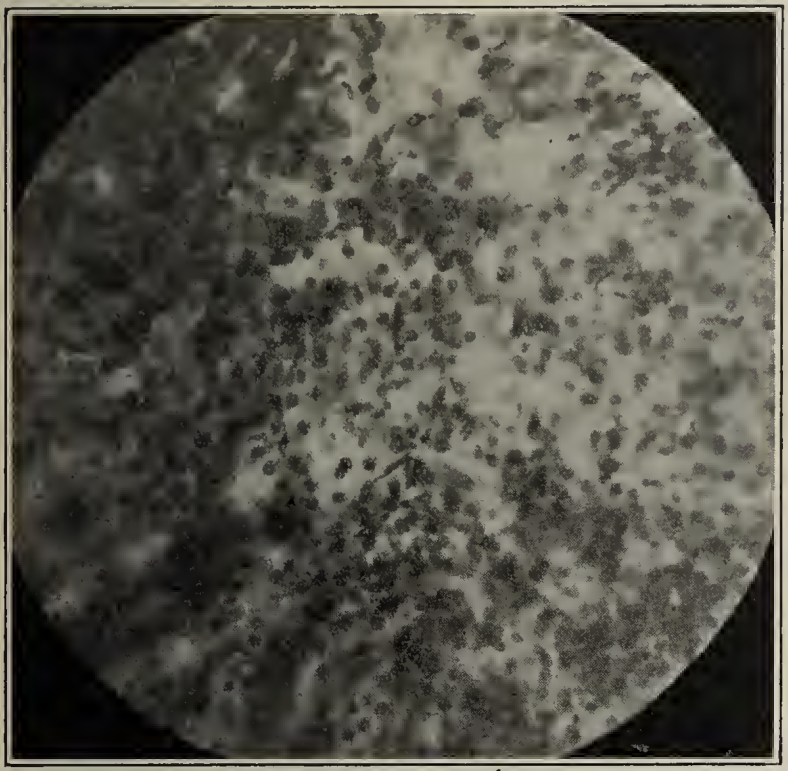

Fig. 5.—Renal section in which effusion of little round cells obliterates everything else. ¼ in. O. Rabbit No. 1.

This solution of salts passing down through the looped and convoluted portions of the tubule, is in osmosis with the blood in the capillary plexus surrounding the tubule, and the urea and other reduction products pass into the fluid in the tubule from the blood, until the density of the two fluids is practically the same. Consequently, so long as the amount of fluid coming from the glomerulus is sufficient, the excrementitious materials in the blood will be eliminated. There is, for obvious reasons, no positive proof of such a process; but there is negative evidence in the fact that just these latter constituents of the urine are reduced in quantity, or absent, when the function of this portion of the tubule is interfered with by disease in the parenchyma of the kidney. There is no direct evidence as to the selective power of the epithelial cells lining the tubules, or as to whether they have something to do with the completion of the reduction processes, aided by the presumed internal secretion of the kidney; but we do know that when the destructive processes of metabolism are incomplete, or there is a surplus of food material which has not been assimilated, and even when the processes of digestion have been interfered with by disease, there are substances circulating in the blood stream which, on account of their chemical composition, cannot pass through the lining membrane of the tubules. They therefore remain in the blood, and are deposited in the tissues, where they act as irritants and intoxicants. The extent of their effect upon the vital processes of the general organism will depend upon several factors; and the most important of these would be the possibility of vicarious elimination through the activity of the lungs and skin. Thus, the man who lives an active outdoor life, with the resulting respiratory activity and more rapid oxidation of the blood, would be in better condition to withstand the effects of autointoxication and recover from them promptly, than would be the man who lived a sedentary life; and his power of resistance would be increased by the more rapid transpiration through the skin, which results from free perspiration. (It is well to remember, that in the simple multicellular organisms, the outer surface of the body performs all of the functions of elimination performed by the kidneys in the higher animals.) Lastly, the intestinal tract sometimes becomes an important factor in vicarious elimination; either naturally in the establishment of diarrhœa, as not uncommonly occurs in acute and chronic autointoxication, or as the result of catharsis. It is probable that this process of elimination through the intestinal discharge is similar to that which takes place in the tubules of the kidney. That is, the diarrhœal fluid, by osmosis, abstracts from the blood in the

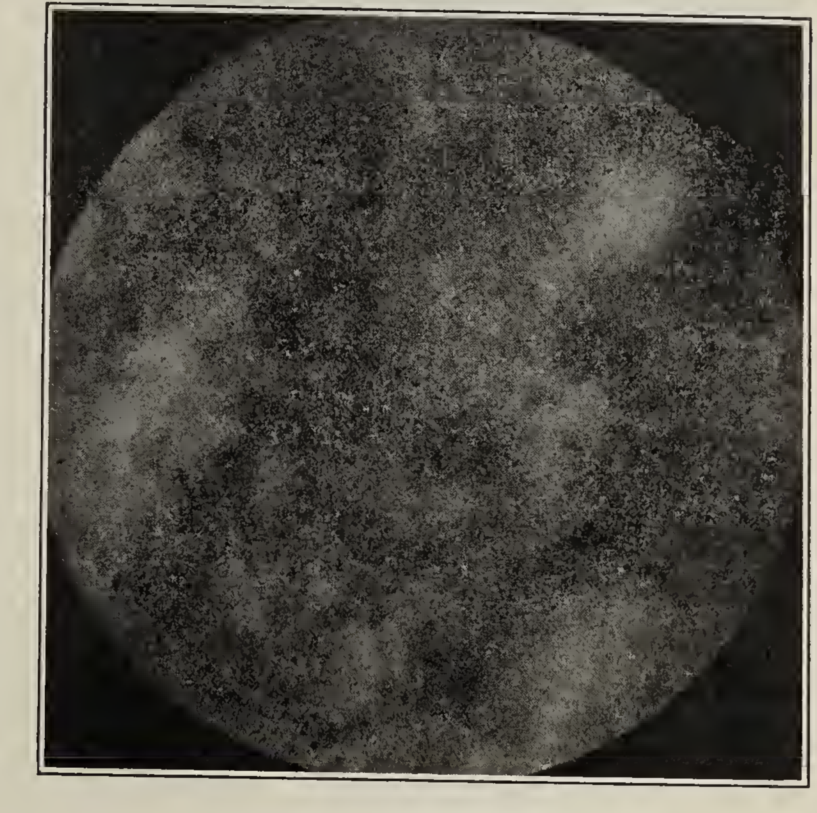

Fig. 6.—Cloudy swelling. $^1/_6$ in. O.

intestinal capillaries poisonous materials, as well as by solution in the serum which is poured out into the bowel.

Albumin, although a proteid substance, is excreted through the glomerulus, and its excretion does not necessarily involve the presence of disease in the kidney; although it does, as a rule, appear in association with kidney disease. It is more probable, however, in the light of current knowledge, that the presence of albumin in the urine involves an impairment of vitality in the general organism, which results in the presence in the blood stream of albumin in such a form that it is a waste product, which is therefore eliminated as a fluid. Aside from the direct drain on the vitality of the general organism which is thus produced, there is the further indirect effect following the resulting change in the character of the fluid which passes through the tubules—the presence of the albumin in some way interfering with the excretion of the urea and other organic substances, probably by the influence of its presence in stopping the osmosis of crystalline substances.

It must be apparent, then, that the function of the looped and convoluted tubules of the kidney is not only the most important, but also the most liable to be interfered with by ordinary conditions in the environment, and further, that this function may be seriously interfered with, in the absence of gross disease of the kidney; while from the nature of the waste products retained in the blood stream, this form of renal inadequacy is the most dangerous. Besides, even in chronic interstitial nephritis, or granular kidney, the immediate cause of death is usually an acute involvement of the parenchyma of the kidney; as shown by the histological changes in the epithelial lining of the tubules.

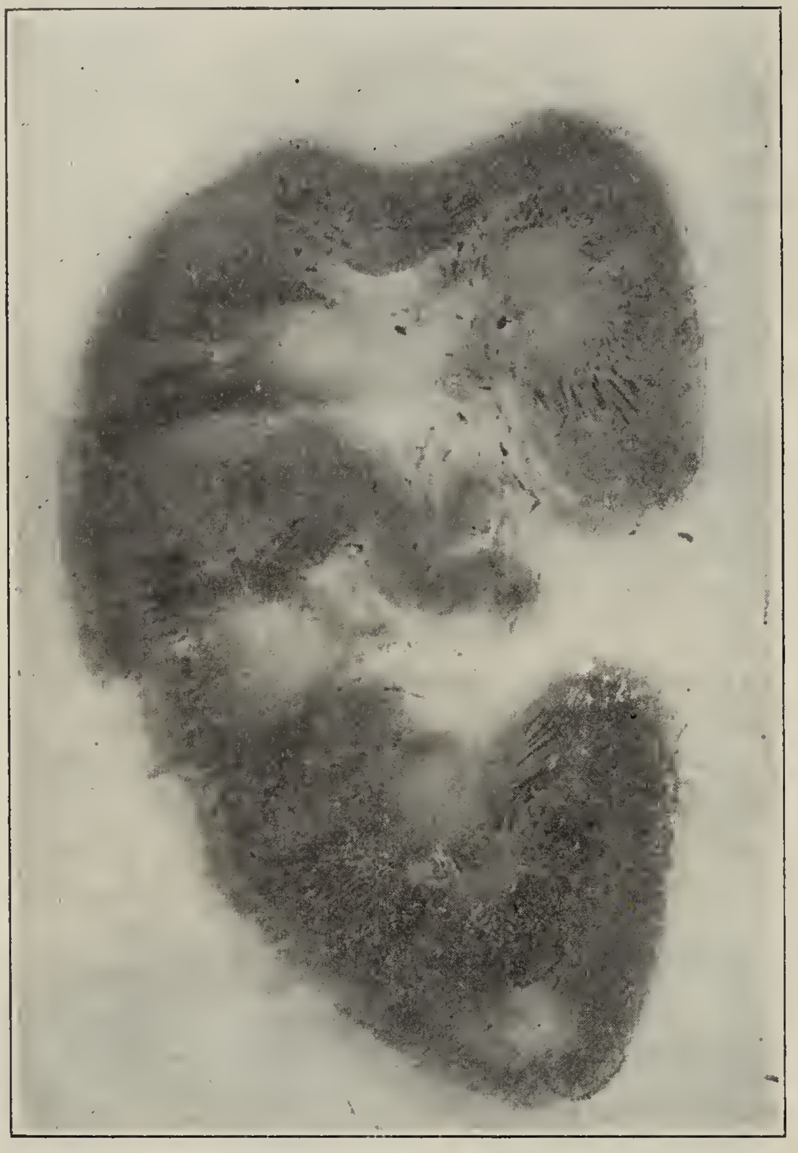

FIG. 7.

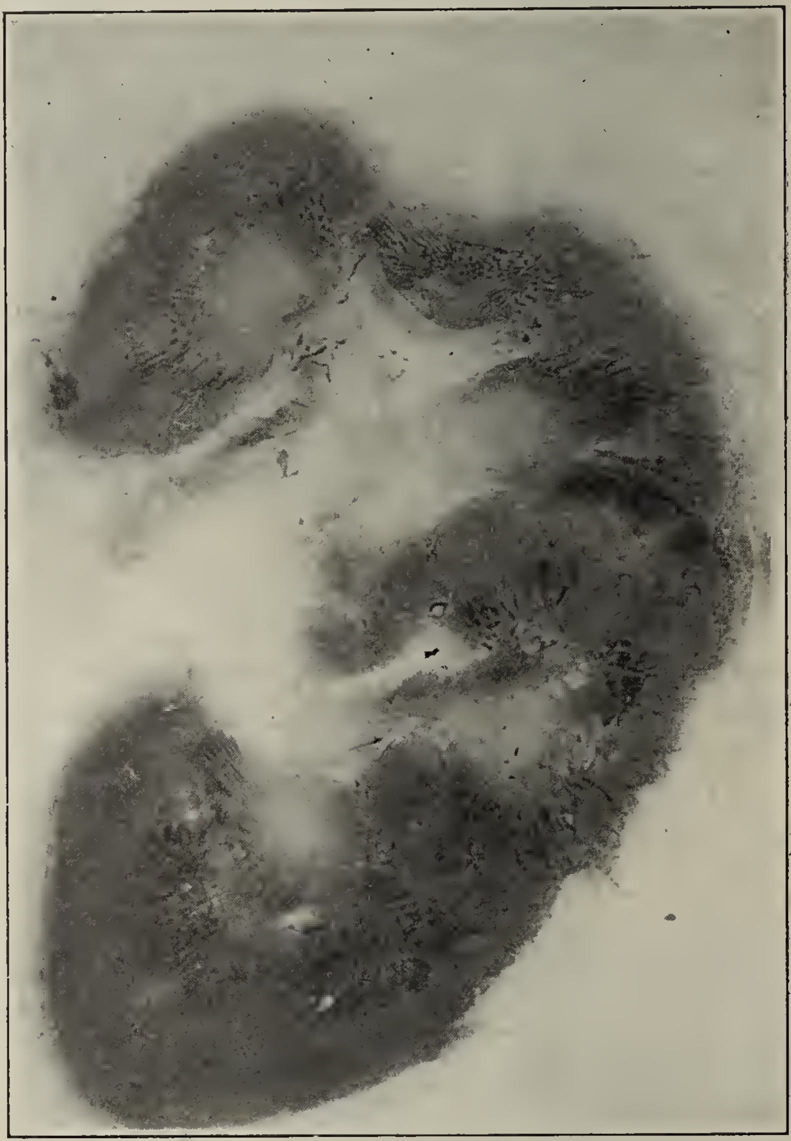

FIG. 8.

FIGS. 7 and 8.—Nearly natural size. Subacute parenchymatous involvement in a chronically degenerated and distorted kidney, in which, however, there were several fairly healthy pyramids. Extensive capillary hæmorrhages. Glomeruli show as dark dots. Marked medullary increase, and extensive deposit of fat in the pelvis. The microscopy showed, besides the evidence of degeneration, extensive cloudy swelling.

The consideration of parenchymatous change in the kidney has become increasingly important, because the pathological conditions which result are so commonly the cause of sudden death in the apparently healthy, and for the reason that the symptoms which result from the subacute or chronic form of this type of degeneration, are practically never referable to the kidney and its functions; consequently they are attributed to local conditions in the organs apparently involved. The involvement of the kidneys is not appreciated unless albumin and casts are found. Just why this should be so, in the light of our present knowledge of the rôle of autointoxication in the production of disease, is hard to understand; but the most obvious explanation is the persistence of the conception of what is constituted in the condition which is termed "albuminuria." That is, the morbid changes in the kidney, as they affect the permeability of the epithelial lining of the tubules, are thought of only as they admit of the escape from the blood of products which are usually only eliminated through the kidneys when they are in excess. But these morbid changes are not considered, as they result in the retention of other products which should be eliminated, and the retention of which produces intoxication in the general organism. Furthermore, the persistence of the belief with regard to the significance of the presence of albumin, has prevented the proper consideration of more than this one aspect of the influence of altered permeability of the lining membrane of the tubules of the kidney; and failure to recognize the possibility that the conditions which result in the persistent elimination of albumin, may be the result of changed metabolic processes, having their primary cause in the retention in the blood stream of substances which the pathological changes in the lining membrane of the tubules have made impossible of elimination; and that the particular form of albumin which appears in the urine may be the result of these altered metabolic processes, and not evidence of the disease in the kidney. Or, in other words, that there has been failure in the functional activity of the looped and convoluted tubules of the kidney for a long time before the conditions arise which are manifested in the excretion of albumin pathologically.

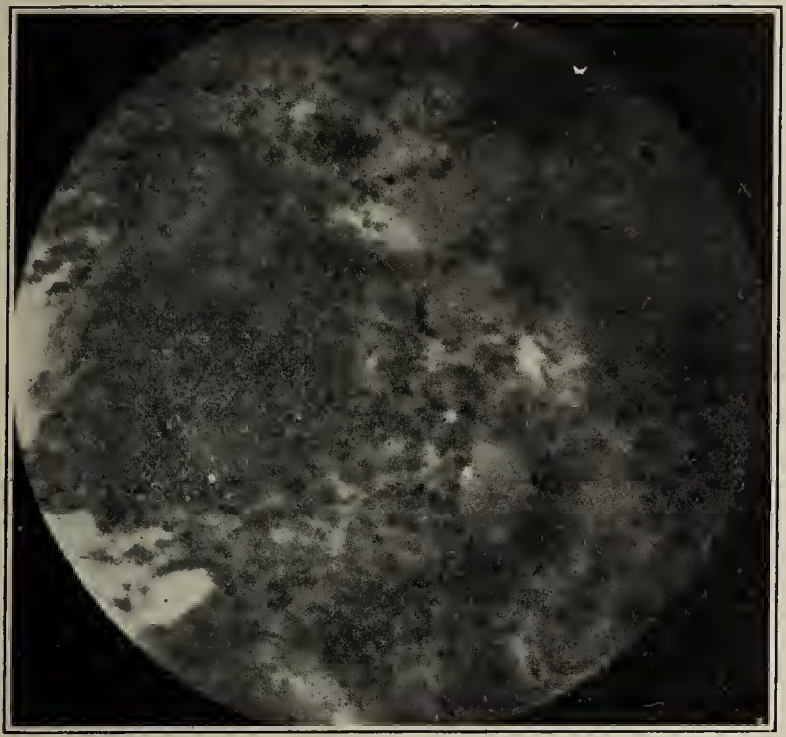

Fig. 9.—Hyaline casts. Hyaline changes in glomerulus. ¼ in. O.

In a recent paper, Maragliano, of Berlin,[1] speaks of what he considers to be the difference between nephritis, and what he calls Bright's disease, or albuminuria. He considers them to be different diseases, and says, "Bright's disease is the result of changes in the entire organism, a systemic disease." J. Rose Bradford,[2] in a recent address, insists that there is a distinct difference, clinically, between nephritis and Bright's disease, and he makes anasarca one of the principal distinguishing symptoms of Bright's disease. These statements are suggestive, as is also the fact, that in chronic interstitial nephritis and granular kidney, there is seldom any albumin in the urine. Besides, when albumin is present in any quantity, the symptom-complex is very different. The presence of albumin in the urine, as a pathological condition, is the result of involvement of the general organism, and this involvement is primarily dependent upon the failure of the kidneys to eliminate completely the waste products of metabolism. The so called physiological albuminuria is the result of disturbed metabolism, and is supposed to be caused by the ingestion of proteid substances in excess; to follow shock or extreme fatigue; and to be the effect of the ingestion of certain poisons. There is back of the albuminuria, therefore, a failure in the processes of constructive metabolism, whereby the proteid substances, instead of being in a form to be available in tissue reconstruction, have remained in one of their transition forms, and have thus become a waste product to be eliminated. Consequently, the presence of albumin in the urine from kidneys known to be the seat of gross pathological change does not argue that the one stands in causal relation with the

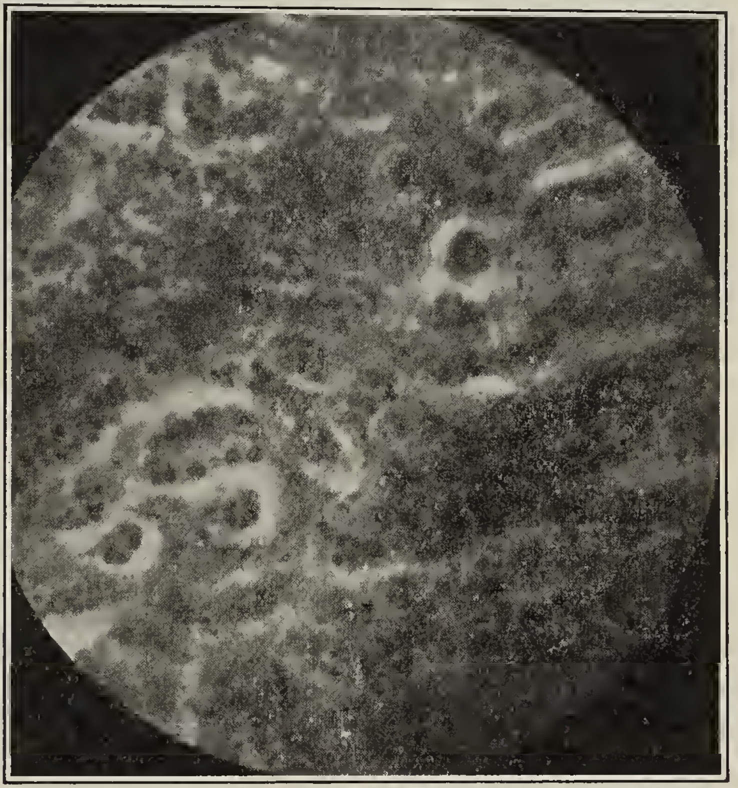

Fig. 10.—Leucocyte casts. ¼ in. O.

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[1] *New York Medical Journal*, June 13, 1903, p. 1082.

[2] Bright's Disease from a Clinical Standpoint. J. Rose Bradford. *Lancet*, July 4, 1903.

other; but rather, that the changes in the kidney have existed long enough to produce a chronic intoxication of the general organism, which interferes with the processes of constructive metabolism. Neither does the anasarca in chronic Bright's disease necessarily bear any relation to the anatomical condition of the kidneys; but probably has the same significance with relation to the lymph system generally that ascites has to the peritonæum, hydrops to the pleura or pericardium, or the ependyma of the ventricles of the brain. In other words, it is a perversion of function, whereby the fluid which should be carried away through the lymph channels remains in the tissues, and the accumulation of this fluid without regard to the amount of water ingested, or that which is excreted through the kidneys and skin, would indicate that some of the processes of metabolism were interfered with, resulting in excessive tissue liquefaction. Liquefaction, as you know, is the process by which waste material is prepared for elimination, as in the removal of infiltration, the resolution of a pneumonia, or the absorption of the callus about a fractured bone. Only, in the anasarca of so called Bright's disease, instead of there being liquefaction of waste material, it is the food substances for the nutrition of the organism and the accumulated fat that are involved. That the inability of the kidneys to excrete water is not the cause of this accumulation is apparent when we take into consideration the fact that, in chronic interstitial nephritis and granular kidney, the excretion of water is reduced to the minimum without the accumulation of fluid in the tissues. It would seem, then, that behind the involvement of the kidneys there must also be an incapacity in the general organism, which results in the aberration or perversion of the processes of metabolism.

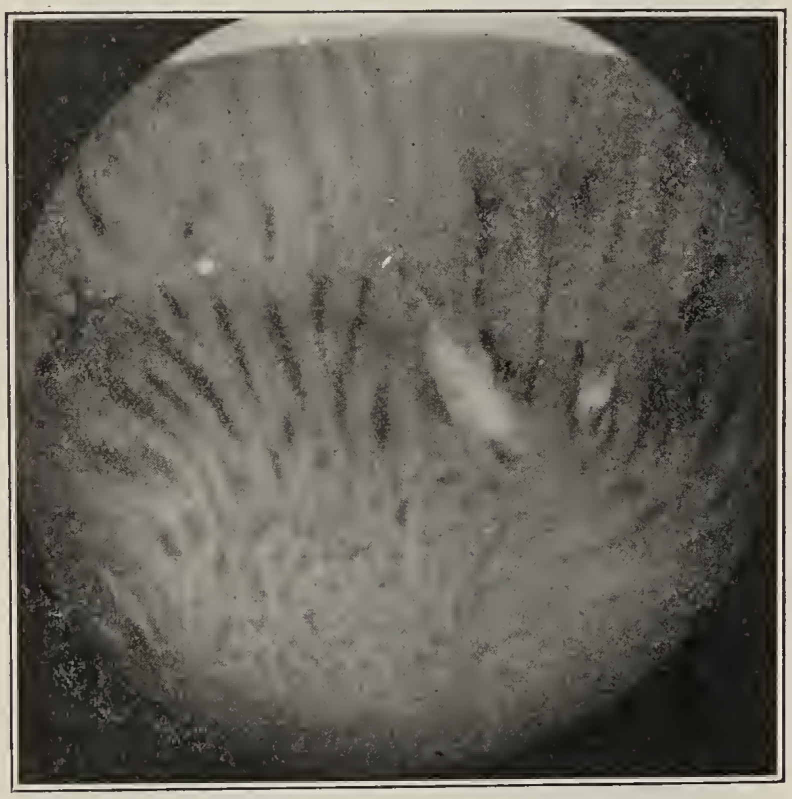

FIG. 11.—Parenchymatous nephritis. Section extending the full width of the organ. 5 in. O.

It should be borne in mind with regard to autointoxication, that it is not the presence of the toxic substances in the blood that is most important, but the fact that they are not eliminated; for it is probable that there are always present in the blood of the ordinary healthy individual, products of imperfect retrograde change, and especially so during fatigue, after overexertion, or when under mental stress; while the malaise, headache, irritability, restlessness, and insomnia which so frequently accompany indigestion and so called colds, are evidently, to the careful clinician, the result of the failure in elimination of the waste products of tissue change which have accumulated in the blood. These substances are not all irritants to the same degree, but some of them undoubtedly affect the kidney through its vasomotor apparatus, producing the condition of intense congestion referred to in discussing the physiology of the kidney function, which acts in the same way, checking the secretion of urine. This ischæmia is followed by vasomotor paresis and blood stasis; and it is probable that it is during this period of delayed functional activity in the kidney that the results of the retention of toxic substances manifest themselves in the nervous system. It is obvious, as the converse of the above described process, that, if the kidney itself is incompetent or diseased, these same conditions may arise without disease in the general organism, but as the result of the gradual accumulation of toxic substances, following the ordinary processes of metabolism. If the accumulation is slow the organism may acquire a tolerance for the presence of these waste products, but, sooner or later, some strain upon vitality will result in a rapid accumulation, and then there will follow an explosive outbreak, apparently without cause, but really the result of cumulative action. It has been noted, in our experience, that, no matter what form of nephritis may be present during life, the condition of the urine just before death and the microscopy of the kidney show that the convoluted and looped tubules are more or less acutely involved, indicating that the immediate cause of death was the failure in the functional activity of that part of the kidney. It is true that in the senile form of chronic interstitial nephritis death usually results from asthenia, on account of the involvement of the medulla; as shown in the pseudobulbar palsy and characteristic respiratory failure which precede death in these cases. But in the class of cases that are most commonly seen in private practice, and which are so frequently not recognized until too late, the main factor is the parenchymatous change which results in that form of intoxication which is so apt to be profound and overwhelming. It is important to remember that there is a marked difference in the way the involvement of the nervous system shows itself, as the result of parenchymatous and interstitial change in the kidney. Aside from the fact that the patient may have convulsions, the motor parts of the nervous system are never directly involved as the result of parenchymatous change. On the contrary, the intoxication is made manifest in disturbance of the functional activity of the vegetative organs, especially that of the lungs and heart, and, next in order, of the digestive apparatus. Cardiac weakness, resulting in syncope, and pulmonary œdema, are the most acute manifestations. Among the most common forms of chronic involvement of the bodily organs are pseudoangina pectoris, pleural effusion, and hypostatic pneumonia. The digestive apparatus may be involved also, and this is most commonly shown in the so-called nervous dyspepsia, gastric and intestinal crises, or in apparently causeless diarrhœa, with profuse watery stools. The mental manifestations of this form of kidney involvement are also characteristic. In the more acute forms, and during acute exacerbations, there are irritability, restlessness, headache, insomnia, and confusion; while in the chronic forms, neurasthenia, with failure of memory and somnolence are most common. It will be recognized at once that these are the symptoms present in those cases of sudden death usually attributed to "heart failure." The usual diagnosis does not go far enough to consider that the dilatation of the right heart, pulmonary œdema, and vasomotor paresis are the result of the intoxication of the nervous system by the retained products of destructive metabolism which have not been eliminated on account of the failure of the function of the kidneys.

The physical manifestations of chronic nephritis are, for obvious reasons, difficult to produce experimentally; but in order to elucidate the subject of this paper, we undertook a series of experiments upon animals, with the object of producing, as nearly as might be, the clinical conditions as we observed them in human beings. The experimental nephritis was produced by the use of a mixture of cantharides and carbolic acid; because the cantharides would produce a congestion of the kidneys the most similar to that which results from acute autointoxication; while the carbolic acid would cause the destructive changes in the epithelial lining of the tubules, and the nervous shock. All of the rabbits were apparently healthy, but one of the most interesting revelations in the study of the morbid histology in these animals was the evidence of preexisting involvement of the kidney structure. In three of the animals in which these changes were most marked, death had been sudden, and followed relatively small doses of the drugs. The symptoms and histological changes varied in all of the animals, but in those cases where death was at all sudden, there were convulsions; and post mortem, a dilated right heart and pulmonary œdema; while the kidneys were intensely congested—so much so that the substance of the cortex pouted out when the capsule was cut. In the urine obtained after death the urea was greatly reduced in amount, as were also the chlorides and sulphates. Only traces of albumin were found, even in those cases where the animal lived for an indefinite time. We have seen these same conditions present in cases of sudden death from so called "heart failure," in persons previously believed to be in good health; where death has followed upon intense excitement, overexertion, or the ingestion of a heavy meal with alcohol. The histology, as shown in the photomicrographs, indicates how the function of the kidney tubules is interfered with, and also suggests how, under the influence of congestion alone, with blood stasis, the same abeyance of function may be produced. These and other similar experiments also confirm the belief expressed in the beginning of this paper, that the acute explosive manifestations of uræmia are dependent upon involvement of the parenchyma of the kidney; also, that the presence of albumin in the urine is not the result of the nephritis, nor is its absence evidence of a healthy kidney. The significance of parenchymatous change, then, is, that it results in chronic intoxication of the general organism without local evidence of the involvement of the kidneys; and that the physical changes in the urine, upon which reliance is usually placed in the diagnosis of so called Bright's disease, are really an indication of disease in the general organism, and have nothing directly to do with the nephritis, which probably existed for a long time before the involvement of the general organism was apparent, with relation to the disease of the kidneys.

The conclusions from our clinical experience, which have been largely verified by the study of similar conditions, both experimentally and clinically, in the lower animals, are: That there is as much difference in the kidney capacity of different individuals as there is in the capacity of their other vital organs and the nervous system; that some individuals are born with defective kidneys, not necessarily anatomically incomplete, but functionally incapable; that in these individuals a chronic degenerative process is set up early in life; that they are always, to some extent, the victims of chronic autointoxication, because of imperfect elimination; and that in them the irritation resulting from the retention of the waste products of retrograde metabolism, keeps up a chronic congestion in the kidneys, so that from causes which do not seriously affect the ordinary individual, there may arise, and does arise, acute involvement of the parenchyma of these organs, checking elimination, and resulting in more or less explosive outbreaks involving the general organism, and especially the nervous system.

JUVENILE TABES.

WITH A CASE OF TABETIC SYMPTOMS IN A GIRL AGED SEVENTEEN YEARS, WHO PRESENTED FROM INFANCY A BRACHIAL MONOPLEGIA, PROBABLY OF POLIOMYELITIC ORIGIN.*

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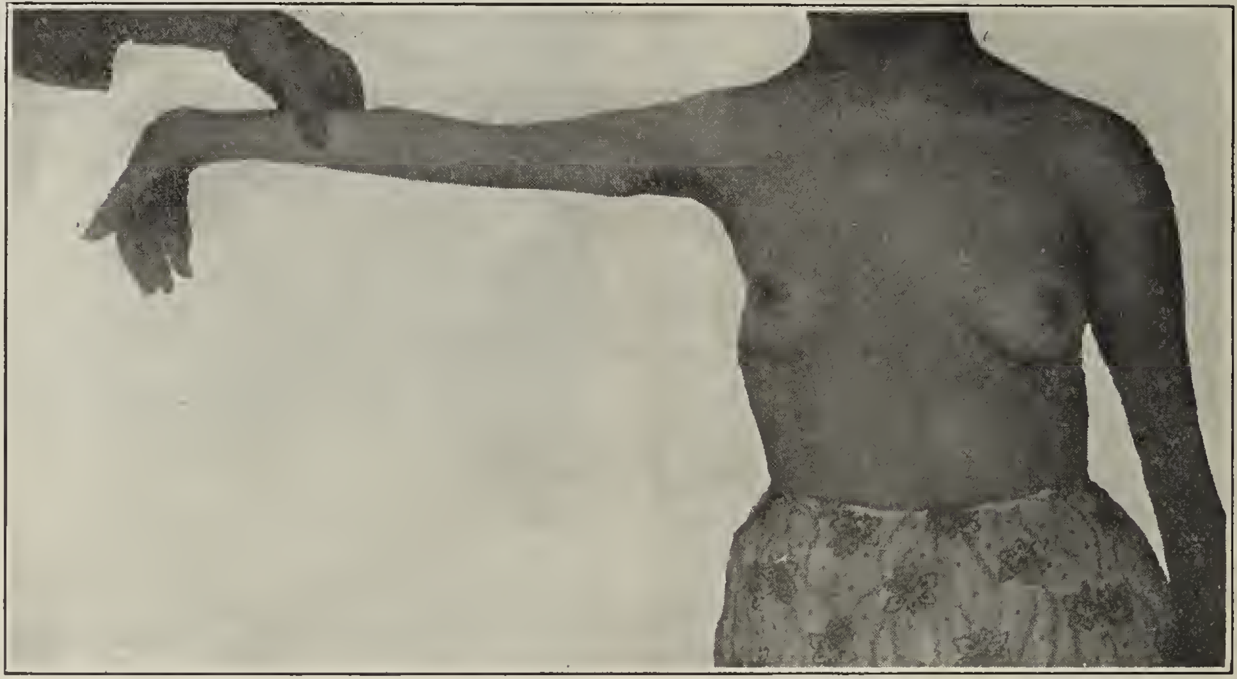
Diseases of the spinal cord, of inflammatory character, rarely disappear without leaving some trace. Generally speaking, the patient is left with irremediable disturbances in some parts of the body. In those exceptional cases in which the old myelitic focus has healed up completely and there is apparently no external sign reminding one of the previous inflammatory condition of the cord, that very same focus may at some time of the patient's life become the point of departure for new inflammatory processes in the same place or at some distance in the same cord. The fact that there is a special vulnerability of a spinal cord which has been affected before, is particularly true with regard to anterior poliomyelitis, and we are now in possession of quite a number of facts proving the correctness of this view. Progressive muscular atrophy is the most frequent occurrence in cases with old spinal infantile paralysis.[1] Hirsh[2] reported the pathological findings of a case of amyotrophic lateral sclerosis, occurring in a patient who presented a history of an old anterior poliomyelitis. In April, 1903, I exhibited before the society a boy, aged fifteen years, with symptoms of a typical amyotrophic lateral sclerosis, who had a history of an acute anterior poliomyelitis in infancy.[3] The records of all those cases show conclusively that the awakening of the old myelitic focus was due to some exciting cause, such as trauma or newly developed infectious diseases, circumstances which were sufficient to give an impetus to the old diseased focus, with the result that the same pathological process spread further and involved in some cases also the pyramidal tract.

The perusal of the literature on the subject shows that progressive muscular atrophy and amyotrophic lateral sclerosis are the only two affections observed, or at least described, as complications of an old anterior poliomyelitis.

When an old inflammatory focus is awakened, it may be expected to involve any portion of the cord. We therefore *a priori* can say that various, if not all, forms of spinal diseases may be looked for in similar cases. The case I am about to report presents a form of spinal affection which differs from those mentioned above.



Brachial monoplegia, probably of poliomyelitic origin.

Whether the symptoms which this patient developed within the last two years are the result of the influence of the old myelitic focus upon other portions of the cord, or present an independent disease developing in an insidious manner, and perhaps on a specific basis, it is difficult to determine. I wish only to put on record a case which, alongside of those already recorded, will show a new, and not yet described, complication of an infantile spinal paralysis. The case is also instructive from this point of view, that once the spinal cord is touched by an inflammatory process, the prognosis, even in the most favorable cases, should be made very cautiously.

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* Read, with exhibition of the patient, before the Philadelphia Neurological Society, October 27, 1903.

[1] C S. Potts, *Univ. of Penn. Med. Bull.*, March, 1903.

[2] *Am. J. Nerv. and Ment. Dis.*, 1899.

[3] *Amer. Medicine*, April 4, 1903.

CASE.—G. G., who is now seventeen years old, was taken at the age of eighteen months with fever, convulsions, and vomiting. The fever persisted for three days, after which the parents noticed a total paralysis of the right arm. The affected limb did not improve, so that the patient never was able to use it. With the exception of a mild attack of measles at the age of four years, from which she recovered entirely, she never was ill until about three years ago, when the present trouble commenced. At that time, namely at the age of fourteen, she began to experience a weakness and various paræsthetic disturbances in the left leg. Among the latter she particularly emphasizes a numbness in the thigh and leg and especially in the sole of the foot; she walked, she states, as though on cotton, the ground did not appear to her to be solid under her left foot. Soon, pain set in, in the entire left limb, although it was continuous, in the form of a slight aching, nevertheless, it was sometimes sharp, lancinating in character, and of short duration. A year later the right leg became somewhat weak and at times also ached. At the same time the patient noticed some disturbances of micturition; the desire often became very imperative and she also had some difficulty in expelling the urine. Finally, a year ago she began to feel weakness, pain, and especially a sensation of pressure and tightness, in the left lumbar region. About the age of fifteen years she noticed a weakness of vision in the right eye. *Status præsens.* Inspection shows a fairly good general physical condition. The right arm is very small, and presents the type of a total brachial paralysis. The muscles of the whole right upper limb, including those of the scapula, are markedly atrophied and completely paralyzed, except some small muscles of the hand, which have only partly recovered. The bones of the skeleton of the entire limb, also the scapula, are very small and thin, showing an arrest of development. Sensations of all kinds are diminished, but not abolished. The skin is flabby and dry, showing disturbance of nutrition. The reflexes of the arm, forearm, and scapula are all lost. Electrical examination of the muscles of the arm shows no response to galvanism and faradaism, a very slight response, and only to strong currents, of the muscles of the forearm and scapula. In the latter case the galvanic current shows ancc-cacc.

The patient has been treated at the Jefferson Hospital with massage and electricity, which has resulted in her regaining some power in the hand.

The chief interest of the case lies in the symptoms, which began to appear about three years ago.

The right lower extremity is apparently normal in size, but the left thigh is 15 cms. smaller in circumference than the right; its anterointernal aspect is somewhat wasted, and the tissue is flabby.

The electrical examination shows diminution of faradaic and galvanic contractility of the muscles of the left thigh, but no R. D. The muscles of the legs respond equally on both sides. The motor symptoms are as follows: Station normal, with open as well as with closed eyes (no Romberg's sign). Station on the right foot is much better than on the left. Resistance power of the right leg is also much better than of the left. The knee jerk on the left is entirely lost; very much diminished and elicited with difficulty on the right. The tendo Achilli's reflex is present, but diminished on the left side.

The objective sensations of all forms are diminished on the left. The subjective sensations are more pronounced now than they were at the onset of the present affection; numbness of the soles of the feet is pronounced on the left, and slight on the right. Aching, with occasional shooting pains, in the left leg; slight aching only in the right. Marked numbness and weakness in the left leg, only some weakness in the right leg. Finally, weakness with pressure and tightness in the left lumbar region. If we add a slight irregularity of the pupils (left larger than right) and the disturbance of micturition, the picture of the disease will be complete. The family history of the patient is negative with this exception, however, that the mother has had several miscarriages.

To sum up we are in the presence of a case with subjective sensory disturbances, girdle sensation, disturbances of deep reflexes and of the sphincter of the bladder, in a young girl who presents an old, complete brachial monoplegia, probably of poliomyelitic origin. Is this a case of progressive muscular atrophy developed in a patient who presents symptoms of an old infantile palsy?

The weakness and slight atrophy of some muscles of the left thigh are certainly present, but are they sufficient elements to justify the diagnosis of a myelopathy. Pain, as a rule, is absent in this disease, and if present it is only in the initial stages; while this patient has had it for the last three years. A progressive muscular atrophy lasting three years would not be confined to a few muscular fibres in one thigh.

The loss of patellar reflex on the left cannot be due to an atrophy of the quadriceps extensor of the leg, as if there is an atrophy of this muscle at all, it is too insignificant to produce a total abolition of the knee jerks. The marked diminution of the knee jerks on the right side can certainly not be explained by the condition of the muscles, as they are not atrophied in the least. Finally, the bladder symptoms and the condition of the pupils are not symptoms upon which a diagnosis of myelopathy can be based. Friedreich's ataxia should naturally be thought of, when weakness of the lower extremities develops gradually in a young person. It is true that one knee jerk is lost and the other much diminished; it is also true that, in exceptional cases of this disease, swaying on standing with closed eyes is absent; but the majority of the characteristic features of the disease are altogether wanting in our case. The patient does not present nystagmus, the jerky and slow articulation in speech, deformities of the feet, mental disorders, ataxic gait, jerky incoordination of the upper extremities, and finally the family character of the affection, which is so characteristic of Friedreich's ataxia, are altogether absent.

Is our patient an example of early tabes?

It is, generally speaking, impossible to make a diagnostic error in a fully developed case of tabes, but at its onset the disease is not always easy to recognize. The symptoms with which the disease begins are sometimes so multiple, and appear to have so little to do with any special disturbance of the nervous system, that not a few authorities have erred in the diagnosis. How often, for example, is the symptom of pain in the extremities, if it does not present the classical type of being lancinating in character, taken for rheumatism, or gastric crises are taken for dyspeptic disturbances, while in reality they are symptoms of tabes in its initial stage.

The paræsthetic disturbances of tabes, especially in the preataxic stage, present, as we know, endless varities, and the shooting pains are not always present. The loss of the deep reflexes, the Argyll Robertson pupils, Romberg's sign, and degenerative changes of the fundi of the eyes are characteristic symptoms of tabes, but mostly in the advanced stages of the disease; while inequality of pupils with various paræsthesiæ and only diminution of the reflexes are usually preataxic symptoms.

The few symptoms our patient presents are certainly not those of an advanced tabes, but they undoubtedly belong to this disease.

The tendency of some writers (Hildebrandt, Mendel, Kalischer, Berbez, Dydynski, and others) to describe a special variety of infantile or juvenile tabes, with its own symptomatology, is proved now to be without foundation. The records show that there is no fundamental difference between the symptom-group of tabes in the adult and the juvenile. If our case is one of juvenile tabes, it is not because of its special symptomatology, but because of the young age, fourteen years, at which the disturbances made their first appearance.

Juvenile or infantile tabes is undoubtedly a rare occurrence, but its existence cannot be denied, although Marie and Leyden denied it at first. It has been seen at as early an age as five years, by Bloch,[4] and at the age of nine years, by Eulenberg. Adler, Mendel, Berbez, Homen, and Gumpertz report cases observed at a similar age.

Juvenile tabes has been confounded by various authors with Friedreich's ataxia, but if we remember that motor incoordination of the lower extremities is ordinarily the first, the earliest, and the most striking manifestation of Friedreich's disease, a fact which is extremely rare in Duchenne's disease; if we are also mindful of the fact that the so called preataxic stage, which is so frequent, if not constant, in tabes, is never present in Friedreich's ataxia; finally, if we remember that the first disease has a strictly family character, while the other is by no means a family affection—taking all this into consideration, in addition to the differential symptoms mentioned above, we cannot accept in this case the view of those who consider juvenile tabes as Friedreich's disease. Our case is one of juvenile tabes. In the great majority of cases acquired syphilis is admitted to be the chief ætiological factor of tabes. We are now, also, in possession of facts in which the cause of tabes can be traced directly to heredity syphilis, and we know as well of the existence of an infantile cerebrospinal syphilis.

The existence of cases of juvnile tabes, in which direct infection can be eliminated and in which specific infection can be traced to the parents, proves conclusively the rôle of syphilis in causation of posterior sclerosis.

In our case we can, therefore, call attention to the following interesting points:

First.—It presents a rare example of tabetic manifestations developed in a patient who shows symptoms of an acute anterior poliomyelitis of infancy. All the cases known are those of progressive muscular atrophy with a rare involvement of the pyramidal tract (amyotrophic lateral sclerosis).

Second.—It puts on record a new case of juvenile tabes.

Third.—It also shows that hereditary syphilitic tabes, and acquired syphilitic tabes are identical in their symptomatology.

I wish to thank Dr. Brewe for his assistance in taking the history of the case, and Dr. J. O. Arnold for the photograph.

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[4] *Centralbl. f. Nervenheilk*, 1897.

EXPERIMENTAL RESEARCHES ON RESUSCITATION AFTER DEATH FROM CHLOROFORM.*

MASSAGE OF THE HEART BY VARIOUS METHODS. PROLONGED INFUSION. EXHIBITION OF HOYT'S PUMP AND OF THE KEMP-GARDNER MODIFIED INTUBATION TUBE FOR ARTIFICIAL RESPIRATION, ETC.

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Mr. President and Gentlemen:

It is my intention to describe to you this evening a series of experiments in which Dr. Gardner has been associated with me, in reference to resuscitation after death from chloroform; to describe a simpler, and what we believe to be a safer, method than that which was first credited to Prus; and to endeavor to bring to your notice certain facts in attempted resuscitation from anæsthetics, drowning, and allied conditions, which may be of possible benefit from a clinical, as well as from a mere experimental standpoint. You will note that I have given credit to Prus; but on careful investigation of the literature I find in an article by T. J. Hake, in the *Practitioner,* No. 70, April, 1874, entitled Studies on Ether and Chloroform from Professor Schiff's Physiological Laboratory in Florence, that Schiff should be credited with the origination of heart massage, which he described under the term, "artificial circulation." In an article entitled La Massage du cœur mis à nu, by L. Maurice Boureau in the *Revue de Chirugie,* 1902, Schiff is described as the originator of the method.

Schiff, in the course of his experiments, seems to have been the first to apply cardiac massage to animals, in resuscitation after apparent death from anæsthetics. It is said, however, that Ludwig, so far back as 1842, conducted some experiments on massage of the heart. He gives all credit to Prus, however, for being the first to apply the method to the human subject and to demonstrate its great possibilities. He employed both massage of the heart and inflation of the lungs. The London *Lancet* for April 13, 1901, gives an account of the case. We submit an abstract of his case, of which you will find an account in the *International Medical Annual* for 1902:

In brief, the patient had died under chloroform. The third and fourth ribs were cut close to the sternum and 2½ inches were resected, the hand was introduced, and rhythmic compression of the heart was commenced; the trachea was opened and air was blown into the lungs through a rubber tube. The heart had ceased to beat and no heart movements were felt when compression was started. After a short time, spontaneous contractions of the heart were felt. Inflation of the lungs was continued. No attempt at spontaneous respiration began until half an hour after the cardiac compression had commenced. The first efforts were feeble and infrequent, and continued so for over two hours. At the end of three hours the patient was breathing without effort. At this time cardiac compression and artificial respiration were discontinued, and the wounds were sewn up and dressed. The patient was at all times unconscious and insensitive.

About an hour later the respiration absolutely ceased and was never resumed, the heart continuing to beat for eight hours until death.

The pupils did not react to light and were contracted. The radial pulse was imperceptible all the time, but there was venous pulsation in the neck. The patient never regained consciousness. Autopsy revealed adhesions of the right lung to the chest wall and pneumothorax on the left side, due to wounding of the pleura. The respiratory centre seems to have been at fault. A more thorough autopsy would perhaps have thrown further light on the subject.

Among further experiments with massage of the heart or those who have written on the subject, we may mention Batelli, Prévost, Rockwell, Freyberger, H. Maag, Tuffier, Gallet, De Liége, Poirier, Michaux, and others. Tuffier and several of his French colleagues have attempted resuscitation by this method on the human subject, but without success. Since Prus, however, was the first to demonstrate that the method could be applied to the human subject, and was, also, the first to restore a human heart that had actually ceased to beat, we can in all fairness call it Prus's method.

In August, 1901, in a case to be described later, I first attempted "massage of the heart" on the human subject, and I think that I can fairly claim to have been the first to employ the method in our own country. We, Dr. Gardner and myself, believe that, as a result of our researches, we have demonstrated a simple and comparatively safe method of compression of the heart, and that we can claim as original both the method described, and the imitation of the physiological beat of the heart, shown by the dicrotism of the pulse in our tracings. Furthermore, we have been unable to discover that tracings demonstrating the death of the animal and its return to life under cardiac massage have ever previously been exhibited. In addition, the Hoyt's pump for artificial respiration has the advantages of simplicity and scientific accuracy, and the intubation tube for artificial respiration seems to be an improvement on former instruments.

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* Read before the Medical Association of the Greater New York, at the New York Academy of Medicine, May 11, 1903.

Our researches were carried out at the physiological laboratory of the Columbia University Medical School.

I will now describe briefly the general method of the preparation of the animal for our experiments. The right carotid artery was dissected out and the mercurial manometer connected, so as to register the heart pulsations on paper on the revolving drum of a kymograph. Part of the connection was made with a piece of thin lead pipe, which could be readily bent. By this means, when the animal was elevated from the dorsal into the Nélaton position, by cautiously changing the curve in the lead pipe, the correct position of the carotid artery in relation to the manometer, that is, its proper alignment, could be maintained; otherwise interference with the pulsation would have occurred. A wire was strung from two poles above the animal, and on this was a running pulley with a suspending cord. By means of a running noose in the cord the animal could be suspended by the legs in the Nélaton position.

The right femoral vein was dissected out and a cannula was inserted and clamped in preparation for saline infusion. In some cases, respiratory tracings were taken by means of a compression bulb held in position by a band strapped about the chest. The movements of the thorax were thus transmitted through a column of air to a tambour, on which was a registering pen, which marked the tracings on the smoked paper on the revolving drum of the kymograph. No further respiratory tracings were taken after the operation of opening the chest was begun.

In some of our animals, only cardiac tracings were taken, but careful note was made above these the instant that respiration ceased.

In other animals, no tracings were taken, but these important facts were noted: The time of cessation of heart and respiration; also the period when the partial movements of the heart ceased, after the thorax was opened; the length of time thereafter that massage of the heart was begun, and the time at which the heart began to beat alone.

In some cases, when the heart *seemed flabby and empty* and did not react to massage, a small infusion of normal saline solution at 120° F. was given, as an additional stimulant, and also to furnish fluid to work upon, so to speak.

In the cases where the heart seemed dilated and full of blood, this was found to be unnecessary. After resuscitation, an infusion at 120° F., from four to six ounces, was given before removing the animal from the Nélaton's to the dorsal position, in order to prevent shock. This was found to be extremely efficacious. Artificial respiration was continued until the wound in the chest was closed, so as to prevent collapse of the lung.

In all cases, after the chest was opened, the heart was allowed to come to *an absolute standstill*, not the slightest movement of any description, even partial, to sight, feeling, or compression; a period of three, five, ten, and in one case nearly sixteen minutes, was allowed to elapse before massage of the heart was begun.

I will later demonstrate the tracings to you, and give you accurate figures.

Regarding the method of death from chloroform inhalation, in most of our cases respiratory failure occurred first, followed by heart failure. This corresponds to the findings of the Hyderabad Commission. This was not invariable, however. On several occasions, heart and respiration failed synchronously, and I remember one case in which the heart failed as if it had been pierced.

In regard to the several methods of death from chloroform, I quote the remarks of Dr. William H. Thomson, in a discussion of my paper entitled Further Experimental Researches on the Effects of Different Anæsthetics on the Kidneys, read before the New York Academy of Medicine, May 18, 1899, and published in the *New York Medical Journal* for November 18 and 25 and December 2, 1899. He spoke as follows:

> The difficulty in deciding about chloroform is that, in spite of the great amount of scientific inquiry on this subject, no satisfactory explanation which will cover all cases of fatality by it, has yet been reached. In our own experiments, the only result was a uniform depressant action upon the heart as indicated by the carotid tracings. But that was in no way different from the effects of other cardiac depressants, whereas when chloroform kills, it does so in ways that seem very special and by no means uniform. Sometimes in many well recorded instances in the human subject, the heart stops beating first, and sometimes the respiration first, and these respective cessations are both so marked and prolonged, that there can be no mistake that at times chloroform is a pure cardiac, and at others a pure respiratory, paralyzer. But in neither case does chloroform act invariably in the same manner. Thus, in cases where the respiration ceases first, we have Richardson's epileptiform syncope, where a tetanic rigidity of the respiratory muscles occurring before general muscular relaxation causes interference with the pulmonary circulation, with venous engorgement, and lastly stoppage of the heart. Or, secondly, after general muscular relaxation has developed, death sometimes occurs suddenly from stoppage of the breathing, while the heart continues to beat. On the other hand, there are those more common cases where, after a few

whiffs have been inhaled, the patient turns deathly pale and the heart stops as if it were pierced. Or, again, Dr. Lauder Brunton explains some cases of death from chloroform during operation as due to imperfect anæsthesia, failing to prevent the reflex effect of the shock of the operation, while the anæsthetic has been sufficient to depress the heart itself.

I shall refer at this point to the

LIMITATIONS OF THE USUAL METHODS OF RESUSCITATION,

as demonstrated by our experiments.

A careful study of these, both clinically and from a physiological standpoint, demonstrates the following facts: In the first place, the chloroform is pushed so that respiratory and cardiac failure occur, and this is so complete that the heart beat cannot be detected, the pulse cannot be felt; nor can pulsation be obtained in the carotid and femoral arteries which, as stated, have been previously dissected out, the one for attachment of the manometer, the other for infusion. The animal *clinically* is apparently dead; yet, even at this stage, the manometer tracings demonstrate a scarcely appreciable beat in the heart, as shown often by only an occasional dot in the trace. Physiologically, death has not occurred, and, in fact, not clinically; for even in this extreme condition, the animal can still be resuscitated by the usual methods, infusion with normal saline solution at 120° F., inversion, artificial respiration, hypodermics, etc.

If no effort at resuscitation is made, the condition goes on from bad to worse, and finally the manometer tracings cease absolutely, and the traces run in a straight line—continuously. The animal according to the physiologist is now dead.

If now, the left thoracic cavity is opened, and the heart carefully examined, it will be noted, that though the heart in its entirety has *absolutely ceased to beat,* yet for some moments—for several minutes in many cases—there is a partial, though slight, muscular contraction occurring occasionally in one or both ventricles.

This contraction is so slight, however, and so incomplete, that no trace is given by the manometer.

Even at this stage, the usual methods of resuscitation will restore the animal in some cases.

Finally, and in the last stage, the heart becomes absolutely motionless and inert, to sight, touch, and compression. Though the vital spark exists, if the radical method of restoration is employed, yet we can consider the animal as "dead," since the usual methods of restoration at this point absolutely fail. Some *vis a tergo,* "force from behind," and that, too, quite vigorously applied, is absolutely necessary to start up the heart action; and it is this indication that cardiac massage alone fulfils, for we must remember that there results from its employment, not simply the interesting experiment of the return of heart beat for a period of time, but an actual restoration of all the bodily and mental functions.

You are, of course, familiar with the various experiments demonstrating the possibility of reviving the heart by different means, even keeping up the heart beat after decapitation of the animal. These experiments are of undoubted value and interest. From the standpoint of a clinician, however, cardiac massage we believe in certain cases to be of practical use, and that so far it can be replaced by no known method.

In our own experience, we succeeded in resuscitating eleven out of twenty-three animals after absolute cessation of heart action to sight, touch, and compression of the heart, as we have previously stated, and that, too, after the heart had remained in this condition for variable periods of time without any efforts at resuscitation. In nine of the animals, the functions of intelligence, drinking, urination, defecation, etc., were restored to normal. One dog, in particular, demonstrated his disapproval of our methods, by an endeavor to bite his caretaker. I will refer to a few special cases later.

In many of our animals under experimentation, artificial respiration, inversion, infusion with normal saline solution at 120° F., etc., were tried, with resulting failure, until cardiac massage was added to our treatment.

I will now describe our

METHODS OF MASSAGE.

The one usually advocated, consists in the resection of several ribs, the insertion of the hand into the left pleural cavity, and rapid compression of the heart therewith.

In our experiments we followed several methods. We secured some successful cases by each, but found one of them to be far safer and more rational than the others.

Method 1.—Trephining the sternum, and inserting several fingers through the opening, and compressing the base of the heart against the chest wall. Though success attended our efforts on several occasions, this method possesses the following disadvantages:

In dogs, the two pleuræ practically meet in the median line, and it was difficult not to open both pleural cavities, though we were successful in a few cases; insertion of the fingers, in the case of these animals, over and behind the base of the heart was comparatively easy.

In the human being, however, our knowledge of the relations of the heart to the sternum, shows this procedure to be practically impossible. An opening of large size would be necessary in the sternum, entering the anterior mediastium, and there would be danger of compression of the great vessels, on account of the limited space at hand. The question of the supraclavicular incision is objectionable on account of the relations of the vessels and the dangers of compression; the distance to the base of the heart, also, is too great.

Method 2.—Resection of several ribs, the insertion of the hand into the left thoracic cavity, and rapid compression of the heart.

By reason of insertion of the entire hand into the cavity, there is greater tendency to shock. There is, in addition, some danger of tearing the pericardium by too rough manipulation. It is attached, as you know, over a considerable area, to the diaphragm below.

Method 3.—This last seems to us the most rational, and by far the safest method of the three. The animal is placed in Nélaton's position. This throws the heart forward against the chest, and somewhat upward. An incision is made over, or slightly below, the apex. If necessary to secure more space, a small piece of the fifth and sixth ribs may be resected. The index and middle fingers are passed over the margin of the heart, and behind it near the apex, and pressure is made on the heart against the chest; or the opening being enlarged, the fingers may be placed behind, and the thumb between the apex and chest wall, and the heart squeezed rapidly between them.

We must remember that the animal is inverted, and hence what in that position is the upper border of the heart is really anatomically the lower margin of that organ.

We found that a rapid intermittent (double action) pressure, so to speak, as I demonstrate to you now with my fingers (flex rapidly twice in succession the second and third phalanges of the index and middle fingers, then pause and so on), resuscitated more cases and, in effect, imitated the dicrotism of the pulse, as is shown in our tracings.

The rapid single action pressure, as I now show you, was not as successful.

In the operation upon the thorax, we found the best method was to make an oval skin flap, reflecting this backward; then to open the thorax about the middle of the base of the flap, resecting a small portion of one or two ribs, if necessary, to secure more space.

In some cases, during compression of the heart, a small amount of very hot normal saline solution at 120° F. was poured on the heart through the thoracic wound, in order to prevent chilling of the organ. It is also well to wrap the animal in hot towels for the same reason. After resuscitation occurred, that is, after the heart began to beat alone, the chest wound was rapidly sutured.

We found that the manipulation in the chest might have a tendency to cause exudation; wherefore, in most cases, we inserted a strand of sterile gauze through a small counteropening, for drainage, at the base of the flap.

Artificial respiration was kept up invariably until the thoracic wound was closed, in order to keep the lungs well filled with air.

Before the animal was removed from Nélaton's position, an infusion of normal saline solution, from four to six ounces, at 120° F., was given, to prevent shock. The manometer was then disconnected, the carotid tied off and the wound in the neck sutured. The same procedure was followed with the femoral vein.

The animal was then removed to a box, and wrapped in cloths and a hypodermic of morphine given to quiet him. Our dogs lived from two to twenty-four hours, and in most of them the body functions returned to normal and they became active and hard to control.

The autopsies demonstrated in some cases that they had torn out sutures, with resulting collapse of lung, or secondary hæmorrhage.

Some cases were infected through their own efforts, and some undoubtedly by our own hurried and insufficient attention to absolute antiseptic details.

None of the cases in which the last method was employed showed any damage to the heart or pericardium. This method, denominated method 3,[1] consists of the insertion of only two fingers and the thumb into the thorax to effect compression of the heart.

With a more perfect technics, there is no reason whatsoever why death should occur at all.

(To be concluded.)

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The Late Samuel Smiles.—A few decades ago the name of Samuel Smiles, the author of *Self-Help*, was almost a household word. Of humble origin, he rose through the personal practice of those excellent principles inculcated later by him in the book referred to, to a position of some importance in the railroad world. He became a medical practitioner, but was not very successful in that field, and after studying music and other arts, and making a trial of editorial writing, he returned to railroad work, and finally became secretary to the National Provident Institution in England. He was the author of several didactic works, and was honored with the degree of LL. D. by the University of Edinburgh.

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[1] We believe the insertion of the index finger and pressure of the heart apex against the chest wall to be sufficient.

ARTERIOSCLEROSIS OF THE CENTRAL NERVOUS SYSTEM; WITH REPORT OF FIVE CASES.*

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Although the subject of arteriosclerosis has, during the last few years, been the subject of considerable discussion, the cerebral and spinal symptoms dependent upon it have received very scant attention indeed, if one may judge from the literature; for in most textbooks on nervous diseases no mention whatever is made of them; while in others the subject is discussed in a few words. For example, in the last volume of the *Jahresbericht über Neurologie und Psychiatrie*—that for the year 1901—but three references are made to arteriosclerosis of the brain and none to spinal arteriosclerosis. Rendu[1] reports a case of homonymous hemianopsia, due to the rupture of a sclerotic vessel in the cuneus; and Probst[2] describes a case of arteriosclerosis of the brain in an alcoholic woman aged fifty years, the symptoms being confusion, forgetfulness, slow speech, vomiting, and stupor. Windscherd[3] believes the diagnosis of cerebral arteriosclerosis may be allowed in the presence of a certain cerebral symptom—complex when there is sclerosis of the arteries of the extremities. Osler[4] holds that the cerebral symptoms of arteriosclerosis are varied and important: "Transient hemiplegia or aphasia may occur in advanced arteriosclerosis; recovery may be perfect. Vertigo occurs frequently and may be either simple, or is associated with slow pulse and syncopal or epileptiform attacks."

The only noteworthy paper on symptoms dependent upon arteriosclerosis of the cord which has come to my notice is that of Dr. William Hirsh.[5] Nine cases are reported by him with one autopsy record. In only one of these nine cases were cerebral symptoms prominent. Hirsh's paper is a very important one, inasmuch as he has, it appears to me, well sustained his argument, and indicated a class of cases which I feel sure must be rather common and which, as the literature would indicate, are but seldom recognized. For my own part, I had been groping about in the dark with regard to these cases, and was only enabled to make the diagnosis with the light shed upon them by Hirsh's illuminating monograph; and I wish hereby to acknowledge my indebtedness to him.

The cases I am now considering are those of arteriosclerosis of the central nervous system (particularly of the cord) which have not produced hæmorrhage or thrombosis or led to any of the well recognized organic diseases of the central nervous system; and like Hirsh, I have tried carefully to exclude syphilitic vascular disease, which, in some cases, at least, could not be differentiated from arteriosclerosis. Indeed, one of the strongest points in the differential diagnosis of these cases is the negative one of the failure of the symptom-complex to be described to conform to that of any of the hitherto described organic diseases of the cord.

As in Hirsh's cases, the anterior cells of the cord in the spinal cases to be recorded seemed especially involved. Hirsh points out that the anterior spinal arteries are much less numerous than the posterior ones, there being but one main artery for the anterior region of the cord, while the posterior region is supplied by two main arteries. In these cases of spinal arteriosclerosis it is the lower portion of the cord which is chiefly involved; and this again may probably be explained by reason of the more peripheral situation of the vessels in this region, as compared with those in the upper region of the cord. In general, Hirsh maintains that the arterioles of the anterior horns in the lumbar and sacral region have less protection against the increase of blood pressure than those of any other portion of the spinal cord.

Certain it is, at all events, that in my cases, like those of Hirsh, spinal symptoms were almost wholly motor in character. Sensory symptoms, although sought for, were absent.

"Considering the anatomical basis of the disease," again to quote Hirsh, "it is evident that a sharply defined clinical picture cannot be given. It goes without saying that any artery or group of arteries may become the principal seat of the lesion, and that according to the localization and intensity of the affection the symptoms will vary. Just as the clinical picture of spinal syphilis is characterized by the atypical complex of symptoms, so is arteriosclerosis of the cord a disease which may offer a great variety of clinical manifestations. In spite of this, however, there are certain clinical phenomena which will enable us to recognize this morbid condition of the spinal cord during life, and to differentiate it from other diseases of this organ."

In the only case examined post mortem by Hirsh the walls of both the anterior and posterior spinal arteries showed considerable thickening. The arterioles of the gray matter of the cord were thicker than normal, the lumina being often extremely small, sometimes occluded entirely. The motor cells of the anterior cord were normal in shape and size, but here and there the Nissl's bodies were indistinct, and there was a marked increased of pigment in the cells. The arterioles of the brain also exhibited general arteriosclerosis.

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* Read before the Pittsburgh Academy of Medicine, October 12, 1903.

[1] *Semaine méd.*, No. 25. June, 1901, p. 193.

[2] *Arch. f. Psych.* Bd. 34. 1901, p. 570.

[3] *Münch. med. Woch.* No. 9, 1901. *Neurolog. Ctbl.*, 1901, p. 1069.

[4] *Practice of Medicine.* Fourth Edition, p. 775.

[5] *Journ. of Nerv. and Ment. Dis.*, February, 1903.

CASE I.—A married man, aged sixty-six years; merchant; of good habits; denies syphilis. Previous health has been good. During the past four months he has been frequently subject to curious attacks which come on towards morning, just before the arising time. In these attacks he kicks and sprawls about the bed. Various muscles are irregularly involved. They last from a few minutes to half an hour; during them he is conscious or semiconscious. Besides these "attacks," for the past two weeks his speech upon awaking is thick, slurring, difficult to understand. His legs are ataxic. Upon attempting to arise he staggers and sprawls about the room in a very helpless fashion and is dizzy. Soon after arising, the patient's various symptoms, including the speech defect, disappear. His intellect has to his family at all times seemed to be entirely clear. Until two weeks ago he had been regularly attending to his business, besides supervising building operations at his home; and in all respects he seemed to perform these duties properly.

I found the patient in bed at my visit with the family physician. His speech was extremely slurring, inarticulate. Apparently disheartened at his attempts to express himself, he twice broke into tears. Despite what I had been told, my first impression was that the case was one of paretic dementia. The patient, with much difficulty, due to ataxic movements and vertigo, arose and with assistance dressed himself. Half an hour later, to my amazement, the speech defect had almost entirely disappeared. No special defect in his mental condition could be discovered. The somatic signs of paretic dementia were entirely wanting. The knee jerks were normal. There were no localized palsies; but the patient was generally weak, and movement brought on a certain degree of vertigo. Both radial pulses were tense and hard.

The patient was put on large and frequently repeated doses of nitroglycerin. In less than a month all his symptoms had disappeared.

In this case the symptoms appeared to be cerebral, bulbar, and spinal, the last named least prominent. No other explanation that I can conceive can explain these symptoms, except an arterial one. Hæmorrhage, embolism, and thrombosis must be ruled out, because of the recurrent and remittent character of the symptoms and the complete recovery under treatment. No other explanation remains, except that of a temporary deficiency of blood supply to the brain and cord, for which three possible explanations may be given, viz.: (1) Insufficient heart force. (2) Arteriosclerosis. (3) Vasomotor spasm. Probably all three factors were operative; certainly two of them, either the first and second, or the first and third. The disappearance of the symptoms soon after arising I looked upon as due to the increased cardiac activity accompanying the efforts in arising and dressing, which forced increased amounts of blood through partly occluded vessels. The promptly beneficial effect of nitroglycerin seems to support this view of the situation.

CASE II.—A married man, aged fifty-five years; merchant. Denies syphilis. He is a very stout, heavy set man, weighing 235 pounds, and has always been a "free-liver" and indulged himself a great deal in the pleasures of alcoholic drinks and tobacco.

Two months ago he was very much troubled with vertigo and "some impediment in the legs." After a stay of a couple of weeks quietly in the mountains the former symptom disappeared; but the latter persists. He said to me: "When I pick up my legs I do not know when or how I shall set them down. I am leg weary all the time." He had no pains in the legs. Examination discovered sensation in them (tact and pain) to be normal. Knee jerks: Right, absent; left, very sluggish. His gait was very unsteady, apparently due to weakness. Indeed he was barely able to stand alone. Tested by resistance his legs were found to be very weak. His pulse at the wrist was hard and resistant.

The main symptom, leg weariness and weakness, with absent knee jerks, to my mind indicates involvement of the gray matter of the lower cord; while the vertigo indicates a degree of involvement of the cerebral arteries.

CASE III.—A married man, aged fifty-eight years; merchant; ancestors long-lived. Denies syphilis. He used alcohol moderately; tobacco, to excess.

He comes (July 20, 1903) complaining of weakness and uncertainty in his gait, from which he has suffered during the past five years. He is a rather heavy set man, weighing 174 pounds. His general appearance and movements are strongly suggestive of senility. He complains of nervousness, restlessness, insomnia, depression of spirits, vertigo, headaches (which he later described as "squeezing of the brain"). His gait is slow, shuffling, deliberate, cautious and somewhat uncertain, like that of a very aged man. He usually walks with his eyes on the ground and his feet wide apart. He finds it difficult to walk in the dark or over uneven places. Sensation in the legs is normal. He has had no pains in them.

The knee and tendo Achillis jerk are feeble. Pupils equal; react very sluggishly to light (2.0 m. m. in light, 2.2 in shade), making but a slight excursion.

The patient is constipated and suffers from flatulent dyspepsia. The arteries at the wrist exhibit high tension and cannot be entirely compressed under the finger.

This I regarded as a case of premature senility, due to arteriosclerosis manifested chiefly in the lower region of the motor portion of the cord.

CASE IV.—A retired merchant consulted me five years ago. His habits were good; no specific history. A brother had melancholia for many years. The patient himself was, nine years before, much depressed. He gave up business on this account, went south, and, after a time, returned greatly restored. He worked steadily and contentedly until a few months ago, when he retired from business. Since this time he had been morbid, introspective, depressed. He worried over the reflection that there was nothing ahead of him; that he was now "on the shelf." For years he had been subject to diarrhœa which he himself had come to believe was largely under mental influence. The fear of it brought on the diarrhœa. The bodily functions in general seemed to perform well enough. He was free from physical pain. Under treatment—largely hygienic—he made considerable improvement.

Lately he has been complaining of weakness and unsteadiness in the legs and feared he had tabes. Two months later his general condition was improved, and he was more cheerful. He had no pains in the legs or elsewhere. In walking he stepped high and brought the heels down heavily. The gait was unsteady and his efforts in walking conscious beyond what is usual. No Romberg. No sensory changes. Knee jerks absent. The pupils react sluggishly to light, making but a very short excursion.

February 7, 1903. Patient reports himself "much improved from the waist up," and seems quite cheerful (to which condition a light occupation has greatly contributed). The gait is more ataxic than ever. Knee jerks absent. No subjective or objective symptoms in the legs. No hypotonia. No disturbance of bladder or bowels. Pupillary reflex to light is feeble—just perceptible.

This case is very similar to the preceding one, a case of premature senility, chiefly of the gray matter of the lower cord. The case bore a certain resemblance to tabes; but the general consideration of the symptoms, the absence of both subjective and objective sensory symptoms, and of hypotonia, to my mind excluded this diagnosis.

CASE V.—A man, aged thirty-six years; single; a musician; good family history; moderate smoker and drinker; denies syphilis. He has never abused himself; never had any severe illness. He is small in stature, weighing only 109 pounds.

Present symptoms date back to three years ago. He is unsteady on his feet, experiences some difficulty and uncertainty in walking, becomes easily exhausted. His legs often feel weak and tired. It had been his custom, for exercise, to raise the body a number of times on his toes. Of late he has been unable to do this. He notes no diminution in the strength of his arms or hands. He has never had any sensory disturbances in his arms or legs.

He has become apprehensive, fearful, timid. He is afraid of elevators, high places, and crowds. He declined an invitation to go to Europe, because of his fear of the ocean, although he had previously made this trip upon several occasions without any fear. Formerly fond of dancing, he has given up this pastime, because of dizziness or the fear of it. He feels the dizziness is due to a "mental process." He fears he has locomotor ataxia.

He sleeps and eats well; awakes refreshed. He has become somewhat irritable. He feels, however, that he can do his work as well as ever; but he tires more readily than formerly.

His gait is shambling, and somewhat uncertain and distinctly weak. Romberg symptom is absent. With closed eyes he walks nearly as well as when they are open. He is unable to stand on one foot alone. Both legs are weak. No atrophy. Sense of pain and of contact are normal. The knee and tendo Achillis jerks are equal and exaggerated. Ankle clonus of short duration is elicited in either foot (spurious clonus). Babinski toe reflex absent . Pupils equal, 2.5 mm. Light reflex is prompt; likewise the accommodation reflex.

Thoracic and abdominal viscera, negative. The radial pulse is soft and compressible. The temporal arteries seemed hard to pressure.

This case might be regarded as one of neurasthenia; and I believe it might be so considered if all the symptoms are not explained on this basis. The loss of power and uncertainty of the legs are too marked and too persistent to be regarded as expressions of neurasthenia. The patient walks like a little dried up old man. The difference in the strength between the legs and arms is most marked, and indicates involvement of the lower motor cord only; and this involvement I believe to be due to arteriosclerosis. Whether the neurasthenia is to be explained as dependent upon a general arteriorsclerosis or whether it is merely a concomitant condition, I do not feel able to decide at the present. The leg symptoms have caused the patient much anxiety. This, in itself, I am sure, aggravated the neurasthenic symptoms if it did not set them up.

The diagnosis of spinal arteriosclerosis in these last four cases was made, then, on the consideration of the following facts:

A marked weakness and unsteadiness of the legs in all cases suggestive of the gait of the very old man; a senile appearance; the presence of sclerotic arteries; an uncertainty in gait which bore only a superficial resemblance to that of tabes; the altered knee jerks (in three of the four cases the knee jerks were feeble or absent, in the other case they were active); the absence of specific history; the absence of muscular atrophy; the absence of sensory symptoms (subjective or objective); the absence of involvement of the sphincters; the failure of the symptoms to conform with those of any of the well known organic diseases of the cord.

I have no necropsies to offer; and the diagnoses I have here made must be regarded as more or less tentative. But at present no other diagnosis seems to be so probable as that I have made; and as I have said before, I was much at a loss to classify these cases until Hirsh's valuable paper came to my notice.

Since the foregoing was written, a valuable paper by Dr. M. Allen Starr[6] has been published, in which the relationship of sclerosis of the arteries to nervous diseases is discussed. But the type of spinal cord diseases I am considering is not referred to especially. Starr believes that thyreoid extract is a useful remedy in arteriosclerosis. In certain cases where undue blood pressure occurs periodically, he advises that the nitrites be given only during these periods, urging that it is worse than useless to give them when not needed.

PRELIMINARY NOTE CONCERNING THE REDUCTION OF DIABETIC GLYCOSURIA WITH PANCREAS-HÆMOGLOBIN-MUSCLE EXTRACTS.*

By ALFRED C. CROFTAN, M. D.,

CHICAGO,

PROFESSOR OF MEDICINE, POSTGRADUATE MEDICAL COLLEGE AND HOSPITAL; PATHOLOGIST TO ST. LUKE'S HOSPITAL.

THE UNDERLYING FACTS AND PRINCIPLES.

The blood normally contains a fairly constant percentage of sugar. A portion of this sugar is continually disassimilated and the loss replaced from various sources. If less sugar than normal is destroyed, the sugar accumulates in the blood (hyperglycæmia) and the excess of sugar is discharged in the urine (glycosuria).

Removal of the pancreas is invariably followed by hyperglycæmia and glycosuria. In explanation of this phenomenon, the theory has been advanced that the pancreas normally pours into the blood an internal secretion (glycolytic ferment) that aids in the destruction of sugar; and that ablation of the pancreas by removing this sugar-destroying something, causes sugar accumulation. Pancreas placed into sugar solutions does not, however, destroy sugar. Some sugar, it is true, always disappears from the solutions, but the loss is so small that it can be attributed to accidental causes and technical errors.

In 1902,[1] I showed that pancreas placed in a sugar solution that contained hæmoglobin possessed the power to a marked degree of destroying sugar. A discussion of the finer mechanism of this process, in which, as I see it, the sugar merely acts as an oxygen carrier, need not be given in this preliminary note. Some months ago Cohnheim showed that pancreas mixed with muscle tissue also possessed sugar-destroying powers, and later Blumenthal[2] demonstrated that pancreas mixed with almost any organ or tissue could destroy sugar. (I consider it probable that the hæmoglobin in these tissues is concerned in the process.) I have been able to corroborate their findings with an extract manufactured in a simpler way than the frozen preparations they employed, viz.: by coagulation with alcohol, of pancreas, muscle, and blood, mixed in varying proportions, while the tissues are still warm.

The following table submitted to me by Dr. W. M. Hartman, who performed most of the sugar determinations given in this article, and whom I wish to thank very much for his valuable assistance, illustrates this.

All flasks contain 100 c. c. of sugar solution, with 2 per mille Na Fl. added to prevent bacterial action:

Flask.	Grammes of pancreas-muscle-hæmoglobin extract added.	Number of hours in incubator.	Per cent. of sugar in solution before placing in incubator.	Per cent. of sugar on removal from incubator.	Sugar loss in per cent.	Sugar loss in grammes.
1	5	17	1	0.72	28	0.28
5	5	17	0.5	0.38	24	0.12
7	5	17	0.2	0.16	20	0.04
2	5	17	1	0.66	34	0.34
3	10	17	1	0.63	37	0.37
4	10	17	1	0.65	35	0.35
6	5	17	0.5	0.39	22	0.11
8	5	17	0.2	0.14	26	0.052

THE THERAPEUTIC APPLICATION OF THE ABOVE FACTS AND PRINCIPLES.

Whereas pancreas alone administered to diabetics exercises no effect upon the sugar excretion (corresponding in this respect with the inability of pancreas to destroy sugar outside of the body), pancreas-hæmoglobin-muscle extract does appear to possess the power of reducing the sugar excretion in diabetic subjects (corresponding to the power of this extract to destroy sugar *in vitro*).

I have prepared a pancreas-muscle-hæmoglobin extract and have given it to a number of diabetic patients under conditions that make my observations as accurate as they can be under the circumstances to be related. I content myself in this note with reporting the effect of this extract on the excretion of sugar (dextrose). The effect on nitrogen excretion, on acidosis, on body weight, on the subsequent course of the disease, etc., I am now studying in the limited number of cases that can be induced to enter a hospital and submit to rigid control.

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[6] *Medical Record*, July 4, 1903.

* Presented to the University of Nebraska, Medical Department, Omaha, March 4, 1904.

[1] *American Jour. of Medical Sciences*, April, 1902.

[2] *Phila. Med. Journal*, January 11 and 18, 1902.

CLINICAL RESULTS.

The preparation has been given in six cases so far. The *prima facie* evidence of the efficacy of the remedy is all positive as far as it goes, i. e., in each case the administration of the extract was followed by a marked decrease in the sugar excretion within twenty-four hours. It is necessary to give fully an ounce or more to produce this effect, for the preparation contains much coagulated fibre and is not uniform, so that one must give large quantities in order to insure the ingestion of enough of the active agent. The following data from my protocols are submitted:

Case I.—C. S., St. Luke's Hospital ward, male, colored, æt. forty-seven years. Sugar excretion on admission 337 grains in twenty-four hours. After seven days of carbohydrate free diet, sugar excretion still 246.4 grains. Administration of 2 ounces of the extract in twenty-four hours. Sugar excretion for corresponding period 138.0 grains, *a drop of 108.4 grains, or of 44 per cent.* Administration of 2 ounces daily continued for three days, sugar excretion fluctuating between 138 and 186.2 grains. On the fourth day succeeding administration of extract stopped; sugar excretion for next period of twenty-four hours, 237.0 grains. Next day, still without extract, 215.6 grains. Administration of 3 ounces of the extract, sugar excretion falls to 143.0 grains, a drop of 183.4 grains from the average of the two days preceding (226.3 grains), or *a decrease of 67.5 per cent.*

Case II.—M. N., female, æt. fifty-two years. Sugar excretion on mixed diet on three successive days before coming under control, 221.4 grains, 239.1 grains, 201.5 grains. Seven days on carbohydrate free diet, sugar excretion on three successive days, 41 grains, 52 grains, 44.5 grains. Urinary nitrogen on second day, 16.1 grammes. Reduction of food albumen to 11 grammes of urinary N, causes disappearance of sugar from the urine; thus on the sixteenth, seventeenth, and eighteenth days of observation, the sugar excretion was 0. On the nineteenth and twentieth days the food albumens were increased, so that the urinary N on the twentieth and twenty-first days was 17.2 and 17.8 grammes. The sugar excretion on the twenty-first day was 36 grains. Administration daily of 2 ounces of the extract, same amount of food albumen, no carbohydrates; sugar excretion on twenty-second, twenty-third, and twenty-fourth days, respectively, 4.1 grains, 3.7 grains, 1.2 grains. No extract on twenty-fifth day, everything else remaining equal. Sugar excretion on twenty-sixth day, 27.4 grains, on the twenty-seventh day (without extract on the twenty-sixth day), 29.2 grains. At the expiration of four weeks the patient withdrew from rigid control.

Case III.—H. B., male, æt., sixty-one years. Mild form of diabetes. Withdrawal of the carbohydrates causes complete disappearance of the sugar from the urine. Boundary of assimilation for carbohydrates between 50 and 75 grammes of white bread; 100 grammes of white bread cause the excretion of 7.2 grains of sugar in twenty-four hours. One hundred and fifty grammes of white bread given in three doses of 50 grammes each on one day cause the excretion of 19.2 grains, 10.4 grains, 4.1 grains, on the next three days, in which no carbohydrate is given. Urine again sugar-free on the eighth day after. On the ninth day, administration of 100 grammes of bread, with 2 ounces of extract, no sugar; on the tenth day, 150 grammes of bread, with 2 ounces of extract; *no sugar;* on the eleventh day, 200 grammes of bread, with 2 ounces of extract; *no sugar;* on the twelfth day, 150 grammes of bread and *no* extract; sugar excretion 12 grains; on the thirteenth day, 150 grammes of bread and 2 ounces of extract; no sugar. In this case the administration of 2 ounces of extract and 150 grammes of bread was continued for a week without glycosuria. After this period he would take as much as 100 to 125 grammes of bread without extract and with a sugar excretion that was about 3 grains to 4 grains a day. Here the same effect was produced as if the patient had been kept upon a carbohydrate free diet for the same length of time. He lost no weight. The boundary of assimilation was raised.

Cases IV, V, and VI are similar to the preceding one; they need not be recorded in detail in this preliminary note, but will be fully reported with others in a later publication. In all of them the urine could be made sugar-free in a few days by complete withdrawal of carbohydrates. In all the boundary of assimilation was determined as above, and in all of them this boundary could be raised from 50 to 80 per cent., when extract was given. In all of the cases, finally, the end effect of the "diet cure" with extract was the same as withdrawal of all carbohydrates for a corresponding period of time, i. e., the tolerance for starches and sugars was increased, with this advantage, that not one of the patients lost weight; two, in fact, gained 8 and 9 pounds, respectively. In none of the six cases was acidosis produced.

EPICRITICISM.

I submit these facts without comment; nor will I attempt for the present to discuss the character and the composition of the active something that apparently can pass unchanged through the stomach and bowel into the blood stream beyond, and can there exercise its effect. I merely call attention to the resemblance existing in this respect between this preparation and thyreoid preparation. We are apparently dealing in both instances with a substitution therapy, i. e., we are supplying something that is lacking. Whether or not the ultimate effect of the pancreas preparations in diabetes will be curative in the same sense that thyreoid preparations are curative in myxœdema, remains to be determined.

The fact that one can raise the boundary of assimilation for carbohydrates might lead one to suppose that, by giving these extracts, the inherent sugar-destroying power of the organism might be granted a rest, its work being done for it by the extract, and that this rest might operate beneficially towards restoring normal tone and educating the perverted glycolytic function back to normal. Such a rest cure is what we attempt to institute when we withdraw carbohydrates. If the extract is given we can apparently accomplish the same result, and at the same time allow the organism to utilize some food-carbohydrate, hence nourish the patient more adequately and also decrease the danger of coma. These are decided advantages.

DIABETES IN CHILDHOOD.

By HUBERT N. ROWELL, M. D.,
BERKELEY, CAL.

This disease is of such rare occurrence that its consideration in textbooks is usually brief, and but comparatively few cases are recorded. The general practitioner too frequently disregards uranalysis in dealing with children, either neglecting the procedure, or, as in the case of infants, being unable to collect a sufficient quantity of urine without catheterization. For this reason diabetes is frequently overlooked until marked symptoms appear, or until the child is stricken by some intercurrent disease.

As in adults, the ætiology of diabetes is as yet undetermined. Anders enumerates some six theories, each of which has its adherents. Interference with the glycogenic function of the liver, alimentary glycosuria, microbic glycosuria, phloridzin glycosuria, glycosuria due to organic disease of the pancreas and to traumatism, are all cited as ætiologically related to true diabetes mellitus. In conection with these, it is admitted that hereditary influence must be recognized; also that injury or disease affecting the floor of the fourth ventricle is often productive of persistent glycosuria.

The influence of the nervous system upon this condition is beyond doubt. Illustrative of the latter, the cases of two patients observed by the writer are noteworthy.

CASE I.—Robert C., aged five years, born at full term, weighing seven pounds, was nursed at the breast eight months, when a diet of cow's milk was substituted. Until the age of four years he developed normally, and underwent the process of dentition without complications.

Constant polyuria first attracted the attention of the mother to the child's attention, this symptom being accompanied by intense thirst, voracious appetite, languor, and progressive emaciation. From one hundred and twelve to one hundred and twenty ounces of urine were voided during the twenty-four hours, with a specific gravity of 1,030. The quantity of sugar varied from four to six per cent.

The dilute nitrohydrochloric acid treatment was first employed, in doses of ten drops, increased to forty drops, t. i. d. Later, codeine was given in large doses without effect. Finally, the bromide of gold with arsenic was pushed to the point of intolerance. The usual dietetic measures were also carried out. For some eight months the patient lingered, when, from exhaustion and coma, he died.

CASE II.—One year later, Rosa C., a full sister of the patient in Case I, exhibited practically the same symptoms as those of her brother, and died of bronchitis, in coma, after sixteen months' illness.

Interest resides in the following family history: The members of the father's side of the family all exhibit neurotic tendencies. The father himself, while apparently free from organic disease, is an unusually nervous, irritable man, and is considered eccentric by his fellows. An uncle is confined at present in one of our hospitals for the insane. An aunt died recently of goître and diabetes. The father's father died of chronic alcoholism, and the father's mother is alive, but partially mentally unbalanced.

Whether or not we had, in these two cases to deal with diabetes directly attributable to hereditary taint, is, of course, a question.

Unfortunately no autopsies were permitted.

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Statement by Professor August Forel.—From August, 1879, until March, 1898, I was director of the Burghölzh Insane Asylum and professor of psychiatry at the University of Zurich, and desire to make the following statement: Dr. Carl Bertuhringer, who has designated me as a representative of the so-called Koenig Medicine Company, of Chicago, and who incidentally represents himself as a former assistant of Professor Forel at the Burghölzh Asylum, was never my assistant and never an assistant at the Burghölzh Asylum. He did, indeed, study medicine in Zurich, and, like other students, studied psychiatry with me, and practised in the clinic as a so-called practikant, as did other students. Under these circumstances I once permitted him to hypnotize one patient. But he was never either my asylum or my private assistant, and has no right to publish himself as such. Another Dr. Bertuhringer (Dr. Hans Bertuhringer) was actually assistant physician in Burghölzh, and is now second physician at the Rheinan Asylum, Canton Zurich. But this is quite another person.

(Signed) Dr. AUGUST FOREL,
Former Professor at the University of Zurich.
CHIGUY, SWITZERLAND, April 6, 1904.

Our Subscribers' Discussions.

A SERIES OF PRIZE ESSAYS.

[*Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:*

XXIX.—How do you treat nocturnal incontinence of urine? (Under adjudication.)

XXX.—What are your achievements in improvising surgical instruments and appliances? (Under adjudication.)

XXXI.—By what means have you ever saved a person supposed to have been drowned? (Answers due not later than May 16th.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of $25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED*) that the answers be short, if practicable, no one answer to contain more than six hundred words.*

Only subscribers to the New York Medical Journal and Philadelphia Medical Journal *(including regular and volunteer officers of the Medical corps of the United States Army, Navy, and Marine Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.*]

The prize of $25 for the best essay submitted in answer to question XXVIII has been awarded to Dr. D. H. Reed, of Washington, D. C., whose article appears below.

PRIZE QUESTION NO. XXVIII.

THE DIAGNOSIS OF SMALLPOX IN THE PAPULAR STAGE.

By D. H. REED, M. D.,

WASHINGTON, D. C.

In making a diagnosis in any case of acute illness, the mode of onset is to be carefully considered, especially in an eruptive fever, and more particularly when the character and distribution of the eruption warrant a suspicion of variola. Although there are many features common to the onset of acute infections generally, and pathognomonic symptoms are not often available, an exaggeration of certain symptoms is a valuable diagnostic hint.

Smallpox usually begins with a severe chill, possibly two or more during the first twenty-four hours; rapid rise of temperature to 103° or 104° F.; severe frontal headache; pains in the back and limbs, with vomiting. Fever continues high until the eruptive period, when there is a remission, the amelioration being usually more pronounced in the milder cases.

The eruption appears usually on the fourth day, at first macular, becoming papular on the same or the next day. Its distribution is suggestive at least, appearing first on the forehead along the hair line, and on the wrists. While extending over the entire body, it is always most abundant on the face and extremities. Its character is almost pathognomonic. Rapid infiltration causes an indurated papule, seated in the deepest layer of the epidermis or in the papillary layer of the derma, according to the severity of the inflammatory process. The papule is quite generally described as having a hard, "shotty" feel, and surrounded by an inflammatory areola.

I mention below the principal diagnostic features of diseases which might embarrass the diagnosis.

1. *Measles.*—Incubation period, one to two weeks. Invasion is characterized by marked catarrhal symptoms—sneezing, lacrymation, conjunctival hyperæmia, cough, slight fever, with some headache and muscular pains. There may be chilly feelings, but a pronounced chill is infrequent. Koplik's sign should be looked for. The eruption, appearing usually on the fourth day, though sometimes "shotty," is blotchy and occurs in crescentic patches, at first on the face and neck, extending thence over the body. Ordinarily, the rash is hyperæmic and disappears on pressure. General symptoms do not subside until the rash begins to fade.

2. *Rötheln.*—Incubation period, two or three weeks; onset mild, with trifling catarrhal symptoms, sometimes slight sore throat and muscular pains, fever not usually above 100° F.; constitutional disturbance slight. The eruption appears generally on the second day, rarely later than the third. The papule is small, light in color, and but slightly elevated; distribution quite general and sometimes wavelike in its course, beginning on the face and neck and gradually spreading to the extremities, which may not be reached until it has faded from the seat of its first appearance. Sore throat and swelling of cervical glands are frequent.

3. *Varicella*, if exceptionally severe, especially during an epidemic of variola, might puzzle one at first. Usually fever and constitutional disturbance are slight. The rash appears during the first twenty-four hours, at first papular, becoming vesicular in a few hours, and within the next twenty-four or thirty-six hours "pearly pustules," most abundant on the trunk, appearing in successive crops. The symptoms are mild throughout. Note especially that on the fourth or fifth day, when the variolous rash is only papular, that of varicella is multiform, papules, vesicles, pustules, and crusts.

4. *A papular syphilide* might be confusing, especially when, as sometimes happens, the eruption is attended with fever and appears on the forehead, constituting the "corona veneris." This eruption, however, is more generally distributed, most plentiful on the trunk and flexor surfaces of the extremities, and frequently occurs on the palms and soles. Macules, papules, and pustules coexist, and are only occasionally itchy. The papules vary greatly in size, from a pinhead to an inch in diameter; at first light-colored, they later assume the "raw ham" or coppery appearance, lacking the inflammatory areola. They develop slowly, running a course of months. Other syphilitic symptoms are usually present—sore throat, mucous patches, falling of the hair, and enlarged glands.

5. *Acne vulgaris* might sometimes suggest variola, but the slight constitutional disturbance, the slow development, and the long life of the papules, associated with pustules and comedones, and want of eruption on the extremities, would remove all suspicion of smallpox.

6. *Typhus fever* is mentioned because of its similarity of onset to that of variola. The eruption appears from the third to the fifth day, extends over the entire body, is petechial in character, and causes a mottled appearance by the alternation of purplish blotches with those of lighter hue. There is no remission of symptoms with the occurrence of the eruption.

7. *Drug eruptions* may be mentioned. But here there is generally a history of the use of some drug known to produce a rash, such as the bromides or a local irritant.

By way of recapitulation, I mention points which, taken together, seem fairly reliable for diagnosis.

1. Presence of an epidemic. In the absence of an epidemic near by, has the patient been elsewhere exposed to the contagion?

2. Previous history of the patient; has he had smallpox or been successfully vaccinated?

3. Mode of onset. Here note the period of incubation (usually about twelve days); date of initial symptoms. Especially characteristic of the invasion are the severe chill or chills, intense pain in the limbs and lumbar region, vomiting, and intolerable frontal headache. A decided remission with the appearance of the eruption.

4. The eruption develops on the fourth day. Distribution especially on the forehead, face, and extremities; "shotty" feel and surrounding areola; uniformity of lesions—only papules, *not* papules, vesicles, and pustules.

315 R STREET, N. W.

Dr. Albert G. Miller, of Philadelphia, writes:

The positive diagnosis of smallpox in the papular stage rests to a great extent upon certain differential points of comparison with several other diseases of much less gravity and importance, so far as the general public health is concerned. The diagnosis, therefore, is mainly one of exclusion, after having ascertained the presence of certain characteristic initial symptoms of variola.

If, for example, a physician should be called upon to see a patient who gives him a history of illness beginning suddenly from two to four days previously with headache (most commonly frontal), severe lumbar and sacral backache, rigors of varying intensity, and epigastric pain, accompanied by complete anorexia and nausea with or without vomiting, together with high temperature and prostration and in some cases an initial rash resembling that of measles or scarlet fever, the case is at least worthy of great suspicion. Furthermore, if the physician should ascertain that there had been a sudden partial or complete cessation of nearly all of these symptoms, he would indeed be negligent if he did not examine further for the characteristic eruption. This appears, as a rule, from two to four days after the onset of the initial symptoms, and should be looked for particularly on the forehead, face, arms, back of the wrists, and hands, but may occur in almost any region, and on skin or mucous membrane.

This eruption consists of one or more papules which are peculiarly characteristic. They are distinctly hard, red, and elevated; and on drawing the fingers slowly and firmly over the surface, the papules are felt to be hard and resistant, giving the sensation as if there were a split shot under the skin. Should the case be seen early in the papular stage and the papules be numerous, one can frequently detect some small red macules scattered among the papules. These are neither hard nor elevated, and are, in fact, the embryonic forerunners of the papules, and if watched for a few hours they increase in size and become distinctly indurated and elevated. On the other hand, if the case is seen later in the papular stage, the papules which appeared first are somewhat enlarged and show at their apices the minute vesicle which is the beginning of the vesicular stage.

Our positive knowledge of the disease must now be supplemented by the several points of diagnosis which distinguish smallpox from other diseases that are accompanied by a papular eruption. I shall consider each of these from three main diagnostic points: 1. The character of the eruption. 2. The location and distribution of the eruption. 3. The initial and the attending symptoms.

Chickenpox.—While this disease is the one most commonly mistaken for smallpox in the vesicular stage, the error is uncommon in the macular or papular stage, because in chickenpox this period lasts only a few hours and is not attended as a rule by marked initial symptoms. The eruption consists of rose-colored macules, somewhat irregular in outline, which in an hour or two become raised and hard. This induration is diffuse and does not have the well defined shotty hardness of the smallpox papule, unless it is quite small; and, unlike that of smallpox, it becomes fully vesicular in from six to twelve hours. The eruption appears almost invariably on the back, chest, and abdomen, is always discrete, and may appear in crops. Severe initial symptoms are rarely present, but even if they are present the temperature is raised very slightly or not at all.

Measles.—Smallpox, if confluent, may simulate measles, particularly on the first or second day of the eruption; but in measles the papules are much less elevated than those of smallpox, do not show beginning vesiculation at their apices, and are resistant, but not hard and shotty. The eruption is noticed first on the forehead and within a few hours begins to spread downward. The early symptoms are chiefly catarrhal, associated with moderate fever which remains unaffected or rises higher when the eruption appears.

Enteric Fever often has an eruption of rose spots on the trunk, limbs, or even the face. If these are somewhat raised and resistant, or show minute vesiculation, the disease may be misleading. The history, the accompanying symptoms, and the duration of the illness (at least a week or ten days before the appearance of the rash), and especially the characteristic temperature should serve to distinguish the diseases.

Prickly Heat consists of small papules around the openings of the sweat glands. These papules are minute, red, acuminate, and discrete, closely crowded together, with vesicles or vesicopustules interspersed, and not having shotty induration. It comes out suddenly over large areas and is characterized by excessive sweating, intense prickling and tingling, and the absence of the severe initial symptoms and typical temperature of smallpox.

Acne.—The papules are bright or dark red and discrete, appearing at the orifices of the sebaceous glands and hair follicles. They occasionally have much induration, but are not shotty, and they suppurate within a few days or weeks. The eruption is seen chiefly on the face, chest, shoulders, and back, and the initial symptoms of smallpox are wanting.

Syphilis.—Some cases of the scaly papular syphiloderm, particularly when accompanied by fever, may be confounded with smallpox. The papules as a rule are hard and somewhat flattened, but may be small, rounded, and firm, and have scaly summits, and in some places may finally become vesicular or pustular. The color at first is bright red, but later brownish-red or copper-colored, and the papules are not attended by itching. The eruption as a rule is symmetrical and general, except that the face is usually exempt. The changes occurring in the eruption are slower than those of smallpox, and the fever, if present, is not apt to disappear with the onset of the eruption. Of course, the concomitant signs of syphilis should be looked for and should bear great weight in giving a final diagnosis.

Eczema.—The papular variety, if associated with fever, may give rise to some doubt as to diagnosis. The papules, however, are rounded, bright-red in color, and irregularly arranged, and often unite, losing their individual identity. Itching is intense, and there is never the shotty induration of smallpox. The papules are often surmounted by minute vesicles, and are seen as a rule on the arms and legs, but do not involve the mucous membranes. The lesions remain papular for weeks, and are neither preceded by the severe initial symptoms of smallpox nor accompanied by any characteristic temperature.

There are several other less common conditions giving papules which may resemble those of smallpox to a certain extent, but these have neither the characteristic initial symptoms nor the fever of smallpox, and need only be mentioned to be avoided. Among these are glanders, lichen, prurigo, and the iodide rash.

Dr. S. J. Bumstead, of Decatur, Ill., writes:

In this stage there will be high fever, a temperature of 102° to 104° or higher; pulse, 100 to 120, one or more severe rigors during the preceding forty-eight hours. If the case is one of varioloid or of the milder form of smallpox prevalent for some years, these symptoms will be milder. But there will be a severe headache, vomiting, and a very severe backache not often overlooked by the patient, if you are dealing with smallpox.

Then either one can see the papules on the skin, or they can be felt like small, distinct bird shot deep in the skin, by rubbing the palm of the hand firmly over the skin. This is always necessary for an early diagnosis in colored people. In addition, one looks in the mouth and throat, and if he sees a few or many red points or pimples, with red or yellowish tips, with nearly healthy mucous membrane between, or in some part of this cavity, one may confidently diagnosticate smallpox or varioloid. I have always found these papules in the mouth or throat to be twenty-four or forty-eight hours further advanced in development than those of the skin, and a very important part of the basis of one's diagnosis.

If the patient is a child, varicella may be thought of, but here the fever is likely to be mild and the papules to develop very rapidly after the onset of the disease, and to be most numerous on the back, instead of the face, as in smallpox. These turn into vesicles, with serum in the tips, in a manner and rapidity, never observed in smallpox. If the child has been successfully vaccinated, the probabilities are against variola. If the patient is an adult, there is no need to consider varicella.

With measles one will observe injection of the nose and bronchi from the beginning, the severe backache will be absent, and no one should ever mistake the papules of smallpox for the eruption of measles. There will be high fever if the disease is at all severe, but it lasts four days before anything appears on the skin. In the mouth there is the measly eruption to be seen twenty-four hours before that of the skin, but it is general, and not in distinct points as in variola.

With scarlet fever one will miss the terrible backache, but will observe as high fever, the rigors perhaps, and in forty-eight hours the eruption on the skin; but this is nothing one can make a papule of, and is not even elevated, as are the semicircular ridges of the measles eruption. These have no resemblance to the papules of variola, either to the eye or to the hand passed over the surface. In the mouth, there is only general redness earlier than on the skin.

With typhoid fever, there will have been the rigor, but not so high a temperature so early in the disease, and there will nearly always be a pulse low in frequency as compared with the temperature; very characteristic of typhoid fever. Then there is no such backache as in variola.

By a close observation of these points it is scarcely possible to be mistaken.

The few rare cases of hæmorrhagic, or fulminating, smallpox, where the patient becomes wildly delirious at once, and dies in twenty-four or thirty-six hours, with nothing to be seen on the skin or in the mouth, may be safely disregarded. They are so infrequent and extraordinary that nothing could avail in the diagnosis unless smallpox had been prevailing in the family or the community. In these cases cerebrospinal meningitis is most frequently thought of.

(To be concluded.)

Therapeutical Notes.

Acute Amygdalitis.—Dr. George B. Wood, in *Therapeutic Review*, for March, 1904, states that he prescribes the salicylates internally as follows:

℞	Strychnine sulphate	½ grain;
	Ammonium salicylate Strontium salicylate } of each	1½ drachm;
	Water, enough to make	3 ounces.

M. Shake well. Dessertspoonful in milk after meals.

As a mouth wash, Wood recommends:

℞	Boric acid	1½ drachm;
	Potassium chlorate	3 drachms;
	Glycerin	1 ounce;
	Water, enough to make	6 ounces.

M. Dilute with warm water and use as throat wash.

Concerning the throat wash, continues Dr. Wood, it is necessary that we instruct our patients in its proper use. In ordinary gargling the fluid does not reach beyond the anterior pillar of the fauces, and hence is of service only for the purpose of cleansing the teeth or mouth, or, perhaps, as gymnastics in some Eustachian conditions. The fluid, however, can be made to reach the posterior wall if the following method is carried out: Take a mouthful of the throat wash, properly diluted with warm water, and lie down so that the head is on a level with the shoulders, then holding the breath allow the fluid to run back just so far as to avoid swallowing it. After letting it rest there a moment, the head should be thrown quickly forward and the fluid brought back into the mouth. In this way the whole of the oropharynx will be thoroughly cleansed, and sometimes the fluid will even reach the pharyngeal vault.

After the acute stages have passed, the throat will be brought to its normal tone much more quickly by the use of some astringent application or gargle. Glycerol of tannin applied freely with a swab, twice a day, gives very good results. The following astringent throat wash is very useful as soon as the pus or membrane has disappeared:

℞	Fluid extract of rhus glabra	3 ounces;
	Powdered potassium chlorate	1½ drachm;
	Glycerin	½ ounce.

M. Shake well. One to three teaspoonfuls to a wineglass of water.

Lecithin in Tuberculosis.—A. Roblot (*Revue internationale de la tuberculose*, August, 1903; *Presse médicale*, March 19, 1904) gives the formula of an injectable oil he has used in 35 cases of tuberculosis:

℞	Sterilized lecithinated oil, 5 in 100	1 cc. (15 minims);
	Crystallized guaiacol Eucalyptol } of each	10 centigrammes (1½ grain);
	Menthol	5 centigrammes (¾ grain);
	Iodoform	1 centigramme ($^{3}/_{20}$ grain).

M. Inject 45 minims deeply into the buttock three times a week.

This mixture seems to influence favorably mixed infections as regards fever. General and functional symptoms improve, and lastly the physical signs clear up. The treatment may be continued for three weeks, then a week of intermission should follow. The injections should be made very slowly.

NEW YORK MEDICAL JOURNAL
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ESTABLISHED IN 1864

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NEW YORK, SATURDAY, MAY 7, 1904.

THE ATTEMPT TO ABOLISH THE OFFICE OF CORONER IN NEW YORK.

The bill substituting medical examiners for the coroners in New York, lately passed by the legislature, has been disapproved by the mayor after a public hearing. This adverse decision of the mayor's was not wholly unexpected after the hearing, for he seemed to have been impressed by some of the arguments brought forward by the opponents of the measure, though not, we believe, by one upon which much stress was laid, of which we shall say more further on.

So far as the mayor's reasons for disapproving the bill are known, they are as follows: 1. The proposed substitution would be an innovation so far as New York is concerned, and has not been shown to have stood the test of experience satisfactorily elsewhere. 2. In order to remedy abuses alleged to have crept into the present system it is not necessary to destroy the system. 3. In the very words of the mayor, "on the argument before me, the proponents did not, in my judgment, successfully defend their measure nor answer the objections of their opponents as to either its justice, humanity, economy, or efficiency."

The mayor's first and second reasons show a wholesome conservatism with which no good citizen can find fault. It is possible that in stating his third reason he bestowed some attention on that one of the arguments brought forward by the opponents of the measure upon which we have said that we should comment further, but, we repeat, we do not believe that he attached weight to it. The argument in question was the ad captandum cry that the real reason why the medical profession had supported the bill to a very great extent was the desire of some medical organization to get possession of more subjects for dissection—to pounce upon the remains of the casual victim of sudden death. The New York County Medical Association was the organization mentioned, though we are at a loss to imagine why anybody should have thought the association stood in need of cadavers. The argument was, to our mind, uncalled for and utterly unjust. Medical men are not ghouls, and we totally repudiate the notion that greed for more anatomical material actuated those of them who favored the substitution of medical examiners for coroners. In this repudiation we shall be joined, beyond a shadow of doubt, by practically the entire profession, and it is very much to be regretted that the opponents of the bill resorted to such unworthy talk.

AN ENGLISH ESTIMATE OF AMERICAN MEDICAL TEACHING.

The *British Medical Journal* for April 23rd contains an interesting summary of the observations and deductions of the two medical members of a commission appointed to study educational methods in the United States. It seems that a Mr. Mosely had been impressed, during his residence in South Africa, with the practical ability of the American engineers at work there, and that the Mosely Educational Commission to the United States of America was the outcome of his rumination over the question "How is it that the United States can afford to pay half a dollar in wages where we pay a shilling, and yet compete with us in the markets of the world?" The two medical members of the commission were Dr. J. Rose Bradford, professor of medicine in University College, London, and Dr. W. H. Gaskell, university lecturer in physiology, Cambridge.

In their reports these gentlemen have avoided alike that obstinate adherence to adverse prepossession that has characterized many of our European critics and the still worse spirit of adulation in which a few of them have indulged, apparently from a determination to please our people or feed our vanity. Indeed we do not remember to have encountered a more intelligent or sensible view than these gentlemen have taken of medical teaching in the United States and Canada. They appear to approve, in the first place, of the tendency to merge instruction in the elementary branches with the university course, so as to reduce to six years the long period otherwise devoted to the two. They have found this tendency more developed in the Middle West than in the older communities of the Atlantic seaboard. In the enumeration of the school exercises they seem to take kindly to the word "recitations" used in our American sense, though on the first occasion of employing it Dr. Gaskell gives his readers the equivalent "catechetical classes." The feature itself is highly approved of, also the Harvard "concentration system." To Dr. Gaskell's mind, two of the most striking points about the laboratory instruction of all kinds in the United States are "the energy and activity displayed by the teachers, their earnest endeavor to do their utmost without sparing themselves, and the determination of the students to be taught." The subdivision of studies and the division of the classes into small squads—sometimes extended to the assignment of laboratory space and appliances to single individuals—also meet with approval. On the other hand, it is thought that as a rule the American student's clinical opportunities are not quite so extensive as his English cousin's, and the absence of clinical clerks and dressers is mentioned as a defect prevalent in the United States, but not in Canada.

PROMPT PAYMENT FOR MEDICAL SERVICES.

It is easy and in a manner interesting to note that the practice of medicine, looked at in a general way, has some disquieting features. Increasing numbers of people seem to be looking for relief from bodily ills in specious and fantastic propositions and promises of cure. The question is asked whether we ourselves are not responsible in some way for an apparent falling away in the old time confidence which seems to have been accorded to the old time medical man. It is so easy for the kind hearted physician to underestimate the money value of his time and services, and people are so apt to accept as of doubtful value what is offered too freely. How common it is for physician and patient to coincide in the opinion that a spell of sickness is enough of an affliction without the added burden of a just and commensurate bill. Not so with those who extort a living from the real or fancied infirmities of men and women, breaking into medicine instead of coming through the academic groves where the humanities flourish. New and larger hospitals and dispensaries are erected nearly every year, though looked at askance by some plodding practitioner who may venture to suggest that new bars and higher be placed at the beginning of the lane that leads to the doctorate of medicine.

But a wider glance around shows that other learned men have their misgivings also and similar grounds for serious reflection. The average rate of remuneration which falls to the lot of our clerical brethren is reported to be woefully small when compared with the expense of their studious preparation for the work of this life or with the promised rewards of the life to come, and deep thought is expended on the question of how to draw the multitudes within hearing of their message. In the legal profession also there are those who deplore the great annual increase in the number of lawyers, each one of whom will naturally fail to appreciate the plans which are always in order for further simplifying and facilitating the distribution of justice and equity.

It is pleasant, however, to reflect that these troublesome questions are not pressing for immediate settlement. They seldom disturb the repose or digestion of the man who is busy with the daily task set before him in court, cloister, and meeting room. It will be an evil day, and also, from a humane point of view, a happy day, too happy for realization in our time at any rate, when people cease to be sick or forget to apply, when overtaken by illness, to the nearest physician who is known to have a kind heart, a good name for probity, and an average modicum of medical knowledge and experience. Such a man will find his time sufficiently occupied and a balance to his account at the year's end if he will follow two plain rules which accompany success the world over: Let him keep his expenses within reasonable limits and kindly but firmly secure payment for services rendered at the earliest practicable moment, and as a simple matter of routine business.

WHEN SHOULD A GENERAL PRACTITIONER SEND HIS PATIENTS TO THE OPHTHALMOLOGIST?

The natural reply to this question is: When he cannot conscientiously treat them himself. Whether any particular general practitioner should treat any particular case depends entirely on the opportunities he has enjoyed to learn to diagnosticate and treat diseases of the eye. Some practitioners have had no such opportunities, some have spent a few weeks in attendance at a postgraduate school, a few have had weeks or months of experience in large dispensaries or hospitals; therefore, no definitive rule can be laid down, but the law for each must be his own conscience. It may be objected that ophthalmologists differ in the same way from the one whose training consists of a six weeks' course at a postgraduate school upward, and there is some truth in the objection. There is no law to prohibit the assumption of this title by any man, whether physician or not, and there is an optical school in this country which pretends to confer the degree of Doctor of Ophthalmology after a brief course of study, and insists that its graduates should be called ophthalmologists. But, in this article, the title indicates a physician who, after a thorough training, either on the house staff or for two or three times as long on the clinical staff of an eye hospital, has gained a reputation as an expert in diseases of the eye among practitioners of that specialty, and does not engage in general practice. Skill is not only to be gained, but to be kept by constant practice, and will be lost in a great measure after a few years of non-use. If a general practitioner has had a good training in eye work, he will always be more competent in diagnosis than his less fortunate associates, and it may sometimes be his duty to operate in cases of emergency when no more practised hand can be obtained; but he will obtain poorer results on the average than the specialist, simply because he operates on the eye less often. Such operations as those for cataract, luxated lens, or an iridectomy for visual purposes, should never be performed by any practitioner unless he is in, or has recently left, active service in a hospital where he has been called upon to do such operations, and is therefore in actual possession of the necessary expert skill. Among general practitioners such a one is rarely found, and it may therefore be stated, as a general rule, that when an important operation on the eye can be delayed until the service of a specialist can be obtained, it should not be performed by any one else. This does not mean that a wounded eye should not be cleansed and examined, that protruding tags of iris should not be snipped off, or that no effort of any kind should be made to save the eye. In emergencies every physician should comport himself to the best of his ability, even though confronted by a condition he has never before seen. In no class of cases is the specialist's advice more highly appreciated.

Eye cases are not all operative. Internal and external diseases exist and are met with by the general practitioner. Internal diseases often pass not only unrecognized, but unsuspected, until they are far advanced. It seems as if every physician might learn to use the ophthalmoscope sufficiently well to see gross lesions at least, but there are few who do so. The general practitioner who can use the ophthalmoscope, who can recognize and follow the course of the disease in the eye, and who knows the proper line of treatment, should retain the care of the case himself, with consultations if he feels them to be necessary; but the practitioner who cannot use the ophthalmoscope well enough to do this should turn the patient over to the specialist's care. External diseases pretty generally fall to the lot of the general practitioner, and if he knows what the trouble is, what the treatment is, and how to apply it, he should keep the case. But if he feels timid or nervous about handling any eye he should turn that case over to the specialist if he can. A reddened eye does not always mean conjunctivitis, and it is often difficult to exclude other diseases at the first visit; so, when this seems to be the diagnosis it is well to see the patient again within a few days and then, if there is any doubt, a consultation may prove advantageous.

A word of warning in regard to proprietary medicines for the eye may not be out of place here. Some of these are of the worst variety of patent medicines. In the *American Journal of Ophthalmology* for 1898 is recorded an attempt to investigate the value of a much advertised preparation to remove cataracts without operation, the refusal of the company, the manager of which was at that time connected with a homœopathic pharmacy, to assist in any such investigation, and the failure to find any evidence that the preparation was of any value as a curative agent in cataract. It would certainly seem wiser to seek the advice of an ophthalmologist who has a reputation for honesty and fair dealing among members of his specialty, and to repose confidence in him, than to rely on the advertisement of a manufacturer; for the specialist is as much interested in the advance of therapeutics along his own line as any physician can be, and if he does not approve of a preparation it is probably not without reason.

Finally, comes the most difficult branch of ophthalmology, the fitting of glasses. This forms the " scrub work " of every ophthalmologist's life; it takes much time, becomes very tiresome, and is not of great pecuniary advantage. Yet ophthalmologists are agreed that only those who understand the eye thoroughly and are constantly familiar with the physiological action of eyes which have been subjected to abnormal strain are competent to do the work. Very few general practitioners try to fit glasses; very few of these persist long in the attempt. Those who do persist are as a rule unusually well qualified by Nature for such work, and are apt eventually to become specialists themselves. All other physicians will advance the best interests of their patients if they send them to the ophthalmologist when they need to have their eyes examined for glasses, rather than to any one who does not understand the anatomy, physiology, and pathology of the eye, no matter how specious the arguments advanced, or how alluring the advertisements presented to guide him otherwise. The general practitioner is in no sense a guide board to direct patients to other physicians. Patients consult him in order to employ the knowledge he has acquired to relieve the conditions from which they suffer, whether of the eye or any other organ of the body, and he should make the best use he can of that knowledge. But when it appears that an examination is needed to determine or exclude a cause of the suffering from which relief is sought, it is just to both his patient and himself that he should recommend such an examination to be made by a practitioner of assured competence.

Now, may an ophthalmologist make two suggestions to the general practitioner? It would often be a kindness if the latter would state in his letters of introduction whether he wishes a consultation or to turn the case over to the care of the former. It has already been said that some physicians wish to treat the patients themselves, under the consultant's guidance, while others do not wish to treat eye cases at all. The individual practitioner may be supposed to know which course he would prefer to follow, and an indication by him is always gratefully received. The other suggestion is that patients who cannot afford to pay the specialist's usual fee be sent to the office rather than the dispensary, with the fact stated distinctly in the letter of introduction. The specialist might like to choose for himself whether to send the patient to the dispensary or to accept the smaller fee, even when no more than the patient's gratitude.

MATTHIAS LANCKTON FOSTER.

THE CHICAGO CARBOLIC ACID ORDINANCE.

The Chicago Retail Druggists' Association is much to be commended for its efforts to regulate the sale of carbolic acid with reference to the protection of the public against poisoning. We are glad to learn that those efforts have culminated in the adoption by the city council of an ordinance that the association accepts as " satisfactory in the main." The director of the department of publicity of the National Association of Retail Druggists urges the cooperation of the physicians and apothecaries of Chicago in a faithful observance of the law.

THE ARCHIVES OF ELECTROLOGY AND RADIOLOGY.

The third number of the fourth volume of this periodical, dated March, 1904, is issued under new editorial auspices. Dr. Clarence E. Skinner, of New Haven, is the editor, and he is assisted by a corps of eminent men. The journal was previously known as the *American Electrotherapeutic and X Ray Era*. It is published in Chicago and New York.

OBITUARY NOTES.

EDWARD L. TRUDEAU, JR., M. D.—The recent death of Dr. Trudeau, on the threshold of a most promising career, is well calculated to remind us anew of that against which man cannot contend. Dr. Trudeau was the son of the well known phthisiologist of Saranac Lake, in the Adirondacks, and he might well have been expected to achieve a fame comparable to his father's.

News Items.

Society Meetings for the Coming Week:

MONDAY, *May 9th.*—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medicohistorical Society (private); New York Ophthalmological Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence; Gynæcological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private).

TUESDAY, *May 10th.*—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society; Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y. (annual meeting); Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, *May 11th.*—New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox Medical and Surgical Society (private); Medical Society of the Borough of the Bronx, New York.

THURSDAY, *May 12th.*—New York Academy of Medicine (Section in Pædiatrics); New York Academy of Medicine (Section in Otology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y. (annual meeting); South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, *May 13th.*—Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, *May 14th.*—Obstetrical Society of Boston (private).

Changes of Address.—Dr. Herman L. Collyer, to 153 West Seventy-seventh Street. Dr. Nicholas R. Dann, to 159 East Thirty-seventh Street.

NEW YORK

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending April 30, 1904:

	Week end'g April 30.		Week end'g April 23.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	1,398	46	1,630	37
Diphtheria and croup	409	62	391	53
Scarlet fever	419	26	436	32
Smallpox	6	..	2	..
Chickenpox	44	..	83	..
Tuberculosis	490	199	381	202
Typhoid fever	40	6	29	5
Cerebrospinal meningitis	30	70	..	55
Totals	2.756	409	2.952	384

Cerebrospinal Meningitis.—An unexpected epidemic of this disease has broken out in New York, there having been seventy deaths reported therefrom during the week ending April 30th, and thirty new cases reported to the board of health.

Long Island College Hospital.—The training school for nurses attached to this hospital presented gold medals to the following graduates on April 29th: Miss Kathryn Ferguson Buckham, Miss Margaret Isabel Airth, Miss Imogene Wandell, Miss Clara Warburton, Miss Rebecca Wood, Mrs. Mary Moore, Miss Sadie Cranston Wilson, Miss Elizabeth Grant, Miss Fredericka C. Noll, Miss Eva May Bratton, Miss Georgia Heales, Miss Mary Northwood, Miss Annie Nelson, Miss Ethel D. Ring, Miss Elizabeth M. Watson, and Miss Beatrice Welton.

The Medical Association of the Greater City of New York.—A stated meeting of this association will be held at the New York Academy of Medicine, 17 West Forty-third Street, Manhattan, on Monday, May 9, 1904, at 8.30 p. m. Order of exercises: Presentation of Specimens or Cases and Voluntary Communications. Discussion on Scarlet Fever and Its Treatment, to be opened by S. Henry Dessau, M. D., and continued by Dr. Andrew H. Smith, Dr. Ransford E. Van Gieson, Dr. Thomas Darlington, Dr. Walter Lester Carr, Dr. Thomas S. Southworth, and Dr. John Dorning. J. Lee Morrill, M. D., treasurer. P. Brynberg Porter, M. D., recording secretary, address, 150 West Eighty-fourth Street, Manhattan.

The Hospitals of New York City.—There are 100 hospitals in Greater New York, exclusive of nearly 200 asylums and homes maintained by public and private charity. These hospitals have a capacity for nearly 12,000 beds. Impressive as these figures are in the aggregate, the city's provisions for the care of the sick are inadequate at certain seasons of the year. During the grippe plagues that sweep over the metropolis in the early spring every hospital, with the exception of those designed for special cases, is overcrowded. In the heated terms of the summer the capacity is taxed to the utmost. Even now the city is poorly provided for taking care of special cases. Patients suffering from delirium or alcoholism and requiring isolation cannot find accommodations.

Academy of Medicine.—The Section on Otology will meet on Thursday evening, May 12th, at 8.15 o'clock. (Clinical meeting.) Order: Presentation of Cases. A Case of Lateral Sinus and Jugular Thrombosis. Operation, with Recovery, by J. D. Richards, M. D.; Exhibition of Specimens and New Instruments. Report of a Fatal Case of Brain Abscess of Otitic Origin, by Gorham Bacon, M. D. Herman Knapp, M. D., chairman. Thomas J. Harris, M. D., secretary, 117 East Fortieth Street.

The Section on Pædiatrics will also meet on Thursday evening, May 12th, at 8.15 o'clock. Order: Demonstration of a Pasteurizer, Sterilizer, and Infant's Nursing Bottle Holder, by Theron W. Kilmer, M. D.; paper: The Possible Influence of the First and Second Dentition Periods in the Production of Convulsions, Especially Epilepsy, by W. P. Spratling, M. D., of Craig Colony. Discussion of the paper opened by L. Pierce Clark, M. D. Paper: A Review of Bacteriological Work Upon the Fæces of Infants and Young Children, by Louise Cordes, M. D. Discussion. David Bovaird, Jr., M. D., chairman. Matthias Nicoll, Jr., M. D., secretary, 124 East Sixtieth Street.

The Proposed Fairhaven Sanitarium.—An appeal for funds has been sent out by an organization concerned in the establishment of a hospital for women, for the purpose of affording relief to incurable cancer patients and for the treatment, study, and prevention of cancer. The hospital will be located in this city, and will be known as the Fairhaven Sanitarium. In the circulars issued by the organization the commissioners of the State Board of Charities are said to have declared themselves satisfied with the necessity of such an institution as the one contemplated, as there is only one hospital in this city—the Montefiore Hospital—which admits incurable cancer patients. Before the board of managers can begin making any arrangements to incorporate and open the new hospital, however, $10,000 must be in hand. The dues have been fixed at $10 for annual members, $100 for life members, and $1,000 for patrons. The officers of the organization are: President, Henry B. Wilson; first vice-president, Frank Tilford; second vice-president, Mrs. Charlotte B. Wilbour; treasurer, Henry R. Wilson; recording secretary, Mrs. J. Woolsey Shepard; corresponding secretary, Miss Caroline M. Pelgram; financial secretary, Mrs. John T. Van Sickle; chairman of the executive committee, Dr. Anna M. Galbraith. Contributions for any amount will be received by Henry R. Wilson, president of the Lincoln Trust Company.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g April 30.		Week end'g April 23.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	23	8	32	9
Diphtheria	71	9	83	14
Scarlet fever	89	6	88	3
Typhoid fever	298	45	352	14
Consumption	..	73	..	88
Cerebrospinal fever	..	..	..	..

Franklin's Hospital.—The 153rd annual meeting of the contributors to the Pennsylvania Hospital was held on May 2nd in the quaint old medical library originated by Benjamin Franklin.

Special Clinics will be held in some of the Philadelphia medical colleges for such delegates and members of the American Medical Association as may visit Philadelphia on their way to the annual meeting. Details will be published in a subsequent issue of this *Journal*.

Presbyterian Hospital.—At a meeting of the trustees of the Presbyterian Hospital of Philadelphia, the following gentlemen were reelected resident physicians of the institution: William R. Butt, Sydney J. Repplier, and Ardsley W. Downs, University of Pennsylvania; James T. Williams and William G. Niles, Jefferson College, and Herbert B. Giffin, Johns Hopkins University.

Typhoid Fever is showing no appreciable abatement in Philadelphia. Work on the filtration plants is being rapidly pushed. It is still to be determined whether these plants will be ultimately effective in eradicating the disease, which exists even in the districts supplied with filtered water. There were 298 new cases and 45 deaths during the week ending April 30th.

Cocainomania is said to have developed among the employees of the Torresdale filtration plant in Philadelphia. The intoxication has been followed by a species of mania, resembling that of the hasheesh eaters in the East. A large quantity of cocaine has been confiscated.

Expelled for Illegal Practice of Medicine.—The faculty of the Medicochirurgical College expelled one of the students from the graduating class of that institution, last week, for practising medicine without a license, the accusation being brought by the president of the State board of examiners.

A Novel Suggestion.—At the meeting of the Jewish Maternity Association of Philadelphia, held last week, the president suggested the establishment of a school for the scientific training of nursery maids, and declared her belief that many of the diseases and infirmities of children cared for by the nursemaids are due to the ignorance of the latter.

Training School for Nurses of Polyclinic Hospital.—On April 29th, this school granted diplomas to:

Minnie E. Greenwood, of Toronto, Canada; Elizabeth A. Kafitz, of Mauch Chunk, Pa.; Georgie R. Weaver, of Clearfield, Pa.; Katherine C. Healy, of Smith's Falls, Ontario, Canada; Elizabeth C. Williams, of Kylertown, Pa.; Bessie M. Robison, of Espey, Pa.; Maud C. Closson, of Altoona, Pa.; J. Elizabeth Hoffman, of Petersburg, Pa.; Emma H. Speary, of Marietta, O.; Berta Bell, of Pollocksville, N. C.; Susie A. Johnstone, of San Francisco, Cal.; Eleanor L. Kerr, of Philadelphia; M. Evelyn Walker, of Londonderry, Ireland; Effie K. Van Demark, of Carbondale, Pa.; Cora W. Sydney, of Philadelphia.

Wills Hospital, South Logan Square.—A meeting of the Wills Hospital Ophthalmic Society will be held Monday, May 9, 1904, at 8.15 p. m. The main subject chosen for discussion is Affections of the Lacrymal Apparatus. Introductory remarks: Ætiology and Symptoms, by Samuel D. Risley, M. D.; Bacteriology and Microscopic Study, by Harold G. Goldberg, M. D.; Complications and Sequelæ, by S. Lewis Ziegler, M. D.; Treatment, by William Campbell Posey, M. D. General discussion: By Dr. George C. Harlan, Dr. Conrad Berens, Dr. Frank Fisher, Dr. W. W. McClure, Dr. Charles A. Oliver, Dr. McCluney Radcliffe, Dr. P. N. K. Schwenk, Dr. William Zentmayer, and others. Physicans interested in Ophthalmology are cordially invited. Walter L. Pyle, M. D., chairman. John R. Taylor, M. D., secretary.

For Compulsory Autopsies.—The following is taken from an editorial comment in the *Medicochirurgical College Journal*, stimulated by a recent murder trial in Philadelphia: "The trial of Mrs. Danz for the murder of her husband by the administration of arsenic is a practical argument in favor of the compulsory post mortem in all cases to determine the real cause of death. Here was one of those very cases suggested by the *Journal* in speaking of this subject a few months ago. The body was prepared for burial by an undertaker, and as usual a large amount of embalming fluid was injected. The undertaker who used the fluid and the man who made it went on the stand and swore there was no arsenic in the preparation, but an able, experienced, and perfectly trustworthy chemist who analyzed some of the fluid followed them on the stand and swore that he found arsenic in weighable quantities in the preparation. Had a post mortem been held, as advocated by the *Journal,* before the undertaker had a chance to use this fluid, and had the arsenic been found in quantities sufficient to warrant a belief that the poison was the cause of death, the defense would not have had the embalming fluid to fall back upon as a means of escape."

GENERAL

Statement of Mortality in Chicago, Ill., for the Week Ending April 30, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on the United States Census Bureau's estimated midyear populations of 1,873,880 for 1903 and of 1,932,315 for 1904:

	April 30, 1904.	April 23, 1904.	May 2, 1903.
Total deaths, all causes	561	643	637
Important causes of death—			
Acute intestinal diseases	15	24	23
Apoplexy	19	19	13
Bright's disease	53	54	29
Bronchitis	23	21	24
Consumption	62	75	65
Cancer	24	23	12
Convulsions	6	16	16
Diphtheria	8	8	6
Heart diseases	45	57	39
Influenza	2	5	4
Measles	1	1	28
Nervous diseases	29	24	38
Pneumonia	114	141	167
Scarlet fever	7	6	4
Smallpox	0	0	2
Suicide	7	11	11
Typhoid fever	12	7	10
Violence (other than suicide)	26	28	28
Whooping cough	1	0	5

The 2,486 deaths reported during the month up to the close of office hours April 30th represent an annual rate of 15.68 per 1,000—or 9.4 per cent. lower than the average.

As has been the case since the first of the year the reduction of deaths is almost entirely among children under five years of age, of whom 225, or nearly 30 per cent., fewer died than in April, 1903. In fact, the first four months of 1904 have established a record for low mortality from the contagious diseases of childhood. There have been but 7 deaths each from measles and whooping cough this year, as compared with 139 and 156, respectively, during the corresponding period last year. Diphtheria also shows a decrease of more than 26 per cent. and deaths from convulsions are fewer than for any previous corresponding period.

Diseases of adult life show the following increased mortality as compared with 1903: Apoplexy, 22.6 per cent.; Bright's disease, 16 per cent.; cancer, 10 per cent.; consumption, 9.1 per cent.; heart diseases, 3.3 per cent.; pneumonia, 3.7 per cent.

Binghamton, N. Y., State Hospital.—Dr. Charles G. Lyon, of Willard, has been appointed junior physician of this institution.

Ann Arbor, Mich., University.—There were 418 matriculants in medicine at this institution during the current session against 455 for the previous session, although the total matriculation in all faculties shows an increase of 165.

Pulte Medical College, Cincinnati, O., graduated, on May 3rd, the following seven successful candidates: Glenn Wise Adams, George Blackford, Harry Blackford, Charles Bertrit Brewster, Adna Leonard Innes, Lewis McClurg Steenrod, and Fred Carl Weber.

New Jersey Medical Examinations.—The examinations of the State Board of Medical Examiners of New Jersey will be held at Trenton, N. J., June 21st and 22nd. Application for the regular blanks should be made before June 11th.

The Camden County, N. J., Medical Society, at its meeting on April 26th, elected the following officers: President, Dr. Joseph H. Wills; vice-president, Dr. William Westcott; secretary, Dr. Paul N. Mecray; treasurer, Dr. J. W. Fithian; historian, Dr. Alfred Cramer; reporter, Dr. E. B. Sharp; censors, Dr. H. H. Sherk and Dr. W. A. Davis; trustee, Dr. E. L. B. Godfrey.

The Thirty-seventh Annual Meeting of the West Virginia State Medical Association will be held at Fairmont, W. Va., May 10, 11, and 12, 1904, with the following programme: Suicide, Public Lecture, by Dr. S. L. Jepson, of Wheeling; Primary Syphilis of the Faucial Tonsil—Treatment of Syphilis by Inunction, by Dr. G. A. Aschman, of Wheeling; The Surgical Aspect of Typhoid Fever, with Special Reference to Intestinal Hæmorrhage, by Dr. E. M. Gardner, of Morgantown; Typhoid Fever in and Around Morgantown, by Dr. S. S. Wade, of Morgantown; The Nose, Its Accessory Cavities, and the Mastoid, with an Exhibition of Specimens, by Dr. D. C. Louchery, of Clarksburg; Gunshot Wounds and Their Treatment, by Dr. John R. Cook, of Fairmont; Diphtheria—the True and the False—Its Ætiology, Symptomatology, and Treatment, by Dr. Chester R. Ogden, of Clarksburg; No Need of Legislation for the Benefit of the Medical Profession and the Public, by Dr. G. D. Lind, of New Richmond; La Grippe, by Dr. A. N. Frame, of Parkersburg; Fractures, by Dr. J. W. McDonald, of Fairmont; The Surgical Relief of Abdominal Injuries, by Dr. Frank Le Moyne Hupp, of Wheeling. Voluntary papers, in order as handed in.

Medical Graduates at St. Louis, Mo.—The commencement exercises of the St. Louis College of Physicians and Surgeons were held on April 12th at the Young Men's Christian Association hall, Grand and Franklin Avenues. The programme consisted largely of musical numbers. The Reverend W. J. Williamson invoked divine blessing, the faculty address was made by Professor George M. Phillips, the class valedictory was given by William H. Starr, and the degree of doctor of medicine was conferred on the graduates by Dean Waldo Briggs.

The members of the graduating class were: C. H. Allen, of Louisiana; Clay Allen, of Missouri; C. S. Ambrose, of Kansas; G. M. Buck, of Indiana; T. C. Buxton, of Illinois; G. O. Bundy, of Minnesota; E. Crandle, of Illinois; F. De Honey, of Missouri; W. W. Damron, of Illinois; M. G. Evans, of Oregon; C. H. French, of Iowa; R. A. Fitzgerald, of Illinois; O F. Flader, of Missouri; N. O. Greer, of Kentucky; A. S. Goldstone, of Iowa; C. C. Greenfield, of Colorado; H. H. Halsey, of Missouri; A. Hamilton, of Missouri; J. A. Hipp, of Arkansas; J. A. Juen, of Iowa; H. C. Loveless, of Missouri; Lewis Roscoe, of Illinois; F. L. Lingle, of Illinois; W. C. Mitchell, of Illinois; L. S. Mayfield, of Missouri; A. M. Murphy, of Missouri; A. McMorrises, of Kentucky; P. M. Nation, of Illinois; E. E. Osburn, of Illinois; E. L. Powell, of Texas; C. L. Puckett, of Illinois; H. J. Rickhoff, of Missouri; J. S. Patterson, of Illinois; C. H. Shutt, of Indiana; W. L. Sharp, of Illinois; J. Seabloom, of Iowa; G. Speer, of Oklahoma; W. C. Schery, of Missouri; W. H. Starr, of Illinois; F. M. Sanders, of Illinois; Onas Smith, of Missouri; S. G. Von Almen, of Illinois; Albert Willis, of Illinois; N. Yahlem, of Missouri; Orphus Young, of Arkansas; Theodore Wiegers, of Missouri.

New Hampshire Medical Society.—The 113th anniversary meeting of this society will be held May 19 and 20, 1904, in Concord. The following papers have been promised: Conservative Surgery, by Dr. F. A. Stillings, of Concord; Laryngectomy, by Dr. C. W. Milliken, of Manchester: A Case of Embolism Following Operation, by Dr. Samuel S. Dearborn, of Nashua; Cholecystitis, with Report of a Case, by Dr. L. E. Grant, of Somersworth; Two Surgical Cases, by Dr. M. E. Kean, of Manchester; Nasal Obstruction, by Dr. F. E. Kittredge, of Nashua; discussion opened by O. B. Douglas, M. D., of Concord; Remarks on Paresis, by Dr. Charles P. Bancroft, of Concord; The Patent in Medicine, by Dr. E. E. Dean, of Lebanon; Albuminuria in the Apparently Healthy, by Dr. W. H. Leith, of Lancaster; Physostigmine for Meteorism, by Dr. Anna M. Littlefield, of New London; Labor and the Puerperium from the Standpoint of the General Practitioner, by Dr. John W. Staples, of Franklin Falls; Some Aspects of Infant Feeding, by Dr. Wallis D. Walker, of Portsmouth; Rheumatic Endocarditis, by Dr. C. W. Hannaford, of Portsmouth; Typhoid Fever, by Dr. G. F. Abbott, of Littleton; The Relation of Bacteria and the Formation of Gallstones, by Dr. H. N. Kingsford, of Hanover; Subphrenic Abscess; with Report of a Case, by Dr. W. T. Crosby, of Manchester; Specialism and Fanaticism in Medicine, by Dr. Arthur F. Sumner, of Concord; The Old and the New in Medicine, by Dr. M. H. Felt, of Hillsborough Bridge; Digitalis as a Therapeutic Agent, by Dr. I. G. Anthoine, of Nashua; President's Address, by Dr. Ezra Mitchell, of Lancaster.

The Sheppard and Enoch Pratt Hospital, Baltimore, Md.—A conference in Psychiatry and Neurology will be held at this hospital on Monday, May 9, 1904. The sessions of the conference will be at 2.30 and 8 p. m., luncheon will be served at 6.30 p. m., and papers will be presented or discussions be opened by the following gentlemen: On the Nature of the Disease Process in Insanity, by Adolph Meyer, M. D., director of the laboratory of the New York State Hospital; Congenital Spastic Rigidity (Little's Disease), by William G. Spiller, M. D., of Philadelphia; Development of Insane Ideas, by Stewart Paton, M. D., director of laboratory Sheppard and Enoch Pratt Hospital; The Sensory Distribution of the Fifth Nerve, by Harvey W. Cushing, M. D., of Johns Hopkins Hospital; Amaurotic Family Idiocy, by Bernard Sachs, M. D., of New York; Statistical Data in Paresis, by Edward N. Brush, M. D.; Mechanism of Exophthalmos, Pulse and Blood Pressure Curves in Maniacal Depressive Insanity, by William B. Cornell, M. D., clinical assistant Sheppard and Enoch Pratt Hospital; Spinal Puncture as a Diagnostic Procedure in Paresis, by George E. Chinn, M. D., clinical assistant Sheppard and Enoch Pratt Hospital; Delirium Following Operations on the Bile Duct, by J. M. T. Finney, M. D., of Johns Hopkins Hospital; Demonstrations of Specimens, by George Streeter, M. D., of Johns Hopkins Medical School; Methods of Examination by the Pupil, by Henry M. Thomas, M. D., of Baltimore. The hospital is reached via the United Electric Railway, out Greenmount Avenue and the York Road —take cars marked Towson—to the hospital gate. The Maryland and Pennsylvania Railroad has a station on the hospital grounds. Trains leave North Avenue and Oak Street at 3.20 and 6 p. m. As the seating capacity of the hospital lecture hall is limited, the invitations to the conference are restricted necessarily to physicans interested in Psychiatry and Neurology, and the favor of a response to this notice is requested. Edward N. Brush, Physician in Chief.

The American Proctological Society will hold its sixth annual meeting at Seaside House, Atlantic City, N. J., June 8th and 9th. Members of the medical profession are cordially invited to attend. Programme: Wednesday, June 8th, meeting of the Executive Council, 9 a. m. Order of business: Call to order by the president, 10 a. m.; reading of the minutes; treasurer's report; report of executive council; reports of committees; unfinished business; new business. President's address, W. M. Beach, M. D., Things of Specialism and of this Society that Make for Optimism. Papers: The Surgical Treatment of Prolapse of the Rectum, by J. M. Mathews, M. D., of Louisville; Further Observations in the Treatment of Pruritus Ani with the Röntgen Rays, by J. R. Pennington, M. D., of Chicago; My Method of Dealing with Perirectal Infections—Case Reports and Illustrations, by John L. Jelks, M. D., of Memphis; A Consideration of the Present Status of the Treatment of Cancer of the Rectum, by Lewis H. Adler, Jr., M. D., of Philadelphia; Sterile Water Anæsthesia in the Office Treatment of Rectal Diseases, by S. G. Gant, M. D., of New York; The Utility and Practicability of the Flexible Rectal Tube, by S. T. Earle, M. D., of Baltimore; Polyadenomata of the Rectum; Report of a Case, by G. B. Evans, M. D., of Dayton; Some Observations on the Treatment of Rectal Diseases, by William L. Dickinson, M. D., of Saginaw; Results of the Treatment of Cases of Obstipation Due to Acquired Valvular Hypertrophy, by Thomas Charles Martin, M. D., of Cleveland; Rectal Valves, with Report of Operative Cases, by Louis J. Krouse, M. D., of Cincinnati; Simple Fistula in Ano, by Howard A. Kelly, M. D., of Baltimore; The Proctologist—the Necessity for His Being an Accomplished General Surgeon, by Floyd W. McRae, M. D., of Atlanta; Clinical Cases, by James P. Tuttle, M. D., of New York; Adrenalin and Rectal Diseases, by A. Tierlink, M. D., of Gand, Belgium; A Paper, by George J. Cook, M. D., of Indianapolis; One Thousand Operations for Hæmorrhoids Without a Death; with Remarks, by Leon Strauss, M. D., of St. Louis. Clinical demonstrations, presentation of new instruments and pathological specimens. The officers of the society are: President, Dr. William M. Beach, of Pittsburgh: vice-president, Dr. Leon Strauss, of St. Louis: secretary-treasurer, Dr. A. B. Cooke, of Nashville.

Pith of Current Literature.

PRESSE MEDICALE.

March 12, 1904.

1. The Theoretical Teaching of the Practice of Medicine, By E. Brissaud.
2. The Fight Against Tuberculosis, By E. De Lavarenne.

1. **Theoretical Teaching.**—Brissaud points out the rapid disappearance of didactic teaching and the importance of cultivating in the student habits of close observation, as all that he learns of value is in the clinics and the practical courses.

2. **Tuberculosis.**—De Lavarenne's article is a history of what has been accomplished in France to combat the spread of this disease and a summary of the present plans of the government.

March 16, 1904.

1. The N Rays: the Search for Them in Certain Affections of the Nervous System, By Gilbert Ballet.
2. The War on Tuberculosis. How Shall We Isolate Tuberculous Hospital Patients? By Maurice Letulle.

1. **N Rays.**—Ballet uses a small cardboard screen covered with pure calcium sulphide to demonstrate these rays. A dark room is necessary, with a moderate temperature, and considerable experience in observation is required to avoid error. The observer should remain in the dark room for five minutes before beginning his experiments, and should be at a considerable distance from the screen in order that the n rays from his own person may not confuse results. Loud talking must be avoided. When the screen is placed on the skin over muscle, nerve, or nerve centre, its luminosity is perceptibly increased; the more strongly a muscle is contracted the more luminous will be the screen. The heart is consequently an actively radiating medium and Charpentier has been able to outline the heart by the varying luminosity of a screen. Nerves are more actively radiant than muscles and the course of a nerve may be traced by its emission of n rays. The brain is a strong radiant centre and the screen shows great luminosity when placed near the third frontal convolution while the subject is speaking. The rays persist for a time after death, but gradually disappear. The muscular rays diminish in muscular atrophy, but not those from the nerves. In lead poisoning they will be found to vary with the degree of paralysis existing. In hysterical paralysis it is interesting to note that the affected muscles increase in radiant power, showing apparently increased innervation. Ballet hopes for excellent diagnostic results from the n rays in the near future.

2. **Tuberculosis.**—Letulle points out the danger and inconvenience to the Paris poor of the new law setting apart certain very necessary hospitals for the sole use of tuberculous patients, and urges that new buildings be provided for the latter outside the city limits.

March 19, 1904.

Respiratory Insufficiency; Its Treatment by Gymnastics and Respiratory Reeducation, By George Rosenthal.

Respiratory Insufficiency.—Rosenthal discusses the classes of patients who suffer from this insufficiency beginning with those troubled with adenoids, whom operation often cures immediately. Occasionally, however, the child develops well in every part of the body except the thorax, and the mouth breathing continues. In such cases, careful instruction in nasobilateral breathing should be given by the physician. There are cases of false adenoids, where mouth breathing is due to deformities of the nose or palate; education alone suffices for such. Lermoyez has reported cases where inability to breathe through the nose seemed to be a purely nervous phenomenon, and has cured these by instruction. Pseudohypertrophy of the heart (heart normal, but thorax too narrow) is rapidly cured by gymnastics. Deep breathing is valuable in many cases of anæmia and should be a routine procedure in all cases of convalescence from acute diseases. It is, of course, the specific in prevention of tuberculosis, and is beneficial in the early stages. Insufficiency of the diaphragm is not an uncommon condition, and is curable in the same way, while asthma and bronchitis are not likely to attack deep breathers. Pregnancy, gaseous distention of the abdomen, ascites, inflammation of the diaphragmatic peritonæum, all tend to produce respiratory insufficiency.

SEMAINE MEDICALE.

March 16, 1904.

Thyreoid Grafting in Man, By H. Cristiani.

Thyreoid Grafting.—Cristiani distinguishes between heterothyreoid and homothyreoid grafting in man as the tissue is supplied from a lower animal or from man. Neither form has produced very encouraging results, but Cristiani claims to have accomplished permanent union by following these three rules: The graft must be homothyreoid; only normal and living tissue must be used; the grafts must be small and numerous, and made in very vascular tissue. He admits that in his preliminary experiments his animals were healthy, and in man the operation is done on an invalid and normal thyreoid tissue, for the grafts are difficult to obtain, but when his rules were followed, subsequent histological examination of the grafts in his human subjects showed conclusively that perfect union and assimilation had taken place. Cristiani has found that thyreoid tissue may be preserved for nearly an hour in artificial serum, and he recommends that the tissue be finely divided with a sharp instrument, care being taken to avoid crushing, and, as it were, emulsified in the serum, and then introduced into the gland by a hollow needle and a syringe. A serious surgical operation is thus avoided and Cristiani believes we may yet consider this method superior to any form of thyreoid medication.

ZENTRALBLATT FUER GYNAEKOLOGIE.

March 19, 1904.

1. Manual Liberation of the Placenta Without Rubber Gloves, By F. Ahlfeld.
2. Bilateral Implantation of the Ureter Into the Bladder, By Kroenig.

1. **Manual Liberation of the Placenta.**—Ahl-

feld has been obliged to liberate the placenta manually fifty-three times in 6,800 births. Of these patients, five died, but none in consequence of the operation, the mortality of which was zero. Ahlfeld asserts that his statistics, therefore, are as valuable as those of operators who insist upon the use of gloves.

2. **Bilateral Ureteral Implantation.** — Kroenig has frequently, as have other operators, performed unilateral resection of the ureter with subsequent bladder anastomosis while doing an abdominal extirpation of the uterus for cancer. He records an instance in which he performed a bilateral implantation of the ureters into the bladder in a case in which he subsequently intended to do a hysterectomy. At the time of the first operation, the parametria were deeply involved. The plastic operation resulted well, but the case appeared later to be inoperable.

BERLINER KLINISCHE WOCHENSCHRIFT.

March 28, 1904.

1. Gonorrhœa in the Puerperium, By A. MARTIN.
2. Therapeutic Attempts with Aniline Dyes in Trypanosome Disease (*To be concluded*), By P. EHRLICH, and K. SHIGA.
3. Tremor Paralysis After Accidents (*To be concluded*), By K. RUHEMANN.
4. Moat Questions in Tuberculosis (*Concluded*), By J. ORTH.
5. Diagnosis of Gastric Cancer, By J. SIGEL.
6. The Fight Against Venereal Disease, By A. BLASCHHO.

1. **Gonorrhœa in the Puerperium.**—Martin reviews the general opinion as to the morbidity in the puerperium caused by gonorrhœa, and records thirteen cases of his own. Of these, eight had fever during the early, five during the later period of the puerperium. None of the patients aborted and the birth was normal in all the cases. The temperature was never high, and did not last long, and involution was not interferred with. Martin regards the prognosis of gonorrhœa as to pregnancy, labor, and puerperium as doubtful, but by no means positively bad. He does not treat the cases actively, and has achieved very good results by introducing sterile yeast into the urethra and the cervical canal. Martin advises great caution in the performance of radical operations in the presence of gonorrhœa.

5. **Diagnosis of Cancer of the Stomach.**—Sigel has used a number of the newer methods of diagnosticating cancer of the stomach, including the tryptophan reaction, Salomon's method of proteid determination, and the examination of the urine for fat acids. As to the first and last methods, the author sees no advantages in them. As to Salomon's method, Sigel says that in some cases ordinarily regarded as chronic gastritis, a diagnosis of cancer can be made, even when no palpable growth is present. In testing for the fat acids, the results were so varying that no reliance could be placed upon them as far as diagnosticating gastric cancer is concerned.

ROUSSKY VRATCH.

February 14, 1904.

1. The Fundamental Principles of Medical Thought and the Problems Confronting the Medical Societies of Russia, By A. D. PAVLOVSKY.
2. Individualization in the Study of the Laws of Growth of the Human Body, By A. K. KARNITSKY.
3. On Phagocytosis and Leucolysis After the Injection of Virulent Streptococci Into the Peritoneal Cavity, By F. V. BOUKOYEMSKY.
4. Thiocol and Sirolin in Tuberculosis, By A. B. KATCHKATCHEFF.
5. On Mineral Mud Baths in the Caucasus (*To be concluded*), By G. A. PARYSHEFF.

1 **Function of Medical Societies.**—Pavlovsky pleads for a greater activity of medical societies in furthering the prevention of disease, and in the promotion of the study of the epidemic and endemic maladies. There are a number of diseases of infectious character which prevail among the Russian people and which are still but very little known, such as pellagra, etc. There are also nervous and mental diseases among the people which are very peculiar in their forms and have been studied but little. The medical societies should organize expeditions into various parts of the country to study disease systematically, just as botanists, zoologists, etc., study the local flora and fauna of a region. Traveling hospitals with special equipment and with a staff of ophthalmologists, laryngologists, etc., should be sent into the rural districts where there is not sufficient medical assistance.

2. **Laws of Growth of the Human Body.**—Karnitsky says that the statistical method of studying the laws of the normal growth and development of the human body leads to wrong conclusions. For a number of years he weighed and measured his own five children at frequent intervals and found that the first condition in the study of the laws of growth is individualism, in the sense that in each case the exact circumstances under which growth takes place should be considered. Observations upon the weight and measurement of a large number of children taken indiscriminately among the inmates of institutions, etc., are not of such value as the study of a number of perfectly healthy children who are growing under the same conditions. It is very difficult to find such a group of children, but the laws of growth among such a group, as deduced from daily observations for a number of years, would be of great scientific and practical value. The laws of growth during the nursing period have been fairly well worked out, but the statistical data from individual observations are very scanty regarding the growth of older children. Hansen attempted to prove that there was a certain periodicity in the weight of children. He asserts that there is a periodic variation in the weight each week, depending upon the differences in the appetite which are said to recur every seven days. He also found periodic variations every twenty-six days, which he thought depended upon variations of the sun's heat and finally periodic changes in the weight every seventy-two days, also de-

pendent upon the intensity of the solar heat. Hansen also evolved a beautiful theory that the variations in weight are dependent upon variations in the amount of a new force which he called the "energy of growth." He goes so far as to assume that this energy partakes of the properties of the ether and vibrates parallel to the ether waves, varying with the variations of solar heat. Another hypothesis of Hansen is that the "growth of energy" is derived directly from the sun and is contained in solar heat, or accompanies the latter, varying in direct proportion with it; that it reaches the earth with the same velocity as the solar rays, and on reaching the earth separates from heat and is taken up by all the growing organisms. Every living organism exhibits, therefore, harmonic variations in growth. This attractive theory is based, however, upon very insufficient data, obtained by the statistical method which generalizes from data obtained with the greatest variety of conditions of growth in development.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

March 6, 1904.

1. A Case of Hepatic Lumbricosis, By F. SCHUPFER.
2. Infantilism, By AGOSTINO BRUNO.
3. Concerning Urophanic Substances, By S. CERAULO.
4. A Case of Severe Snake Poisoning Cured with Potassium Permanganate, By ANTONIO MORI.
5. Primary Tuberculosis of the Ovary, By GUIDO SENNI.

1. **Hepatic Lumbricosis.**—Schupfer reports a case in which the autopsy showed ascarides in the gallbladder and in a number of dilated biliary ducts in the liver. The gallbladder was full of bile, and contained, in addition to one worm, two calculi, consisting chiefly of cholesterin. The common duct and the other bile ducts were very much dilated. The patient had been suffering from epileptic attacks, had become very much emaciated, but showed no jaundice. The patient was admitted in a state of semiconsciousness and great agitation. There was no fever until the last few days, when there was a slight remittent temperature. The case shows among other things that the dilatation of the bile passages may be greater than is required by the size of the ascarides, and that, therefore, the presence of these worms in the liver and biliary passages may not be followed by jaundice from obstruction.

4. **Case of Snake Bite Treated with Potassium Permanganate.**—Mori relates a case of snake bite in a boy fourteen years of age, in which he used potassium permanganate with excellent results. This case is rather interesting, because the value of this method of treatment has been questioned very seriously of late. Immediately after the bite the patient was seized with nausea, vomiting, prostration, chills, and vertigo. The eyelids became heavy, the vision clouded, and the patient lost consciousness. The wound was almost immediately incised, disinfected, and a ligature placed above it to prevent the entrance of the poison into the circulation. On admission, there was complete ptosis and the mydriatic pupil did not react to light. All the signs pointed to a very intense snake bite poisoning. Two injections of a one per cent. solution of potassium permanganate were made in the region of the wound, and a third into the median cephalic vein. Injections of camphor were also given every four hours. On the following day the symptoms began to recede gradually, and the patient made an uninterrupted recovery. The action of potassium permanganate in these cases is probably due to its oxidizing properties, as well as to its antiseptic effects. It is analogous to the effect obtained in morphine poisoning by Moor, for morphine produces symptoms which are very similar to snake poisoning. It is probable that the permanganate enters the circulation and liberates enough oxygen to neutralize the injurious action of the snake poison upon the blood cells and the respiratory centre.

March 13, 1904.

1. Observations on the Duration of the Period of Tension in Patients with Heart Disease, By E. BELLIBONI, and F. SOPRANA.
2. On the Value of Ficker's Method of Diagnosis in Typhoid Fever, By L. DATTA.
3. Gastric Dyspepsia in Malaria, By DE BLASI.
4. Spontaneous Rupture of the Walls of a Ventral Hernia with Prolapse of the Intestines, By T. POZZAN.
5. Abscess in the Iliac Fossa After Typhoid Fever; Trephining of the Ilium; Recovery, By G. BECHI.

1. **The Period of Tension in Heart Disease.**—Belliboni and Soprana conclude from a study of the pulse curves and the tension curves of patients with heart disease that the period of tension becomes shorter as the energy of the heart beat increases. The "period of tension" or the "latent systole" are terms introduced in 1863, by Chauveaux and Marey, who find that the systole begins a little while before aortic pressure rises. The interval between the beginning of the systole and the rise of pressure is the "period of tension." When a patient with heart disease improves, the period of tension diminishes, while a weakening of the heart's action corresponds to a lengthening of this period.

2. **Ficker's Reaction in Typhoid.**—Datta found that the reaction of typhoid serum effected by Ficker's method gave exactly parallel results to those obtained by the Widal-Gruber method. Ficker's method, which has been repeatedly mentioned in these columns, is based upon the fact that dead typhoid bacilli become agglutinated by the serum of typhoid patients. Ficker prepares a liquid, consisting of a culture of typhoid germs, in which the organisms are killed and preserved. This obviates the use of fresh cultures, of the microscope, etc. In the 12 cases examined by the author, the reaction was tried by both the methods of Ficker and of Widal, and whenever the reaction could not be obtained by one method it was absent when the other was applied. The author concludes that the Ficker method is of great value on account of its simplicity, its only disadvantage being that it requires a longer time than the Widal method (ten to twenty hours).

3. **Dyspepsia as a Complication of Malaria.**—De Blasi emphasizes the fact that dyspeptic symptoms are very common in malarial patients. The observation of numerous cases of malaria in a region where this disease is prevalent showed him that there were three distinct forms of dyspeptic affections complicating malarial fever: (1)

A gastralgic form. (2) A form characterized by a sense of swelling in the epigastrium after meals. (3) A form characterized by excessive appetite and absence of all other gastric symptoms. The exact relationship between malaria and dyspepsia cannot be determined from our present knowledge, but the author calls attention in this connection to the fact that the gastric juice is less active in animals deprived of spleen. The abnormal appetite of patients with the third form of malarial dyspepsia who show deep changes in the spleen may be analogous to the voracity seen in animals deprived of the spleen, or in man after splenectomy. It is possible that the diminution of hydrochloric acid in patients with the second type of dyspepsia is connected with their splenic tumor, for some observers have found a marked diminution of HCl in the gastric juice of animals deprived of the spleen. The present state of our knowledge cannot definitely answer these questions, but two factors which are commonly present in chronic malarial infection must aid in the causation of malarial dyspepsia, namely, anæmia and the congestion of the internal organs.

5. **Abscess in the Iliac Fossa Cured by Trephining.**—Bechi reports the case of a young man, twenty years of age, who developed an abscess in the iliac fossa after typhoid fever. The chief symptoms were pain localized in the infected region and an evening rise of temperature. The thigh was flexed and rotated outward on the affected side, and the movements of the limb were incomplete and painful. A tumor, the size of a hen's egg, could be felt in the iliac fossa. An incision was made parallel to the fibres of the gluteus from the iliac crest to the great trochanter, passing through the centre of a line uniting the two iliac spines. The muscles were incised down to the bone, the periosteum was raised, and a small opening drilled into the bone. The abscess was incised in the iliac region of the abdomen and evacuated. Drainage was established through the abdominal opening and through the aperture in the ilium. The patient made an uneventful recovery with perfect healing of the wounds within three weeks.

BOSTON MEDICAL AND SURGICAL JOURNAL.

April 28, 1904.

1. Herter Lectures, by Professor PAUL EHRLICH. Lecture I, Mutual Relations between Toxine and Antitoxine. Abstract. Lecture II, Physical Chemistry *v.* Biology in Doctrines of Immunity. Abstract. Lecture III, Cytotoxines and Cytoxic Immunity. Abstract.
2. Treatment of Prostatic Hypertrophy, Surgical Anatomy of Prostate, by L. R. G. CRANDON. Gross Pathology and Mechanism of Prostatic Obstruction, by ARTHUR L. CHUTE. Choice of Operation for Prostatic Hypertrophy, by F. S. WATSON. Results of Operations Upon Prostate, Massachusetts General Hospital, from January 1, 1892, to July 1, 1893, by HUGH CABOT. Use of Cystoscope in Determining what Operation is Advisable in Prostatic Hypertrophy, by F. C. BALCH. A Brief Résumé of Present Status of Treatment of Enlarged Prostate, by ARTHUR TRACY CABOT. Prostatectomy; Spinal Anæsthesia, by F. B. LUND.

1. **Herter Lectures.**—The three lectures were delivered by Ehrlich before the Medical Department of Johns Hopkins University on April 12, 13, 14, 1904. The abstracts presented cover about eight pages, and yet are nothing more than the barest outline of the lectures themselves. Those wishing to get an adequate idea of Ehrlich's views will have to consult the original lectures rather than these abstracts.

2. **Treatment of Prostatic Hypertrophy.**—The title indicates the scope of the paper and shows how inadequate an abstract would be. The individual papers, while all short, cover the ground quite thoroughly.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

April 30, 1904.

1. Cæsarean Section for Placenta Prævia, By JOHN B. DEAVER.
2. Surgical Observations in the Philippines, By J. M. BANISTER.
3. A Clinical Study of the *Bacillus Dysenteriæ* in Boston and Vicinity, By ROBERT W. HASTINGS.
4. The Panama Canal and Oral Hygiene, By EUGENE S. TALBOT.
5. Routine Method of Detecting and Differentiating Reducing Agents Found in the Urine, By W. G. DOERN.
6. A Case of Circular Insanity Studied from Clinical, Differential and Forensic Standpoints, By RICHARD DEWEY.
7. A Case of Parasitic Hæmoptysis or Infection with the *Distoma Westermanii*, By A. D. MACKENZIE.
8. Illegitimacy an Economic Problem, By JAMES E. DAVIS.
9. Enormous Mixed Tumor of the Parotid Region Reaching to the Clavicle and Weighing About Seven Pounds; Operation; Recovery, By W. W. KEEN.

1. **Placenta Prævia.**—Deaver reports one case of placenta prævia treated by Cæsarean section. Both mother and child lived. He reviews the mortality statistics of placenta prævia and shows that if we argued by analogy only, we should be justified in expecting a smaller mortality in cases treated by Cæsarean section than in those treated either by packing or by version. The results of Cæsarean section for placenta prævia so far reported are, however, not very encouraging. They show a considerably increased mortality for the mother, and not a materially decreased death rate for the fœtus, as compared with those of the older methods. A review of all the statistics at hand would seem to show that Cæsarean section for this condition should be resorted to only in special cases.

2. **Surgery in the Philippines.**—Banister reports the outcome of 428 operations performed in Manila. He concludes, from his experience, that the results of operative intervention obtained in the Philippines are as good as those of other localities. This is contrary to general belief. The danger from infection is not materially greater. Air infection with the tetanus bacillus is possible, but with proper precautions not probable.

5. **Reducing Agents Found in the Urine.**—Doern discusses the various tests for sugar in the urine and points out the most usual sources of error. He closes his paper with the following conclusions: (1) The copper and bismuth tests are reliable negative tests, but a positive reaction must be confirmed.

(2) Trommer's test is not always reliable. (3) Fehling's solution is not permanent. (4) Haines's solution is the most convenient of all copper solutions, and is reliable if properly employed. (5) Bismuth solutions are not reduced by the alkaptons, and serve to differentiate them from other reducing agents. (6) The fermentation test is in itself not characteristic, nor is it very delicate, but it serves to differentiate lactose, glycuronic acid, hippuric acid, the alkaptons and the pentoses, which do not ferment, from lævulose and dextrose. (7) If the completely fermented urine should still reduce the copper solution, it indicates the presence of glycuronic acid or alkaptons. (8) The phenylhydrazin test is good, but the technics is complicated. (9) Pentoses may be recognized by the orcin test. (10) Alkaptons are recognized by the characteristic ozonized alkali test. (11) Finally, we can differentiate dextrose from lævulose by a polariscopic examination.

7. **Distoma Westermanii.** — Mackenzie reports the case of a Japanese man who suffered from hæmoptysis and other symptoms which suggested pulmonary tuberculosis. Examinations of the sputum for the tubercle bacillus always resulted negatively. The ova of the distoma were finally found in the sputum and their nature was confirmed by Stiles, of Washington. This case is the first case of parasitic hæmoptysis observed in this country.

MEDICAL RECORD.

April 30, 1904.

1. Some Observations on the Surgery of the Common Duct of the Liver, By William J. Mayo.
2. Appendicitis in Children, By John W. Brannan.
3. Uric Acid and Its Relation to the Clinical Manifestatons of Gout and Lithæmia, By Egbert Le Fevre.
4. Insufficientia Pylori, By Mark I. Knapp.
5. Hæmorrhage After Amygdalotomy; Its General Consideration, By H. Jarecky.

1. **Surgery of the Common Duct.**—Mayo bases his remarks on the study of 107 operations upon the common duct, performed either by himself or by his brother, Charles H. Mayo. He describes the indications and the technics of the following operations: Cholecystectomy; cholecystostomy; hepatic drainage (opening of the common duct and introduction of a tube drain into the hepatic duct); choledochotomy, and cholecystenterostomy. Many collateral points are covered. The paper is thoroughly practical and little or no space is devoted to purely theoretical points.

2. **Appendicitis in Children.**—Brannan reports the case of a boy, aged six years, who came under his care with rather vague symptoms of intestinal disturbance. Three days later a diagnosis of generalized peritonitis was made and the appendix was suspected of being the site of the causative lesion. Operation was advised and accepted. It disclosed a ruptured and suppurating appendix and a generalized peritonitis. The patient died about one week later, after a second operation, undertaken for the relief of intestinal obstruction. This case made such a profound impression upon the author that he looked up the literature of appendicitis in children. It is scant and unsatisfactory. In general it may be said that appendicitis in children is rare; that it has not well defined symptoms and that the mortality is higher than in the case of adults. Surgical advice should be sought as soon as the diagnosis is made.

3. **Uric Acid.**—Le Fevre discusses some of the old, as well as some of the new, theories of the origin and significance of uric acid in gout and lithæmia. Personally, he seems to hold to the view that uric acid is derived from the nuclei of the tissue cells which, through decomposition, are split up into albumin, nuclein, nucleinic acid and the xanthin bases. The uric acid in the body, or rather the precursors of uric acid, may be derived either from the ingested food (exogenous uric acid) or from the tissue cells (endogenous uric acid). Gout and lithæmia are related forms of faulty metabolism in which there is a lack of balance between uric acid production and elimination. What this faulty metabolism is due to is a mystery. Treatment resolves itself to limiting the ingestion of nucleoproteids and so controlling the production of exogenous uric acid and to attempting, by means of hygienic measures, to overcome the vice of metabolism that leads to the production of endogenous uric acid.

4. **Insufficientia Pylori.**—Knapp's paper appeared in the *Journal of the American Medical Association*, April 16th, and was abstracted in our issue of April 23rd.

5. **Hæmorrhage After Amygdalotomy.**—Jarecky concludes his paper with the following summary: (1) Troublesome hæmorrhages occur in children. (2) They happen very frequently in adults, in proportion to the number operated upon. (3) In case of bleeding, use a good light and clean the parts to ascertain the cause. (4) Anæsthetize or use morphine, if necessary, to quiet the patient. (5) Never operate without being prepared to cope with a hæmorrhage.

MEDICAL NEWS.

April 30, 1904.

1. The Symptomatology, Differential Diagnosis, and Course of Bronchopneumonia in Children, By Matthias Nicoll, Jr.
2. The Pathology of Lobar and Bronchopneumonia in Infants and Children, By David Bovaird, Jr.
3. Treatment of Bronchopneumonia in Children, By W. P. Northrup.
4. The Behavior of the Costal Arch in Diseases of the Abdominal Organs and Its Importance as a Diagnostic Symptom, By Ellsworth Eliot, Jr.
5. A New Method for Transillumination of the Stomach by Means of Fluorescent Media: The Value of Fluorescin, with a Research Into Its Properties, By Robert Coleman Kemp.
6. The Scope of Physical Economics: An Inquiry Into the Possibilities of Enhancing Human Efficiency Through Physical Education, By J. Madison Taylor.

1. **Bronchopneumonia.**—Nicoll bases his remarks on a study of 167 cases. He brings out two facts prominently: 1. Bronchopneumonia is essentially a secondary or complicating disease. 2. It may readily be overlooked unless we always bear in mind that its symptoms and physical signs are often indefinite.

2. **Bronchopneumonia.** *Treatment.* — Northrup summarizes his advice thus: "*How to cure a baby with bronchopneumonia.*—(1) Castor oil to clear the field of operation. It is the first aid to the injured. (2) Fresh air, cool and flowing. It reddens the blood, stimulates the heart, improves digestion, quiets restlessness, aids against toxæmia. Regulate the temperature of air of the room inversely to that of the child. The patient's feet must always be warm, and the head cool. (3) Water, plenty, inside and outside. Temperature of the water as indicated by child's temperature. (4) Quiet and rest. Tranquillizing influences about patient. Undisturbed sleep. (5) Correct feedings to avoid fermentation and gas in abdomen. If there is need, high hot salines. (6) Antipyretics. Water. No coal-tar products. (7) Heart stimulants. Fresh air, hot foot-baths. Relieving tympanites and crowding. Hot foot-baths and hot salines can be given in a cold room. Both can be given under the bedclothes. *Drugs.*—Whisky and strychnine. *How to Kill a Baby with Pneumonia.*—Crib in far corner of room with canopy over it. Steam kettle; gas stove (leaky tubing). Room at 80° F. Many gas jets burning. Friends in the room, also the pug dog. Chest tightly enveloped in waistcoat poultice. If child's temperature is 105° F. make a poultice thick, hot and tight. Blanket the windows, shut the doors. If these do not do it, give coal-tar antipyretics and wait."

4. **The Costal Arch.**—Eliot reports twenty-three cases in order to illustrate the importance of examining the behavior of the costal arch in diseases of the abdominal organs. His paper ends with half a page of conclusions. The symptom he calls attention to is an increased resistance offered by the costal arch to palpation when there is either acute or chronic inflammation within the abdomen. The presence of this symptom not only serves to call attention to the presence of disease, but serves also as a valuable indication for the proper location of the incision to be used in opening the abdomen.

5. **Transillumination of the Stomach.**—Kemp has from time to time published some notes on the subject of the present paper. He now gives for the first time a complete description of his experiments in this field of research. The object of the experiments was to find the best harmless substance which could be introduced in solution into the stomach and which would increase the power of the electric light used for transillumination. Three substances have this power: *(a)* Quinine; *(b)* æsculin, a bitter principle obtained from the horse-chestnut bark; *(c)* fluorescin. The last of these substances is the most efficient. It is best used in a quarter grain dose dissolved in a pint of water, to which 30 grains of sodium bicarbonate have been added.

AMERICAN MEDICINE.

April 30, 1904.

1. Surgery of Urinary Tuberculosis in Women, By GUY L. HUNNER.
2. Pervigilium, or Long Periods of Physiologic Wakefulness, By GEORGE M. GOULD.
3. Family Periodic Paralysis, By GEORGE E. HOLTZAPPLE.
4. Some Pulmonary Lesions Produced by the Bacillus of Hæmorrhagic Septicæmia of Carabaos, By PAUL G. WOOLLEY.
5. Temporary Sutures for Hæmostasis, By WILLIAM C. WOOD.
6. A Plea for the Meatus, By A. NELKEN.
7. Medicine an Exact Science: Query, By JOSEPH CLEMENTS.

1. **Urinary Tuberculosis.**—Hunner, in a former paper, reported 35 cases of tuberculosis of the urinary system in women. In that paper he devoted himself specially to the question of diagnosis. He now reports the surgical technics that was developed in the treatment of these cases and gives a review of the results obtained by the operative intervention. The author's views are thus summarized: "Tuberculosis of the urinary system is a surgical disease, being, as a rule, unilateral, and often the only focus of tuberculosis in the body. If the disease is bilateral and there are no pronounced symptoms referable to the kidneys, the treatment should be that usually accorded tuberculosis of the lungs, viz., suitable climate, nutritious diet, and proper regulation of the patient's rest and exercise; but if one or both sides begin to cause marked local or general manifestations, surgical intervention is often of great benefit. In case of bilateral disease, or in associated disease of the lung, the anæsthetic is of great importance. Local cocaine anæsthesia may be used for nephrotomy, and nitrous oxide gas for nephrotomy, nephrectomy, or nephroureterectomy. Thickened ureters are generally tuberculous, and should be removed with the kidney if the patient's condition justifies. Bladder disease in these cases is often non-tuberculous, and removal of the diseased area should not be attempted at the first operation. If the bladder fails to heal within a year under ordinary methods of cystitis treatment, the disease is probably tuberculous, and if not occupying more than half of the bladder, it should be excised."

2. **Physiological Wakefulness.**—Gould has collected a number of letters from various physicians relating to their personal experience with physiological sleeplessness. Dr. Rodman, on one occasion, went without sleep for eight days and nights. On another occasion for five days and nights. Dr. Greenley went for eighteen days and nights without going to bed, getting all the sleep he did while on horse-back. Dr. Matas once went for fifteen days and nights without sleep. This, however, permanently injured his health.

3. **Family Periodic Paralysis.**—Holtzapple had a family under his observation, for over twenty years, in which 16 members were subject to attacks of periodic paralysis. A number of these patients died during one of their attacks. The histories of fifteen of the cases are reported. The pathology of this condition is unknown.

6. **A Plea for the Meatus.**—Nelken asserts that meatotomy is not needed so frequently as is supposed, and that unless the operation is absolutely indicated it should not be resorted to. The objections to a split meatus are: (1) The fan-shaped spraying stream, which results from the mutilation, and which is an annoyance to the victim. (2) Reduction in the pleasurable sensation to be derived from sexual intercourse. (3) Greater liability to infection from impure intercourse.

BRITISH MEDICAL JOURNAL.

April 16, 1904.

1. Remarks on the Treatment of Retroversion of the Gravid Uterus, By G. E. HERMAN.
2. Extrauterine Pregnancy, By A. E. HIND.
3. Treatment of a Case of Depressed Fracture of the Skull Caused During Birth, By A. B. ROSS.
4. The Glycogen Reaction in Blood: Its Pathological and Diagnostic Import, By G. L. GULLAND.
5. Observations on Some Tests for Albumin in Urine, By C. MURRAY.
6. An Inquiry Into the Primary Seat of Infection in 500 Cases of Death from Tuberculosis, By J. O. SYMES, and T. FISHER.
7. Two Cases of Primary Malignant Disease of the Pancreas, By J. STEWART.
8. Some Unusual Conditions in Gallbladder Surgery, By E. S. BISHOP.
9. A Case of Head Encephalopathy, By W. R. JODD.
10. Trypanosomiasis and Morbus Dormitiva, By A. M. ADAMS.
11. On the Proposed Medical Acts Amendment Bill, By J. P. WILLIAMS-FREEMAN.
12. Consultations Between Medical Witnesses, By W. J. GREER.

1. **Retroversion in Pregnancy.**—Hyman states that retroversion of the gravid uterus needs treatment because it causes retention of urine. Exfoliative cystitis is set up, leading to extension of the inflammation from the bladder to the kidneys, " surgical kidney," and death. The bladder may give way and extravasation of urine take place, or peritonitis be set up. The alleged danger of gangrene of the retroverted pregnant uterus itself is, however, a mere figment. There is little danger of abortion, as by the time the uterus is incarcerated under the sacral promontory, it is too late. The one danger is the bladder. If the catheter is used in time, the bladder kept empty, and the patient recumbent, the uterus will right itself in over 90 per cent. of cases. In a few cases spontaneous reposition does not take place, and the uterus must be pushed up. The author has never seen a case where this could not be done. The best way is with two fingers in the rectum, the patient under anæsthesia, the bladder being empty. All that is necessary is to push the fundus up. There is no reason for performing abdominal section, and it is not free from risk.

4. **Glycogen Reaction.**—Gulland describes the glycogen reaction occurring in the blood in certain diseases. When a film is stained with a solution of iodine and potassium iodide if glycogen is present the multinuclear leucocytes will show a brown or reddish brown coloration, either diffusely, as fine granules, or as coarse granules near the periphery of the cell. The general conditions under which the reaction occurs are four in number: 1. Severe disturbances of respiration. 2. Anæmia. 3. Toxæmias of metabolic origin. 4. Suppuration and bacterial infection. Clinically the following are the chief conditions in which the reaction is constant. *(a)* Croupous pneumonia. Here it is early and intense. *(b)* Bronchopneumonia. Not so well marked, but often present. *(c)* Empyema. Well marked as contrasted with serous effusion or dry pleurisy, where it is absent. *(d)* Abscess and gangrene of the lung show a positive reaction unless there is free drainage. *(e)* Septicæmias and pyæmias of all kinds. *(f)* All advancing suppurative processes. *(g)* Septic gangrene of all kinds. *(h)* Appendicitis and peritonitis. The relation of the reaction to leucocytosis is that while many of the causes which produce the reaction also cause leucocytosis, there is no necessary connection between the two. Frequently in leucocytosis producing diseases the infection is either so slight or so severe that the leucocytes do not rise, though the glycogen reaction is positive, and in the latter case very intense. The relation between the reaction and a high relative proportion of multinuclear leucocytes is, however, close. The reaction is not a degenerative change, but is probably associated in some way with the resistance of the organism to poisons.

5. **Albumin Tests.**—Murray calls attention to the fallacies of the heat and acidulation test for albumin in urine. If too little or too much nitric acid be used the presence of albumin may fail to be detected. Weak acetic acid is the best acidulating medium. The author prefers the salicylsulphonic acid test. A few drops of a saturated aqueous solution of salicylsulphonic acid is added to a small amount of urine in a small test tube. If no precipitate occurs there is no proteid present. If there is a precipitate the tube is boiled to distinguish albumin, which does not clear up on heating, but becomes coagulated.

6. **Seat of Tuberculous Infection.**—Symes and Fisher, from a study of the primary fatal cases of tuberculosis, reach the following conclusions: If local foci of disease are taken as evidence of primary disease in the neighborhood of the foci, their statistics tend to show that during the first twelve years of life tuberculous infection by the air passages is four times as common as by the alimentary canal. The comparative frequency of infection through the alimentary canal during the second twelve years is equally common. The proportion of abdominal thoracic tuberculosis is very small after the age of twenty-four years.

10. **Sleeping Sickness.**—Adams discusses the relations of trypanosomiasis and sleeping sickness (morbus dormitiva) and calls attention to the clinical resemblances between the two diseases. The elucidation of the complete cycle of the life history of the trypanosome is necessary to the complete proof of its relation to sleeping sickness. The author suggests that the rat is the vehicle of infection and the animal in which the complete sexual life of the parasite is reached.

LANCET.

April 16, 1904.

1. The Neurology of Vision. (Arris and Gale Lecture), By J. H. PARSONS.
2. Fractures of the Skull. (Hunterian Lectures: II). By L. B. RAWLING.
3. A Chronic Neurosis Characterized by Frequent Paroxysms of Pain, Swelling, and Hæmorrhage in Various

Parts of the Body; Death from Acute Pulmonary Tuberculosis, By T. K. MONRO, and A. N. MCGREGOR.
4. Brachial Neuritis, By C. W. BUCKLEY.
5. Intracranial Resection of the Second Division of the Fifth Nerve for Epileptiform Neuralgia, By J. HUTCHINSON, JR.
6. Notes on a Case of Myelopathic Albumosuria, By R. C. BRUCE, K. F. LUND, and P. P. WHITCOMBE.
7. On the Treatment of Cancer with Radium Bromide, By H. G. PLUMMER.
8. The Site of Referred Pain in Visceral Disease from an Embryological Standpoint, By W. M. WILLOUGHBY.
9. On So Called Intrauterine Cretinism and Its Supposed Identity with Endemic and Sporadic Cretinism, By H. BAYON.

2. **Fracture of the Skull.**—Rawling, in his second Hunterian lecture, classifies the various hæmorrhages that may result from skull fractures as external and internal. 1. External. The great majority of fractures of the skull involving the middle fossa of the base are accompanied by hæmorrhage from the ear. The blood comes from the anterior and upper region of the tympanum—from the torn tympanic vessels which, supplying the mucous lining and bony walls of the middle ear, lie in the path of the fracture. Hæmorrhage from the middle meningeal artery is much more common than is generally supposed, the slighter forms yielding no clinical symptoms, the blood being forced into the middle ear through the fissures running across the tegmen tympani. Profuse and continuous hæmorrhage from the ear is suggestive of an extradural hæmorrhage, and when the general symptoms are grave trephining is often advisable. Hæmorrhage from both ears is usually due to a bilateral compression and fracture. Hæmorrhage into the nose or nasopharynx is a constant symptom in fracture of the base of the skull. Most anterior fossa fractures traverse the cribriform plate of the ethmoid, a fairly free hæmorrhage resulting from laceration of the ethmoidal arteries. In fractures of the middle fossa the sphenoid is injured with resulting hæmorrhage. Hæmorrhage into the orbital regions produces paralysis of the muscles, subconjunctival, palpebral, and circumpalpebral hæmorrhage, and proptosis. In marked cases the extravasation may completely obliterate the field of vision. In "orbital aneurysm" a pulsating tumor appears in the orbit, the globe being pushed aside. In some cases the eye is actually pushed out on the cheek. Ligature of the common carotid, if tried early enough, is almost certain to effect a cure. 2. Internal. *(a)* Extradural hæmorrhage. This may be arterial or venous. Arterial hæmorrhage is derived almost exclusively from the middle meningeal artery. A purely venous hæmorrhage is seen in fractures of the posterior fossa where the lateral sinus is torn. The symptoms suggestive of tear of the middle meningeal artery are: (1) A temporal hæmatoma; (2) a copious and continued hæmorrhage from the ear; (3) muscular twitching on the opposite side of the body; (4) a brief lucid interval between the stages of concussion and collapse; and (5) "constricted" pupil on the affected side. Trephining is the treatment indicated, and the earlier the better. Of 110 cases operated on, the mortality was 27 per cent. The internal carotid artery is liable to injury in fractures of the middle fossa. Hæmorrhage into the subarachmoid and subpial regions occurs in most cases of severe head injury. Hæmorrhage into the lateral, third, and fourth ventricles is only seen in the most severe cases, and death usually results early. The symptoms are those of apoplexy. The escape of cerebrospinal fluid from the nose and ear is not so common as is generally thought. Cerebrospinal fluid can be readily identified by the fact that it contains a reducing substance allied to pyrocatechin. The flow usually begins early, is colorless and profuse, and lasts for some days. The discharge of cerebrospinal fluid does not materially influence the prognosis.

3. **A Chronic Neurosis.**—Monro and McGregor report the remarkable case of a man aged twenty-eight years, who suffered from a neurosis allied on the one hand to angeioneurotic œdema and on the other to the purpuric type of erythema. The joints suddenly became swollen and painful, and as the pain subsided, discoloration appeared. Later on the lesions appeared in and on the soft parts—the skin over the muscles, the pharynx, etc. Eventually the patient developed acute pulmonary tuberculosis from which he died. At the necropsy the changes in the spinal cord were few and slight. The father of the patient was an epileptic, but there was not history of hæmophilia.

4. **Brachial Neuritis.**—Buckley summarizes the symptoms of brachial neuritis as pain, varying in degree, but often very severe; tenderness of the affected nerve trunks; weakness of certain muscles and limitation of movement; trophic changes, rarely severe; and sensory changes, such as anæsthesia and hyperæsthesia. Apart from injury gout is the most prominent ætiological factor. The duration is never less than three or four months, and it may last a year or more. Rest in bed is indicated with purgation and treatment of the general condition. The coal tar products are more useful than opium in relieving the pain. Hot applications are sometimes useful. Treatment for gout is often of great service. Massage must never be used as long as acute inflammation exists.

7. **Radium in Cancer.**—Plummer reports seven cases of cancer treated by exposure to radium bromide. The effects in all the cases were negative, either no change or an increase in the size of the nodules.

8. **Referred Pain.**—Willoughby advances the following hypothesis regarding the site of referred pain in visceral disease: 1. That viscera lateral in origin and development, if they give rise to pain or hyperæsthesia at all, refer this to their own side of the body wall. 2. That viscera bilateral in origin, but asymmetrically developed, refer their pains and hyperæsthesias predominantly to that side of the body from which the predominant element, be it right or left, is derived. 3. That viscera median in origin give rise to pains and hyperæsthesias on both sides of the midline in states affecting both sides of the viscus, or if affected on one side on that side, near the midline, to which the half of the viscus in which

the lesion is situated originally belonged. 4. That viscera lateral and bilateral in origin and developing symmetrically give rise to pain on either or both sides, according to the situation of the lesion. Viscera illustrating these origins are: (1) ureters, ovaries, testicles, etc.; (2) ascending aorta and heart; (3) trachea, œsophagus, intestine; (4) uterus.

Letters to the Editor.

THE ULTRAVIOLET RAYS.

New York, *April* 26, 1904.

To the Editor,

Sir: I have read Dr. Rosenberg's interesting article on Phototherapy in your issue of April 23rd. The ultraviolet rays are exceedingly valuable in their own special field, and I make frequent use of them; but I am unwilling to credit them with the results obtained by Dr. Rosenberg. First, because the apparatus as described by him does not gave a maximum of ultraviolet, and, second, because he is entirely in error in stating that " the investigations of Finsen and his assistants have proved the unusual penetrating power and bactericidal action of these rays." The ultraviolet rays are notably *non-penetrating*, and their direct action is extremely superficial. Give credit where it is due, and in this instance it is due, I believe, to the luminous rays and not to the ultraviolet. It is the visible rays of longer wavelengths that have the greater penetrating power. In fact, their penetrability for tissue appears to vary in direct ratio to their wave-length, except, of course, those particular wave-lengths that are absorbed by the blood (hæmoglobin spectrum). " Glass absorbs ultraviolet light powerfully, but epidermis absorbs it vastly more. . . . A human ear compressed between quartz plates absorbed isolated ultraviolet light completely" (Strebel quoted by Freund). If Dr. R. desires to ascertain the comparative richness in ultraviolet of the apparatus employed by him, let him test the rays with proper calcites from New Jersey or Sweden; or, better yet, with the electroscope. In conclusion, permit me to advise all who employ or propose to employ phototherapy to read the masterly article on the subject contained in Freund's *Elements of General Radiotherapy*.

Henry G. Piffard.

THE RELATION OF THE ANÆSTHETIST TO THE PATIENT AND TO THE SURGEON.

New York, *April* 7, 1904.

To the Editor,

Sir: In view of the notice which you have already taken of this subject and of the importance which the *Lancet* attaches to it in its editorial of November 21, 1903, in which it expresses certain views by way of reply and criticism of my paper read before the Medical Society of the Greater City of New York on June 8, 1903, and published in the *New York Medical Journal and Philadelphia Medical Journal*, Consolidated, for August 22, 1903, I trust you will permit me the use of your columns for the purpose of dealing with the misconception of the *Lancet* in regard to the principle upon which I base my contention in the matter.

The *Lancet* remarks: " It is in the matter of fee, we think, that Dr. Goldan makes out a strong case for his specialist colleagues." In this the *Lancet* is fundamentally and seriously mistaken. It is not, and has never been with me, a question of fee principally, but one of *status*—as a principle, the admission of the anæsthetist to equal professional rights and privileges with the surgeon and the physician. It is for this perfect equality that I have so long fought, it is to this end that I have consecrated my time and labor in order to qualify myself as an expert in this branch of medicine, for I have always realized as fully as the *Lancet* realizes that this matter is " of importance to the whole medical profession and to the public;" that the prevailing custom and practice as to anæsthetization, " constitutes a public danger," and that " enlightened professional opinion and common sense" imperatively demand an immediate and complete abandonment of this custom and practice and the adoption of one more consistent with civilization, the real interests of the profession, and the public welfare.

I say again, and emphatically, that my object and purpose have always been to secure for the anæsthetist equal recognition and freedom, which alone are consistent with the moral and essential considerations that are the controlling factors in the question. To effect this a revolution is necessary, the absolute relegation to the limbo of the past of the employment of hospital nurses, students, and, in fact, any inexperienced or untrained and therefore incompetent person who happens to be at hand, and the adoption of the very opposite course—namely, the strict and religious limitation of such services to a class of practitioners who shall have duly qualified themselves therefor by a regular course of study and practice in which anæsthetics and their use shall be included as an essential feature in medical and surgical training.

It is obvious that the moment this is done instant *status* is established—that is to say, the duly qualified anæsthetist becomes at once the professional equal of the physician and surgeon in all cases, so that the intervention of an intermediary between the patient and the anæsthetist will be for the purpose of determining the latter's fee, or indeed for any other purpose, quite unnecessary, in fact, impossible, without his consent; as impossible as it would be similarly as between the patient and his physician or surgeon. In other words, the anæsthetist would be left entirely free to arrange with the patient for his fee in the same manner and subject to the same limitations and conditions as would obtain and influence the physician or surgeon for a like purpose.

But, sir, it is not status that really bothers or concerns the physician or surgeon. Were it only and simply a question of status, all difficulty would disappear as if by magic; in fact, none would have ever existed. The trouble does not consist in the physician's or the surgeon's conscientious and scrupulous dignity. They would at any moment admit the anæsthetist to the same platform with themselves and hold out to him the hand of professional equality if by so doing the trouble would end here—without doubt, they would prefer to have the services of an expert whose skill would contribute to the successful issue of an operation as largely at least as their own, for which success by the bye they have hitherto invariably claimed all the credit and gained the chief reward, leaving to the anæsthetist only a trifling remuneration and obscurity—they would, I say, cheerfully and preferentially use these valuable services provided they could at the same time enjoy the traditional advantage of continuing to treat the anæsthetist as a subordinate, keeping him at arm's length and away from the patient, and determining with the latter his, the anæsthetist's, fee (generally a mere trifle), without permitting him the privilege or right of a single interview or word with the patient on his own behalf. Unfortunately, however, *status* having been once established, this highly convenient method of enjoying and of appraising and rewarding the anæsthetist's services would also instantly be lost, and with it the selfish and arrogant monopolization by the surgeon of the credit for successful operations to the shameful discredit and injury of the man—his equal in all respects—to whom he is very largely if not principally indebted for this credit and probably for his professional reputation. It will be seen at a glance that should the anæsthetist be permitted to fix and determine his own fee, this would invariably also fix and determine the physician's and the surgeon's. The latter, however, rather than permit this, rather than allow the anæsthetist, a worthy and skilful cooperator, to fare as well as himself in regard to the emoluments for services of equal value, we will say, will preferentially employ any incompetent person, the first that comes to hand, for performing such a service, such a momentous function as the administration of anæsthetics, and thus unhesitatingly endanger and even sacrifice human life. What, then, becomes of the plea—" enlightened professional opinion " and of " common sense "—which the *Lancet* would appear to make on behalf of such selfish and reckless practitioners? Is not this defense frivolous and a shame? Does it not upon its face justify judgment for the anæsthetist on the ground that if " enlightened professional opinion " and " common sense " are anything more than meaningless phrases they imperiously demand that this public danger, this immolation of human life upon the altar of unscrupulous selfishness, be instantly and effectually arrested by admitting the anæsthetist to perfect freedom and equality in all respects with the physician and surgeon. The *Lancet* also distinguishes between simple and difficult surgical operations, to the disadvantage, or, to be more accurate, to the belittling of the anæsthetist's function. I respectfully contend that there cannot possibly be any such distinction in connection with anæsthetization. If the latter is at all necessary—and it is almost always necessary—this circumstance of itself determines the equal importance and value of the anæsthetist's services by making them thus confessedly as essential to safety and therefore to success as those of the surgeon. It is almost too obvious to remark that the incompetency of the anæsthetist can impart a fatal issue to what may be termed a simple surgical operation, while, on the other hand, in difficult and critical cases the result of the surgeon's work is inevitably exposed for " better or worse " to the same control.

In fact, these two branches of medicine are indissolubly bound together in actual practice, and the practitioners of both are mutually necessary and interdependent; and the conscientious and reciprocal contribution of their best skill and knowledge is indispensable to the success of both the safety of the public and the interests of the profession.

I may now inquire of the *Lancet*, Where does the " larger range of the surgeon's responsibility " or his " more intimate relation with the patient " come in? Are they not the direct and invariable result of, are they not predicated by the *Lancet* upon, the perpetuation of that very pernicious evil which it should be the desire, the religious duty of the natural guardians and protectors of the public and the profession of the healing art to at once and forever eradicate and stamp out? How could such " responsibility " or " relation " be other than fictitious under the proper, the only possible, condition consistent with all the essential and moral—I might even add, the solemn considerations of this question—namely, those of perfect freedom and equality under all circumstances, the mutual and reciprocal sharing of responsibility as well as interchange and contribution of skill, knowledge, and facilities by and between the physician and the surgeon, on the one hand, and, on the other, their hitherto neglected but worthy equal and confrère, the anæsthetist?

S. Ormond Goldan.

A QUESTION OF PRIORITY.

123 Stanley Street,
Montreal, *April* 23, 1904.

To the Editor,

Sir: I notice in your issue of April 16th an abstract from the *Boston Medical and Surgical Journal* in which Dr. Quackenboss is credited with having devised a method of ligating the canaliculi for the purpose of preventing suppuration of the eyeball after operation for cataract in the presence of disease of the tear sac.

I would ask you kindly to correct this error, as Dr. Quackenboss himself, in the article quoted, distinctly disclaims having devised this procedure, and mentions the fact that I first brought this little operation to the notice of the profession in a paper read before the American Ophthalmological Society's meeting at New London two years ago.

The way the abstract in question reads is, I think, unfair both to Dr. Quackenboss and myself, and for this reason I would ask you to do what you can to correct the error.

F. Buller.

Book Notices.

Fieber und Fieberbehandlung. Von Dr. Bergel, Arzt in Inowrazlaw. Berlin: S. Karger, 1904.

In this essay of seventy pages the author seeks to formulate a theory of fever in harmony with the latest researches in bacteriology and pathological chemistry. The title is somewhat misleading in being too broad, as there are important phases of the subject which are scarcely touched upon, the writer limiting his discussion to fevers of infectious origin. A critical and historical survey is taken of the earlier theories of the nature of fever, all of which he finds inadequate. The idea of a specific heat centre in the central nervous system is rejected, and the therapeutic mistakes which have arisen in the past from regarding fever in itself as a morbid entity are pointed out. Equally erroneous and misleading in practice has been the teleological conception of fever as a beneficent means of promoting natural recovery. The clue to the real nature of fever is to be found in wound infections, and the author considers such diseases as measles, pneumonia, scarlet fever. typhoid fever, diphtheria, acute articular rheumatism, etc., as truly belonging to this class, as much so as such surgical conditions as erysipelas and septicæmia; in the latter case the wound is macroscopic, in the former the lesion may be a minute abrasion of the epithelium of the respiratory or gastrointestinal tract, or may consist merely in a chemical alteration of the cell substance which lessens the resistance of the epithelium to pathogenic germs. When the bacterial invasion has been accomplished, the resulting febrile process is the same in either case. As the microbes multiply, heat is disengaged through the play of chemical affinities, as the bacteria prey upon the tissues of the body, toxines are eliminated as a product of their vital activities which in turn have affinities which must be satisfied, and here again heat is set free. On the part of the healthy tissues there is a leucocytosis which actively resists the infection, the secretions of the white cells (antitoxines) neutralizing the harmful toxines by uniting with them to form less injurious or innocuous compounds. The successful completion of this stage terminates in recovery. Here again heat is produced, and it is the elevation of bodily temperature from these different chemical sources which gives the clinical picture of fever.

The practical conclusions as to treatment are rather meagre. The administration of antipyretic drugs is illogical and generally to be condemned, as they can have no permanent effect on the disease process unless, as in the case of quinine and the salicylates, they unite with their antipyretic action a distinct germicidal effect. The benefit from cold baths is to be ascribed to increased leucocytosis, improved heart action, and deepened respirations rather than to reduction of temperature. Elevation of temperature alone is not dangerous, and it has been shown experimentally that artificial high temperatures, exceeding those usually met with in acute fevers, do not produce the degenerative changes in tissue cells which have been attributed to the pyrexia of infectious diseases. These parenchymatous alterations, according to the author, are always the effect of the chemical poisons which are such essential elements in the infectious process. A plea is made for generous feeding in fever cases, in order to reinforce the natural powers of resistance and also repair the damage wrought by increased catabolism. The recent tendency to permit a more abundant and varied diet in typhoid fever is in harmony with this view.

Most clinical observers will be inclined to regard fever as a more complicated matter than it is here presented. The author's theory is too easy, it exhibits too strong a bacteriological bias, and it fails to take into account the high temperatures of uræmia, cerebral tumors, insolation, and puerperal eclampsia, where there can be no element of bacterial infection. As an example of closet ratiocination, however, the writer's speculations are interesting and suggestive, if not entirely convincing.

Pathologie und Therapie der Rhachitis. Von Dr. Wilhelm Stöltzner, I. Assistenten an der Kinder-Poliklinik der KGL. Charité und Privatdozenten an der Universität zu Berlin. Mit 3 Tafeln. Berlin: S. Karger, 1904. Pp. 176.

Stöltzner has written a very excellent as well as very exhaustive treatise on rickets. His work begins with a full and comprehensive historical review of the disease from the time of Glisson's master study up to the recent treatises of Virchow and of Vierordt. The first chapter deals with the subject of the distribution of rhachitis among lands and races, and Stöltzner remarks that many which are now thought to be free from the disease will be found not to be when we have more exact observations at our disposal. The second chapter treats of the symptomatology, and, while naturally devoted mainly to symptoms referable to the skeleton, there is yet adequate attention bestowed on disorders of a general nature and of special organs.

Under the heading of complications the author discusses the question of whether spasm of the glottis and tetany, as well as eclampsia, are manifestations of rickets or coincident maladies. He inclines to the view of their pathogenic independence.

The chapter devoted to the pathological anatomy of the disorder comprises thirty-five pages and three plates, and includes the gross appearance as well as the histological. It is written not only with a critical knowledge of the literature, but also from personal knowledge of the lesions. He considers Ziegler's classification of bone marrow into splenoid marrow and endosteum " eine geistreiche und fruchtbare," but does not subscribe to his idea of the rhachitic lesion. He opposes Dickinson in regard to the existence of a visceral rickets, and says that his pathological experience furnishes nothing to justify such a supposition. There follow next a chapter devoted to the pathological chemistry of the malady and one on its relation to osteomalacia.

In regard to the ætiology and pathogenesis, the author frankly admits that we know next to nothing, though he discusses the various theories at length. In the matter of therapy, Stöltzner no longer believes in the administration of organic extracts, of which he was formerly a leading advocate, and recommends codliver oil, alone or combined with phosphorus, as the best means of treatment. Of course, he lays proper stress upon hygienic surroundings and suitable diet. He believes that future investigation will show that the use of some organic extract, and thereby the internal secretion of the organ, will prove effective.

This monograph is certainly deserving of widespread notice, and it is not saying too much of it to express a desire for its translation, so that the body of our physicians may benefit by its study.

Les Nerfs du cœur chez les tabétiques (Etude clinique et anatomopathologique). Par le Dr. JEAN HEITZ, ancien Interne des Hôpitaux de Paris: G. Steinheil, 1903. Pp. 220.

This is a monograph which deals with the cardiac nerves of tabetics, both from the clinical and from the pathological standpoint. It is divided into two parts. The first part treats of the anatomy, histology, and physiology of the sympathetic nerves connected with the heart and of the pneumogastric nerve. The second part treats of the clinical aspect of cardiac disturbances in tabetics in a very exhaustive manner. Under these are included aortitis, tachycardia, and pain. Tabetic aortitis is not regarded as of trophic origin, but as being of a syphilitic nature. Pathologically there is a rarefying of the myelin sheaths of the cardiac plexus of nerves. It affects both large and small nerve fibres, thus differing from the process observed in the sympathetic nerves. This lesion bears a direct and constant relation to the lesion in the posterior columns of the cervical enlargement. The author considers that the latency and absence of subjective symptoms of aortitis in tabetics are due to the changes in the cardiac plexus by which its nerves lose their conductivity. The pneumogastric nerves may be the seat of inflammation, and in such cases there is disorder of the larynx, with, when pronounced, a tachycardia of 120 to 150 beats and even a marked showing of respiration.

A Practical Treatise on Nervous Diseases for the Medical Student and General Practitioner. By B. F. SAVARY PEARCE, M. D., Professor of Nervous and Mental Diseases in the Medicochirurgical College of Philadelphia; Fellow of the College of Physicians of Philadelphia, etc. With 91 Illustrations. New York and London: D. Appleton & Company, 1904. Pp. xvii-401.

If we must have textbooks in medicine which cover the field in a brief, condensed fashion, this book is deserving of a place in the first rank. The subject is treated with brevity, and yet nothing seems to have been sacrificed on the side of accuracy and correctness. The relative importance of the various topics has also been well considered. The plates and other illustrations are quite sufficiently numerous and the typography is excellent. In short, it is good of its kind.

Handbuch der Urologie. Herausgegeben von Dr. ANTON P. FRISCH, Professor der Chirurgie an der wiener Universität, und Dr. OTTO ZUCKERKANDL, Privatdozent für Chirurgie an der wiener Universität, unter Mitwirkung von Professor E. BURCKHARDT (Basel), Hofrat Professor Dr. S. EXNER (Wien), etc., Erster Band. Mit 176 Abbildungen im Texte und 5 Tafeln in Farbendruck. Wien: Alfred Holder, 1904. Pp. 779.

The first of three volumes to treat exclusively of all that pertains to the uropoietic system and the urinary passages, is before us for consideration. This volume is a collection of monographs from the pens of most distinguished authorities in their respective fields. The anatomy of the urinary and sexual organs is considered by Zuckerkandl and Koeppe, and their physiology is described by Koeppe and Exner. The chemistry of urine is from the pen of Manthner, and Kraus is responsible for the article on the bacteriology of urine. The principles of asepsis in urology and the general symptomatology are also treated of by Zuckerkandl. The methods of examination are discussed by Frisch. By this enumeration of the contents of this book we hope to have conveyed an impression as to its scope. Any detailed critical remarks the limited space at our disposal hardly permits.

These contributions are not merely articles, but veritable textbooks, concluding in each instance with an exhaustive bibliography, the best evidence of the diligence that has resulted in giving us a work that has reached the highwater mark of books on urology.

The illustrations are nearly two hundred in number and mostly original. The five full-sized plates at the conclusion are a sort of atlas of the urinary microscopical findings and endoscopic and cystoscopic pictures. There is merely a table of contents, but no general index. This to some extent impairs the value of this book for reference work, which feature will no doubt be supplied upon the completion of the work, which bids fair to be monumental in the extent, accuracy, and thoroughness, if this first volume is any guide at all.

The Blues (Splanchnic Neurasthenia). Causes and Cure. By ALBERT ABRAMS, A. M., M. D. (Heidelberg), F. R. M. S., Consulting Physician, Denver National Hospital for Consumptives, etc. Illustrated. New York: E. B. Treat & Co., 1904. Pp. 230. Price, $1.50.

Abrams has written a book on neurasthenia in a popular style and with a popular title. And he has written a really very readable book upon a subject which has been so much treated of that there is certainly a surfeit of it; though Abrams professes to have discovered something new in neurasthenia and that is a form which he calls "splanchnic." It is "neurasthenia dependent essentially on a stagnation of the blood in the splanchnic or abdominal veins."

The causes of this condition are to be found in lack of nerve force exerted through the muscles of the abdomen and respiration and the nervous mechanism which regulates the supply of blood in the veins. He admits that this condition of stagnation is usually secondary to nervous exhaustion. The less the intraabdominal tension, the more blood collects in the abdominal vessels, and the intraabdominal tension is largely dependent upon the tone, or tension, of the abdominal muscles. Hence the treatment he advises for the "blues" is directed toward improving the condition of the belly muscles.

This treatment consists in physical exercise and the use of a special apparatus of his own contriving, and the practice of what he calls automassage. This last consists in making resistance to contractions of the abdominal muscles by finger pressure exerted by the patient.

There is no need of any detailed account of what Abrams calls the "blues," because doubtless most readers of this review have at times suffered from the condition without being aware of the congestion of their splanchnic vessels. Yet if they are chronic sufferers it would be well to try Abrams's treatment for their relief.

The introductory portion of the book is devoted to a concise discussion of the causes, various forms, and symptoms of neurasthenia, and the reader's interest in the subject is enhanced by the introduction of many appropriate quotations from general as well as medical literature.

Zur Psychopathologie des Alltagslebens. (Ueber Vergessen, Versprechen, Vergreifen, Aberglaube und Irrtum) Von Professor Dr. Sigm. Freud in Wien. Berlin: S. Karger, 1904.

In this brochure, reprinted from the *Monatsschrift für Psychiatrie und Neurologie,* the author attempts, chiefly through experiences of his own, to trace out the psychological chain of events which is at the bottom of daily (and, practically normal) forgetfulness, misstatements, errors of comprehension, etc. Many of his explanations are ingenious, and the essay is an interesting contribution to everyday psychology.

BOOKS, PAMPHLETS, ETC., RECEIVED.

La Rachitide e le deformita da essa prodotte. Dr. Paolo Mancini. Con 116 figure intercalate nel testo. Ulrico Hoepli, Editore Libraio, della Real Casa, Milano. 1904.

800 Manuali Hoepli. Ulrico Hoepli, Editore, Milano, Gallerio Decristoforis.

Elettricita Medica. Elettroterapia-Raggi Röntgen Radioterapia Fototerapia Ozono-Elettrodiagnostica. Dr. A. D. Bocciardo, Assistente ordinario al l'Instituto di Clinica Medica della R. Universita di Pisa. Con 54 incisioni e 9 tavole. Ulrico Hoepli, Editore Libraio della Real Casa. Milano. 1904.

The Therapeutics of Mineral Springs and Climates. By I. Burney Yeo, M. D., F. R. C. P., Emeritus Professor of Medicine in King's College, London; Consulting Physician to King's College Hospital, etc., etc. Chicago: W. T. Keener & Co. 1904. [Price $3.50 net.]

Le Malattie dei Paesi Caldi Loro Profilassi ed Igiene. Con un'appendice: La Vita nel Brasile. Dott. Carlo Muzio, Medico di la classe nella Regia Marina. Regolamenti di sanità pubblica contro le infezioni esotiche. Con 154 incisioni e 11 tavole. Ulrico Hoepli, Editore Libraio della Real Casa, Milano. 1904.

Die Gellensteinkrankheit, ihre Haufigkeit, ihre Entstehung, Verhutung und Heilung durch innere Behandlung. Von Dr. Walther Nic. Clemm, Specialärzt fur Magen, Darm, und Stoffwechsel-Krankheiten, Darmstadt. 25 Kronen o.W. Verlag von Georg Klemm, Berlin S. O. 26. 1903. [Preis 1 Mark.]

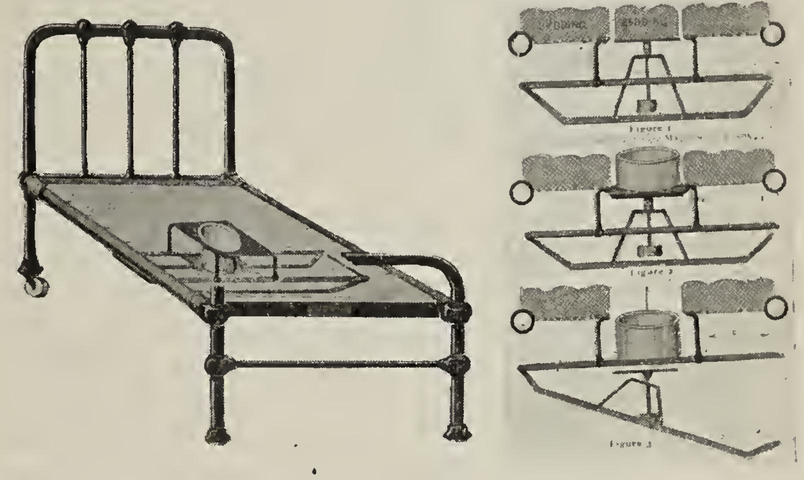
New Inventions.

A COMMODE BEDSTEAD.

By G. S. HEATLEY, M. R. C. V. S.,

EDINBURGH.

The attention of the medical profession is called to a new commode bedstead, which promises to fulfill admirably all the requirements of the invalid in cases of disablement or protracted illness. A general view of the bedstead is given, and Figs. 1, 2, and 3 indicate the mechanism employed in its manipulation.



Heatley's commode bedstead. On the right, Fig. 1 shows the pan out of use, the hole in the bedding being filled with a plug of material similar to the mattress. The resiliency of the spring mattress is unimpaired, as the whole apparatus is suspended with and moves with the same. Fig. 2 shows the pan in position for use. It can be left so continuously without causing discomfort; it can also be removed or replaced without awaking the patient. Fig. 3 shows the lever, A, lowered, so that the pan may be withdrawn and the bed-plug replaced, or vice versa. Then by raising the lever A, the substitute plug or pan is raised to the position shown in Figs 1 and 2.

The construction of the bed is as follows: In the centre, about the positon occupied by the pelvis, is a hole in the bed. Corresponding to this are a hole in the mattress, the edges of which are lined with rubber, and one in the sheet. The hole in the mattress is filled, under ordinary circumstances, by a mattress pad capable of removal. Underneath the bed, below the hole, are two sets of rails, upon which either the mattress filler or the bed pan runs or slides. To use the pan, the depression of a lever attached to the rails lowers the mattress pad so that it can be withdrawn underneath the bed. The bed pan, charged with disinfectant, is then slid in till it reaches the place formerly occupied by the pad, when by raising the lever the pan is lifted into actual contact with the patient, and can be kept there as long as desired. When the pan is no longer required, the lever is depressed, the vessel removed, and the pad to fill up the opening in the mattress replaced; the whole is then raised again into position by the elevation of the lever. All this can be accomplished without the slightest disturbance of the patient's position other than is necessary to draw up the night clothes.

The usefulness of this device will at once be apparent for all conditions in which it is necessary or desirable for a patient to maintain the recumbent position; exhausting illness of all kinds, such as acute fevers, pneumonia, pleurisy, acute rheumatism, etc.; paralyses; obstetrical cases; fractures, and surgical operations, etc. Among its advantages may be mentioned, first, the passing of the excreta directly into a pan containing disinfectants without the necessity of shifting the patient to the remotest degree, or even of elevating the pelvis; secondly, the possibility of cleaning the patient from below without removal of the bed clothes or the least exposure which could offend the most refined and delicate sensibility; thirdly, the fact that the bed clothes do not need to be raised diminishes the liability to chills; fourthly, a great lessening of the liability to bed sores; fifthly, a diminution of the likelihood of disseminating the germs of contagion; and, finally, so great a simplicity of manipulation that it can be managed with ease by a person of the most ordinary intelligence, even indeed by a child.

Not only will such a bed prove of incalculable service in hospitals and other public institutions, but inasmuch as it is in no sense inferior for everyday use to the ordinary bedstead, one such at least might well take a place in the equipment of ordinary households, as a provision against the contingency of sickness or accident. This bed has been received with the cordial approval of many prominent physicians in this country, as well as in England. It has already been introduced into the Middlesex Hospital and the Royal Free Hospital, London; the Royal Infirmary, Edinburgh; the Royal Infirmary, the Great Western Infirmary, and the Marchioness of Bute's Hospital, Glasgow; the Royal Infirmary, Newcastle-on-Tyne; and many other public institutions. The inventor will be happy to answer any inquiries.

66 WEST WASHINGTON PLACE, N. Y.

Miscellany.

Idiopathic Epilepsy in a Canary Bird.—At a meeting of the New York Neurological Society, held on March 1st, Dr. Pierce Clark reported the case of a male bird, a year old, from a brood of four. The family and personal history was negative. No cause for the epilepsy was known. Typical idiopathic *grand mal* of Jacksonian onset and *petit mal* occurred irregularly every few days at the beginning of the observation period. After giving a detailed description of the attacks, Dr. Clark said the case was interesting, because it showed: 1. Apparent idiopathic epilepsy in a bird. Nearly all previously reported cases of animal epilepsy, and especially in the bird, where an autopsy had been made, had proved to be Jacksonian traumatic epilepsies. 2. Postepileptic exhaustion paralysis. 3. Status epilepticus and death analogous in many clinical respects to that seen in the human being.

Rod Auscultation (Stäbchenauscultation).—Dr. J. H. Tyndale describes, in the *Postgraduate* for February, an instrument devised by Dr. E. Reichmann, of Berlin, and called a "phonendoscope." It consists of a cylindrical rod about seven centimetres in length, flat at the top, and hemispherically rounded at the bottom. Its circumference is carved into a series of horizontal rings, serving to intensify the friction sounds caused by the finger in passing over its surface. The mode of application is as follows: The stethoscope is applied to the organ to be examined, and the rounded end of the rod is pressed quite firmly on the skin over the organ near the stethoscope. It is steadied with the index finger by firm pressure on the flat top, while, with the pulp of the middle finger, the rod is stroked over the indentations from above downward with moderate force. The sound produced by this friction on the rod will be practically the same in character so long as the rod remains on the particular organ, becoming dulled only as the rod is made to recede from the neighborhood of the stethoscope toward the periphery of the organ. As soon, however, as the rod passes the direct continuity of the organ underlying the stethoscope, even from one lobe of a lung to the next, the character of the sound changes, so that it is possible by starting from the centre of an organ and testing in radiating lines toward the periphery, to map out with considerable accuracy the borders of the organ. It is not asserted that the rod will determine differences of density in the underlying organ, or establish the limits, for instance, of a pneumonic infiltration; it does not, in fact, supersede other methods of auscultatory percussion, but amplifies them. The best points for application of the stethoscope in the examination of the various organs are indicated by Dr. Reichmann as follows: Upper lobes of the lung, a point immediately below the centre of the clavicle. For the heart, "the centre of the so called heart dulness." For the liver, the centre of the anterior liver dulness. For the sotmach, about the middle of the fundus. If the stomach is empty, the introduction of a small amount of carbonic acid will render the definition of the limits easy. For the spleen and kidneys, the centres of dulness are recommended.

Radium for Hire in London.—It is stated that an enterprising physician of London, Eng., rents one quarter grain of radium bromide to brother practitioners at two shillings and six pence an hour. Is this a new phase of radioactivity?

Official News.

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending April 28, 1904:

ALEXANDER, E., Acting Assistant Surgeon. Granted leave of absence for ten days from May 1st.

ANDERSON, J. F., Passed Assistant Surgeon. Granted leave of absence, on account of sickness, for seventeen days from April 5th.

BAILEY, C. W., Acting Assistant Surgeon. Department letter granting Acting Assistant Surgeon Bailey leave of absence for eleven days from April 22nd, amended to read eleven days from April 24th.

BALLARD, J. C., Acting Assistant Surgeon. Granted leave of absence for ten days from May 5th.

COBB, J. O., Surgeon. Granted leave of absence for four months from May 1st.

Berry, T. D., Assistant Surgeon. Granted leave of absence for three days from April 22nd under paragraph 191 of the regulations.

Goldsborough, B. W., Acting Assistant Surgeon. Granted leave of absence for three days from April 27th.

Junt, Reid, Pharmacologist. To proceed to New York for special temporary duty. April 20th.

Pettus, W. J., Assistant Surgeon-General. Granted leave of absence for seven days from April 26th.

Rodman, J. C., Acting Assistant Surgeon. Granted leave of absence for five days from April 26th.

Rodman, J. C., Acting Assistant Surgeon. Bureau letter granting Acting Assistant Surgeon Rodman leave of absence for six days from April 12th, amended to read one day from April 13th.

Rosenau, M. J., Passed Assistant Surgeon. One day's leave of absence, April 28th, under paragraph 189 of the regulations.

Watters, M. H., Pharmacist. Granted leave of absence for five days from May 3rd.

Wertenbaker, C. P., Surgeon. To proceed to Toomey, Waterall, Logansport, and Greenwood, La., for special temporary duty. April 2nd.

Promotions.

Assistant Surgeon T. F. Richardson commissioned as passed assistant surgeon, to rank as such from March 11th.

Assistant Surgeon W. W. King commissioned as passed assistant surgeon, to rank as such from March 13th.

Boards Convened.

Board convened to meet at Stapleton, N. Y., April 23, 1904, for the examination of an officer of the Revenue Cutter Service. Detail for the board—Surgeon Preston H. Bailhache, chairman. Passed Assistant Surgeon A. C. Smith, recorder.

Board convened to meet at Washington, D. C., April 25, 1904, for the physical examination of an applicant for admission into the Revenue Cutter Service. Detail for the board—Assistant Surgeon-General L. L. Williams, chairman. Assistant Surgeon-General W. J. Pettus, recorder.

Board convened to meet at San Francisco, Cal., May 9, 1904, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Passed Assistant Surgeon W. G. Stimpson, chairman. Assistant Surgeon Carl Ramus, recorder.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from April 15 to April 29, 1904:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
California—Los Angeles	Apr. 2-9	2	
California—San Francisco	Apr. 3-10	2	
Florida—Jacksonville	Apr. 9-23	6	
Illinois—Chicago	Apr. 9-23	11	
Illinois—Danville	Apr. 9-23	8	
Indiana—South Bend	Apr. 9-23	7	1
Kentucky—Covington	Apr. 9-23	3	
Kentucky—Louisville	Apr. 1-14	5	
Louisiana—New Orleans	Apr. 9-16	3	
Maryland—Baltimore	Apr. 9-23	11	
Michigan—Detroit	Apr. 9-23	7	
Michigan—Grand Rapids	Apr. 16-23	1	
Michigan—87 localities	Apr. 9-16	Present.	
Missouri—St. Louis	Apr. 9-23	22	2
Nebraska—Omaha	Apr. 8-23	2	
New Hampshire—Manchester	Apr. 9-16	1	
New Jersey—Camden	Apr. 9-23	5	
New Jersey—Trenton	Apr. 9-23	2	
New York—Buffalo	Apr. 16-23	7	
New York—New York	Apr. 9-23	3	
Ohio—Cincinnati	Apr. 8-15	5	1
Ohio—Cleveland	Apr. 6-22	3	1
Ohio—Dayton	Apr. 9-23	14	2
Pennsylvania—Allentown	Apr. 16-23	3	
Pennsylvania—Johnstown	Apr. 9-23	3 1 imported.	
Pennsylvania—Philadelphia	Apr. 16-23	32	9
Pennsylvania—Pittsburgh	Apr. 9-23	9 1 imported.	1
Pennsylvania—Williamsport	Apr. 16-23	1	
South Carolina—Greenville	Apr. 9-16	2	
Tennessee—Memphis	Apr. 9-23	40	
Tennessee—Nashville	Apr. 9-23	11	
Wisconsin—Milwaukee	Apr. 9-23	31	

Smallpox—Insular.

Puerto Rico—San Juan	Mar. 1-31	11	

Smallpox—Foreign.

Austria—Prague	Mar. 26-Apr. 9	8	
Belgium—Antwerp	Mar. 26-Apr. 2	24	3
Belgium—Brussels	Apr. 2-9		2
Brazil—Pernambuco	Mar. 1-15		20
Brazil—Rio de Janeiro	Mar. 13-27	121	75
Canada—Sydney	Apr. 16-23	54	1
Canada—Winnipeg	Apr. 8-16	1	
China—Shanghai	Mar. 5-19		22
France—Marseilles	Mar. 1-31		14
France—Paris	Apr. 2-9	17	1
Great Britain—Cardiff	Apr. 2-9	1	
Great Britain—Edinburgh	Apr. 2-9	3	
Great Britain—Glasgow	Apr. 8-15	33	3
Great Britain—Hull	Mar. 26-Apr. 9	17	2
Great Britain—Leeds	Apr. 2-9	3	
Great Britain—Liverpool	Apr. 9-16	2	
Great Britain—London	Mar. 26-Apr. 2	67	
Great Britain—Manchester	Mar. 26-Apr. 2	6	
Gt. Britain—Newcastle-on-Tyne	Apr. 2-9	4	1
Great Britain—Nottingham	Mar. 26-Apr. 9	17	1
Great Britain—Southampton	April 2-9	1	
Great Britain—South Shields	Apr. 2-9	1	1
India—Bombay	Mar. 21-27		23
India—Karachi	Mar. 20-27	2	1
Italy—Catania	Mar. 31-Apr. 7		3
Italy—Palermo	Mar. 26-Apr. 9	2	
Java—Batavia	Mar. 5-12	20	1
Mexico—City of Mexico	Mar. 21-Apr. 10	13	4
Mexico—Torreon	Apr. 10-16	19	35
Netherlands—Amsterdam	Apr. 2-9	2	
Russia—St. Petersburg	Mar. 26-Apr. 2	7	2
Spain—Barcelona	Apr. 1-10		8
Turkey—Constantinople	Mar. 27-Apr. 10		6
Turkey—Smyrna	Mar. 20-27		1

Yellow Fever.

Brazil—Rio de Janeiro	Mar. 13-27	6	3
Colombia—Barranquilla	Mar. 23-Apr. 3		1
Ecuador—Guayaquil	Mar. 19-26		10
Mexico—Merida	Apr. 3	3	2

Cholera—Insular.

Philippine Islands—Manila	Feb. 27-Mar. 5	1	1
Philippine Islands—Provinces	Feb. 13-Mar. 5	32	20

Cholera—Foreign.

India—Calcutta	Mar. 12-19		58
India—Karachi	Mar. 20-27	1	1 Imported.
India—Madras	Mar. 12-25		23

Plague—Insular.

Philippine Islands—Manila	Feb. 27-Mar. 5	2	2

Plague—Foreign.

Africa—Cape Colony	Mar. 12-19	1	1
Africa—Johannesburg	Mar. 18-20	22	6
Africa—Pretoria	Mar. 29	2	
Brazil—Rio de Janeiro	Mar. 13-27		2
Egypt	Mar. 12-26	126	102
Egypt—Alexandria	Mar. 12-26	1	1
Egypt—Port Said	Mar. 12-26	1	
India—Bombay	Mar. 8-29		2,705
India—Calcutta	Mar. 12-19		295
India—Karachi	Mar. 20-27	426	355
India—Madras	Mar. 19-25		1
Formosa	Feb. 1-29	114	80
Peru—Lima	Apr. 17		148
Straits Settlements—Singapore	Feb. 28-Mar. 5		2

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending April 30, 1904:

Comegys, Edward T., Lieutenant-Colonel and Deputy Surgeon-General. Relieved from duty at the United States General Hospital, Fort Bayard, N. M., and ordered to proceed to Manila, P. I., for duty, on transport to sail from San Francisco, Cal., about June 1, 1904.

Crabtree, George H., First Lieutenant and Assistant Surgeon. Detailed for duty in connection with the Military Athletic Tournament, Madison Square Garden, New York, on May 2, 1904. Granted two months' leave of absence, to take effect on May 30, 1904.

Gilchrist, H. L., First Lieutenant and Assistant Surgeon. Ordered to report for duty at the United States General Hospital, Washington Barracks, Washington, D. C.

Gorgas, William C., First Lieutenant and Assistant Surgeon. Returned to duty as Chief Surgeon of the Department of the East, Governor's Island, New York, from detached duty at Panama.

Gosman, George H. R., First Lieutenant and Assistant Surgeon. Relieved from duty at Camp Thomas, Ga., for temporary duty.

Hansell, H. S., First Lieutenant and Assistant Surgeon. Reported for duty at the United States Legation, Peking, China.

Kiersted, Henry S., First Lieutenant and Assistant Surgeon. Left Fort Myer, Va., with troops F and H, Fifteenth Cavalry, for duty at Mt. Gretna, Pa.

Little, William L., First Lieutenant and Assistant Surgeon. Granted leave of absence for twenty-one days, to take effect as soon after June 5, 1904, as his services can be spared.

Mason, Charles F., Major and Surgeon. Granted leave of absence for four months, to take effect on or about June 1, 1904.

Patton, I. W., First Lieutenant and Assistant Surgeon. Ordered to report to the commanding officer at Fort Jay, N. Y., for temporary duty with the troops going to Sea Girt, N. J.

Phillips, John L., Major and Surgeon. Relieved from temporary duty in charge of the Chief Surgeon's Office, Department of the East, Governor's Island, New York.

Schreiner, Edward R., First Lieutenant and Assistant Surgeon. Granted three months' leave of absence, to take effect when a medical offcer is sent to Fort McHenry, Md., to relieve him.

Wilcox, Timothy E., Colonel and Assistant Surgeon-General. Retired as Brigadier-General of the United States Army.

Promotions.

Corbusier, William H., Major and Surgeon, to Deputy Surgeon-General, with rank of Lieutenant-Colonel.

Havard, Valery, Lieutenant-Colonel and Deputy Surgeon-General, to Assistant Surgeon-General, with rank of Colonel.

Kieffer, Charles F., Captain and Assistant Surgeon, to Surgeon, with rank of Major.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending April 30, 1904:

Backus, J. W., Assistant Surgeon. Detached from the *Helena* and ordered to the *Annapolis.*

Balch, A. W., Assistant Surgeon. Detached from the *Machias* and ordered home to await orders.

Grunwell, A. G., Surgeon. Sick leave further extended two months from May 2, 1904.

Iden, J. H., Assistant Surgeon. Detached from the *Topeka* and ordered home to await orders.

Ohnesorg, K., Passed Assistant Surgeon. Detached from the Naval Hospital, Boston, Mass., and ordered to the *Topeka.*

Payne, J. H., Passed Assistant Surgeon. Detached from the Naval Hospital, San Juan, P. I., and ordered to the *Marietta.*

Seaman, W., Assistant Surgeon. Detached from the *Don Juan de Austria,* and ordered home to await orders.

Strine, H. F., Assistant Surgeon. Detached from the *Annapolis* and ordered to the *Helena.*

Strite, G. E., Acting Assistant Surgeon. Ordered to the Naval Recruiting Station, Baltimore, Md.

Stuart, A., Assistant Surgeon. Detached from the *Marietta* and ordered to the Naval Hospital, San Juan, P. I.

The following named officers have been appointed assistant surgeons, with the rank of lieutenant, junior grade, from April 12, 1904: H. F. Hull, G. L. Wickens, and W. J. Zalesky.

Births, Marriages, and Deaths.

Born.

Rogers.—In Chicago, Illinois, on Saturday, April 9th, to Dr. Daniel Weston Rogers, U. S. N., and Mrs. Rogers, a son.

Married.

Blanchard—De Witt.—In Washington, D. C., on Tuesday, April 26th, Dr. Robert M. Blanchard, U. S. A., and Miss Mary Wallace De Witt.

Bull—MacDonald.—In Philadelphia, Pennsylvania, on Wednesday, April 27th, Dr. Alfred G. Bull and Miss Mary Eleanor MacDonald.

Deehan—Gallagher.—In Philadelphia, Pennsylvania, on Wednesday, April 27th, Dr. Sylvester James Deehan and Miss Gena Gallagher.

Hill—Espey.—In Washington, D. C., on Wednesday, April 20th, Dr. Walter Rogers Hill and Miss Mabel Espey.

Hopkins—Smith.—In Brooklyn, N. Y., on Thursday, April 28th, Mr. William Robert Hopkins and Dr. Clara L. Smith.

Kaufman—Strouse.—In Baltimore, Maryland, on Wednesday, April 20th, Dr. Harry Kaufman and Miss Elsie Strouse.

Morris—Emmons.—In Baltimore, Maryland, on Saturday, April 23rd, Dr. Erastus Frederick Morris and Mrs. Ida Emmons.

Norton—Weightman.—In Philadelphia, Pennsylvania, on Saturday, April 23rd, Dr. Nathaniel Read Norton, of New York, and Miss Bertha Weightman.

Palmenberg—Von Ramdohr.—In New York, N. Y., on Wednesday, April 20th, Mr. Oscar Walter Palmenberg and Miss Elsa von Ramdohr, daughter of Dr. C. A. von Ramdohr.

Sinclair—Wilson.—In Newburgh, N. Y., on Thursday, April 21st, Dr. John F. Sinclair and Miss Gertrude May Wilson.

Wharton—Paige.—In Baltimore, Maryland, on Wednesday, April 20th, Dr. Charles M. Wharton and Miss Margaret Paige.

Died.

Barry.—In Utica, N. Y., on Tuesday, April 26th, Dr. Thomas E. Barry, in the thirty-first year of his age.

Brown.—In San Francisco, California, on Tuesday, April 19th, Dr. Charlotte Blake Brown, in the fifty-eighth year of her age.

Bruckner.—In Cincinnati, Ohio, on Monday, April 25th, Dr. Charles Bruckner, in the seventy-sixth year of his age.

Chartrand.—In Montreal, Canada, on Tuesday, April 26th, Dr. J. P. Chartrand, in the forty-fourth year of his age.

Cox.—In Coraopolis, Pennsylvania, on Thursday, April 21st, Dr. Andrew Cox, in the sixtieth year of his age.

Drescher.—In Newark, New Jersey, on Wednesday, April 27th, Dr. Louis Drescher, in the eighty-fifth year of his age.

Elston.—In Jefferson City, Missouri, on Friday, April 22nd, Dr. A. D. Elston, in the seventy-third year of his age.

Friedman.—In Cleveland, Ohio, on Thursday, April 21st, Dr Ignatz Friedman, in the forty-fifth year of his age.

Krebs.—In Boston, Massachusetts, on Friday, April 22nd, Dr. Franz Hugo Krebs, in the eighty-first year of his age.

Lee.—In Chicago, Illinois, on Sunday, April 24th, Dr. Edward H. Lee, in the thirty-sixth year of his age.

Nutten.—In Newark, New Jersey, on Monday, April 18th, Dr. Wilbur F. Nutten, in the sixty-fifth year of his age.

Perryman.—In Belleville, Illinois, on Friday, April 22nd, Dr. James L. Perryman, in the seventy-fourth year of his age.

Poole.—In Poolesville, Maryland, on Saturday, April 23rd, Dr. J. S. Poole, in the forty-first year of his age.

Read.—In Los Angeles, California, on Thursday, April 21st, Dr. Robert M. Read, in the fifty-sixth year of his age.

Rosamond.—In Jasper, Alabama, on Monday, April 25th, Dr. W. C. Rosamond.

Shoemaker.—In Philadelphia, Pennsylvania, on Wednesday, April 27th, Dr. D. W. Shoemaker, in the forty-fifth year of his age.

Staudinger.—In St. Louis, Missouri, on Sunday, April 24th, Dr. Herman L. Staudinger.

Stevens.—In Philadelphia, Pennsylvania, on Saturday, April 23rd, Dr. James S. Stevens, in the seventy-first year of his age.

Thomson.—In Dallas, Texas, on Thursday, April 21st, Dr. David D. Thomson, in the eighty-first year of his age.

Winslow.—In New Rochelle, N. Y., on Saturday, April 30th, Dr Charles H. Winslow, in the seventy-third year of his age.

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Original Communications.

THE VASOMOTOR CENTRE IN INHIBITION OF THE HEART.

By CHARLES E. DE M. SAJOUS, M. D.,

PHILADELPHIA.

Although nearly sixty years have elapsed since the brothers Weber (1) discovered that the heart's action could be arrested by passing a current from the intranasal surfaces to the cord, the mechanism of the inhibitory process is still obscure. Langley (2), for example, states that "we are still far from any real knowledge of the processes involved in inhibition." This cannot be ascribed to insufficient experimental research; few problems have been studied with more diligence in physiological laboratories. So great, in fact, has been the labor bestowed upon the question by physiologists as compared to the meagre results attained, that one is led to wonder whether some fundamental error has not misled them from the start, and whether their researches analyzed from a different standpoint might not prove more fruitful. The results of an effort in this direction are submitted in the following pages.

Having obtained cardioinhibitory effects by stimulating the bulb, the brothers Weber found that the heart could also be arrested by cutting the vagus in the neck and stimulating its lower or peripheral end. They concluded, therefore, that the vagus was the inhibitory nerve. Waller (3) showed, however, that inhibition could not be ascribed to the vagus *per se*. Having destroyed the roots of the spinal accessory and left those of the vagus intact, he found that after the fibres of the former nerve had been allowed to degenerate, inhibitory effects could no longer be obtained. Yet neither the internal nor the external division of the spinal accessory proved to be an inhibitory nerve. Claude Bernard had found that section of the internal division was followed by aphonia, but by no other appreciable morbid effect. Waller (4) in turn obtained marked contraction of the muscles of the neck and shoulder by stimulating the external branch, but no cardiac effects. Moreover, having observed that excitation of the vagus caused, among other phenomena, cardiac arrest irrespective of either of these branches, he concluded that "the motor fibres of the heart and stomach *in* the vagus . . . are derived from the spinal accessory nerve." Waller's observations were confirmed by Schiff (5), Heidenhain (6, 15), and others, and the doctrine taught at the present time is that the cardioinhibitory fibres are supplied by the spinal accessory nerve.

As suggested by Langley's remark, however, Waller's results have not solved the problem. Considerable uncertainty still exists as to the path of the cardioinhibitory impulses from the bulb to the vagal trunk, and the manner in which the spinal accessory fibres act upon the heart has not been determined. Porter (7), for instance, says in this connection: "The nature of the terminal apparatus by which the vagus inhibits the heart is unknown."

Reduced to its simplest expression, the whole question seems to me to furnish the elements for a strong working proposition: (1) the discovery of the Webers that stimulation of the bulb and of the vagus can arrest the heart's action; (2) the observation of Waller that the impulses from the cardioinhibitory centre are not carried to the heart by vagal fibres. The multitude of experimental data recorded by physiologists during the last half century must have furnished the complemental factors of the problem as a whole. Might a solution not be reached by taking into account the landmarks of misleading paths?

THE IDENTITY OF THE CARDIOINHIBITORY CENTRE.

The brothers Weber (1) obtained inhibition by stimulating an area comprised between the optic lobes (which in the frog correspond with our lower corpora quadrigemina) and the ends of the calamus scriptorius. This includes practically the entire fourth ventricle. Eckhard (8, 95) reduced this area to about the lower half, while Laborde (9) still further restricted it to a mass of gray matter on a level with the accessory nuclei of the hypoglossus, vagus, spinal accessory, and glossopharyngeal nerves, occupying the lower third of the ventricle. The cardioinhibitory centre is evidently not located below this area in the spinal cord, for Heidenhain (10) found that when the cord was transected immediately below the bulb, stimulation of the latter always caused inhibition.

Heidenhain's experiment strongly sustains the prevailing belief that the inhibitory impulses are transmitted to the heart by one of the bulbar efferent nerves. But an attempt to identify this nerve, either by exclusion or by other means, shows that but two cranial nerves are entitled to any consideration in this connection: the vagus and the spinal accessory —the identical two which, we have seen, have failed so far to satisfy the needs of the function. Here lies, it seems to me, the main misleading factor. Both these nerves having been in evidence in this connection since 1856, it is reasonable to suppose that if the demonstration that either of them was in reality the cardioinhibitory nerve had depended on further experimental work, physiologists would have solved the problem long ago.

The first question to suggest itself is whether cranial nerves can be connected with such a process at all. Wherever the functions of these nerves have been sufficiently elucidated by experimental research, their efferent impulses have awakened *increased* activity—quite the opposite of the "paralyzing" influence on the heart attributed to the vagus by the Webers, Budge, Bernard, and others (11). In the submaxillary gland, for example, we have the memorable experiment of Claude Bernard, performed in connection with his discovery of the vasodilator nerves. On stimulating the chorda tympani, a branch of the facial (another cranial nerve), he found that the flow of arterial blood through the gland was greatly increased, and that its secretory activity was correspondingly enhanced. In the stomach, as shown by Rutherford (12, 75), the vagus also increases the local blood supply, while, as recently demonstrated by Pawlow and Madame Schumow-Simanowski (13), it likewise incites functional activity. In the pancreas, the vasodilator influence of the vagus has been shown by François-Franck and Hallion (14), while its secretory influence has been demonstrated by Pawlow (13) and his collaborators. Even the spinal accessory enhances functional activity, for when its external branch is stimulated, convulsive movements occur in the trapezius and sternocleidomastoid muscles. When such phenomena are compared with the typical, flaccid, motionless, heart of true inhibition, it seems quite probable that cranial nerves do not transmit *inhibitory* impulses.

We cannot, therefore, (at least from the standpoint of inductive reasoning) consistently ascribe inhibitory phenomena either to the vagus or to the spinal accessory if researches upon the functions of these nerves in other directions can be taken as standard. True, this brings us back to the bulb empty handed; but we are now impressed, at least, with a strong probability that cardioinhibitory impulses originate therein elsewhere than in the nuclei of the vagus or spinal accessory.

The Webers, as already stated, located the cardioinhibitory centre in the frog between the optic lobes (which correspond to our inferior corpora quadrigemina) and the calamus scriptorius. Leonard Hill (15) refers to the *vasomotor centre* in the following words: "This centre was minutely localized by Ludwig and Owsjannikow. While a section of the brain carried out *below* the corpora quadrigemina did not produce any noteworthy change in the arterial pressure, they found, on slicing away the spinal bulb by successive cuts, that the pressure fell with each cut until a maximal depressor effect was reached. By such experiments the centre was located in the rabbit to a spot 3 to 4 m. m. in length, commencing 1 to 2 m. m. below the corpora quadrigemina and ending 4 m. m. above the tip of the calamus scriptorius." This suggests clearly that the area from which the Webers obtained cardioinhibitory effects might be the vasomotor centre. As the slicing progressed, the pressure steadily declined until a maximal effect was reached, i. e., the anatomical level of the upper limit of Eckhard's cardioinhibitory area, and also, of the mass of gray matter from which Laborde obtained the maximal inhibitory effects.

The likelihood that cardioinhibitory stimuli are to be ascribed to the vasomotor centre is increased when the relationship between the cardioinhibitory centre and the vasomotor centre is considered. Hill, for example, refers to these centres as "lying closely *bound up together* in the medulla oblongata." The region from which Laborde obtained his maximal vasomotor effects immediately adjoins the sensory centre of the vagus nerve, the large spindle-shaped cells of the latter lying near the middle line. While removal of the lower portion of the bulb, after its destruction higher up "depresses the arterial blood pressure," Sherrington (16) states that it destroys also "a number of vasomotor reflexes that were previously possible." . . . "The cardioinhibitory centre connected with the vagus and its accessory nerve is also destroyed," adds this physiologist, "and the reactions through it of sensory nerves upon the heart are of course lost with it."

THE MECHANISM OF INHIBITION UNDER VASOMOTOR INFLUENCE.

The functional attributes of cranial nerves, we have seen, are not such as to bring about inhibition. Can the same be said of vasomotor nerves?

When the spinal cord is divided below the vasomotor centre, all the vessels of the body become dilated because the impulses which keep up their tonic contraction are interrupted. Stimulation of the peripheral end of a cut vasomotor nerve, on the other hand, can provoke sufficiently violent contraction of a vessel's muscular coat practically to obliterate its lumen and arrest the flow of blood through it. This may easily be seen in the bat's wing, in the rabbit's ear when the cervical sympathetic is stimulated after section, etc. "Obviously," writes Foster (17), "the current has generated in the cervical sympathetic nerve impulses which, passing upward to the ear and finding their way to the muscular coats of the arteries of the ear, have thrown the muscles of those coats into forcible contractions, and have thus brought about a forcible narrowing of the calibre of the arteries—a forcible constriction. Through the narrowed constricted arteries less blood finds its way, and hence the paleness and coldness of the ear."

This mechanism includes, it seems to me, the elements of an inhibitory process. If excessive vasoconstriction entails a marked reduction of the blood supplied to an organ, it must restrain and arrest its functional activity, i. e., inhibit it.

Considerable evidence suggests that a similar process can occur in various organs. Hill (15), for example, referring to Claude Bernard's experiment on the submaxillary gland, states that "on dividing the cervical sympathetic nerve, the blood flowed in increased volume and became arterial in color. On exciting the same nerve the outflow *entirely ceased*, and the gland became pale in color." Morat (18) observed that the tonus and the rhythmic contractions of the stomach were reduced by stimulating its extrinsic sympathetic nerves. This result is due, evidently, to a deficient blood supply, Frémont (19), Pawlow (20), Contejean (21), and Onuf and Collins (22) having found that the same procedure failed to increase the normal secretory activity of the organ—a function governed, as previously stated, by the vagus. In the pancreas, Popielski (23) observed that stimulation of the sympathetic fibres inhibited functional activity. A similar observation has been recorded by Kudrewezki (24). Although the vagus is the secretory nerve of this organ, stimulation of the sympathetic, after causing an exacerbation of a few seconds' duration, was found to arrest the secretion by curtailing the supply of blood to the glandular elements.

Again, just as the submaxillary gland becomes inactive when deprived of blood by excessive vasoconstriction, so do the intestines, as observed by Betz (25, 29), van Braam-Houckgeest (26), Mall (27), and others. "If while lively peristaltic action is going on in the bowels, the splanchnic be stimulated," writes Foster (17), "the bowels are brought to a rest, often in a very abrupt and marked manner." Mayer and von Basch (28) attributed this action of the splanchnic to intestinal vasoconstriction. Van Braam-Houckgeest denied this, on the plea that the hyperæmia, which he ascribed to the vasomotor paralysis caused by exposure of a rabbit's intestines to the air, did not prevent the inhibition of the intestinal movements observed on stimulating the intestinal vasomotor nerves. He overlooked the fact, however, that capillaries have no muscular coat, and that they are not, therefore, supplied with vasomotor nerves. Hence his denial was not justified, since the deeper vessels remain under vasomotor influence notwithstanding the superficial hyperæmia. Starling (20) says in this connection: "I have myself never obtained any other effect than inhibition on excitation of these nerves," i. e., the splanchnics.

We thus have evidence that stimulation of vasomotor nerves in various parts of the organism can cause sufficiently marked constriction of the vessels of these parts to arrest the flow of blood through them. Absence of blood in an organ entailing cessation of its functional activity, we have in excessive vasoconstriction a possible source of inhibition. Vasomotor nerves, therefore, may be said to possess the necessary attributes for the production of cardiac inhibition.

Can the same process occur in the heart? If such is the case the vessels of this organ must be governed as they are elsewhere, i. e., in regions where they were found to contract sufficiently to arrest the flow of blood through them: Chauveau, Rebatel (30, 94), Newell Martin and Sedgwick (31), and Porter (32) all proved experimentally that the contractions of the coronary arteries and those of arteries in other parts of the body occurred synchronously. Ziemmsen (33) was able to confirm this fact by observations on a woman whose heart was exposed. Moreover, Langendorff (34), Porter (32), and Magrath and Kennedy (35) found that the functional activity of the heart coincided with that of the blood flow in the coronaries during rest, exercise, etc. The presence of vasomotor nerves in the walls of these vessels can alone account for these functional coincidences.

Over fifty years ago (1853) Brown-Séquard (36) observed that stimulation of the peripheral end of the vagus in the neck caused contraction of the coronary arteries. He concluded, therefore, that the vagus was the vasomotor nerve of the heart. In 1895 W. T. Porter (37), of Boston, demonstrated that the vagus contained vasoconstrictor fibres, a current of defibrinated blood passed at a constant pressure through the coronary vessels of an isolated heart having been materially reduced in volume by excitation of this nerve. Maass (38) found that stimulation of the vagus caused slowing of the circulation through the veins. He also reached the conclusion that the vessels of the heart were governed by vasomotor nerves, thus confirming Porter's results. Stimulation of the accelerator nerves produced no appreciable effect. On the other hand, Heymans and Demoor (39) have ascertained histologically that the muscular coat of cardiac vessels contains a rich network of vasomotor fibres.

The identity of the vasomotor fibres of the vagus as the cardioinhibitory path appears to me forcibly—though indirectly—shown by a series of experiments by Porter and Beyer (40). They endeavored to find a stimulus to the vagus which would act on the vasoconstrictor, but not on the inhibitory fibres. "In the effort to separate the two sets of fibres," write these physiologists, "cold, fatigue, different rates of stimulation, degeneration, atropine, and other drugs, have been employed, but thus far without success." The cause of this now seems clear: The vasomotor fibres *being* the inhibitory fibres, they could not be separated.

Evidently, the coronary arteries are supplied with vasomotor nerves and their connection with the bulb, through these nerves, is such as to enable them to receive the constrictor impulses to which functional inhibition is due.

The inhibitory effect of excessive constriction of the coronaries also seems beyond question. Chirac (41) found that the beats of a dog's heart were soon arrested when one of the coronaries was tied. Erichsen (42, 15) observed a similar result after tying these vessels. Leonard Hill (15), referring to the investigations of Cohnheim and Schulthess-Rechberg (43), McWilliam (44), Bettelheim (45), and others, also states that "ligaturing one of the large branches only is frequently sufficient to cause arrest." Again, Sée, Bochefontaine and Roussy (46) observed that substances capable of plugging the coronaries—lycopodium spores, for instance—also caused cardiac arrest. Porter (47) plugged the left coronary artery in nineteen dogs and says that "the closure of the artery was always promptly followed by arrest." As the result of closure by ligation in sixty-seven dogs, he reached the deduction that "the frequency of arrest is in proportion to the size of the artery ligated." As cardioinhibitory impulses transmitted through the vasoconstrictors of both vagal trunks probably influence *all* the coronary vessels simultaneously, the ease with which the heart's action can be arrested by exciting the bulbar centre is easily accounted for. Finally, Kolster (48, 94), Porter (49), and others have shown experimentally that the part of the heart supplied by an infarcted coronary artery degenerates.

If the vasomotor impulses inhibit the heart by causing excessive constriction of the coronaries, the effects on the heart wall should coincide with those resulting from deprivation of blood.

E. Weber (1) observed that during partial inhibition the cardiac contractions were weakened, while Schiff (50) found that the muscular elements of the entire organ responded less or not at all to stimuli. François-Franck, Fischel (51), and others observed that the cardiac walls were softer than usual. Foster (17) states that when the interrupted current is used to stimulate the vagal trunk, the heart remains in diastole, motionless and flaccid. When, however, the current is weak, the beats are only slowed and weakened. Coats (52, 56) ascertained manometrically that the contractions were markedly reduced in force. Gaskell (53, 56), and Stefani (54, 7) found that the ventricular tonicity was reduced. Muskens (55) also found that stimulation of the vagus lessened the force of the contraction in the frog.

Gaskell (56) characterizes as "most striking" the attending depression of activity. Still, there is no loss of inherent muscular irritability, since, according to Foster (17), a pin prick in the heart during inhibition may cause a beat; the morbid phenomena are, therefore, the result of a deficient supply of the nutrient components of the blood. Porter (7) states that "but little is known as to the constituents of the blood which are essential to the life of the mammalian heart," and that "an abundant supply of oxygen is certainly highly important." The manner in which the deficiency of these blood constituents causes the inhibitory effects is suggested in the following lines of Langley's (2): "The decrease of rigidity in the inhibited muscular tissue shows that inhibition is not caused by the development of a contractile force, acting in a direction opposed to the normal one and overpowering it. We are then brought to the conclusion that certain nerve impulses—the inhibitory nerve impulses—are able to lessen or to stop the chemical change in the tissue which leads to contraction."

The manner in which the functions of the heart are influenced also contributes confirmatory evidence. Hill (15) states that moderate stimulation of the "vagus" may reduce the output of blood from the heart 30 to 50 per cent. Roy and Adami (57, 15) found, by means of the cardiometer, that the output per second was diminished and that the residual blood was increased—the result, evidently, of the reduced contractile power of the heart wall. This accounts also for the observation of Meyer (58) and Arloing (59) that a sufficiently strong excitation lengthens both the diastole and systole. Kauders (60) found that the marked fall of blood pressure in the aorta which occurred during inhibition coincided with a considerable rise of pressure in the left auricle. This can now readily be accounted for: Contraction of the auricular walls being rendered impossible by excessive constriction of its vessels, the auricle cannot empty itself into its ventricle. The pressure of its blood gradually increases while that of the blood column below—in the ventricle and the aorta—is correspondingly reduced. This also explains the fact recorded by Nuël (61) and confirmed by Gaskell and Heidenhain (56), that "the contractions of the auricle were diminished to a greater extent than those of the ventricle" during inhibition.

Finally, when the current is applied continuously, the inhibition tends to cease. "If the duration of the current be very long," writes Foster (17), "the heart may recommence beating while the stimulation is still going on." We have what appears to me at least a ready explanation of this phenomenon if inhibition is due to excessive vasoconstriction, viz., fatigue of the constrictor nerves and relaxation of the coronaries. Indeed, Maass (38) observed that after continuing the stimulation of the vagus some time, the quantity of blood supplied by the veins of the heart, which was at first reduced, gradually increased.

When, in 1853, Brown-Séquard discovered that the coronary arteries became narrowed on stimulation of the peripheral end of the vagus, he advanced the view that a deficiency of blood in the cardiac walls, and the resulting cessation of functional activity, accounted for cardiac inhibition. Vasomotor nerves were then practically unknown, and his conclusion that the vagus *per se* could act as such could not, of course, be demonstrated. His hypothesis, therefore, has remained in the annals of physiology all these years practically unnoticed. Modified, however, by the introduction of the vasomotor centre and of vasoconstrictor nerves, his conception—as far only as I have been able to judge—is the only one, among those so far proposed, capable of standing the close scrutiny that logical reasoning entails. Its position in the inhibitory process as a whole is given in the conclusions submitted farther on.

COURSE OF THE CARDIOINHIBITORY IMPULSES.

Gaskell (62, 56), on stimulating the *intracranial* portion of the vagus, i. e., its *root,* noted phenomena which were, he says, "in marked contrast with what is seen when the vagus is stimulated in the ordinary manner." He obtained cardiac standstill with an extremely weak current, and this state persisted long after the stimulation was over: 252 seconds in one instance. Again, the heart could be kept absolutely quiescent—as long as twenty-eight minutes in one of his experiments—by continued stimulation of the nerve in this region. He found, moreover, that the innervation of the heart was the same both in cold-blooded and in warm-blooded animals. Langley (2), on the other hand, concludes (1900) that, so far as experiments have gone, "the cardiac inhibitory fibres arise from the medullary roots of the eleventh nerve." Giannuzzi (63, 95), in turn, was led experimentally to the conclusion that *both* the vagus and the spinal accessory contained cardioinhibitory fibres.

In the light of prevailing views these results, including those implied by Langley's conclusion, seem mutually contradictory. Giannuzzi, by stating that both the vagus and the spinal accessory are cardioinhibitory nerves, controverts Waller's observations. If these nerves arise from the spinal accessory roots, as stated by Langley, it is difficult to understand how Gaskell could have obtained inhibitory effects on exciting the vagus *above* its anastomosis with the spinal accessory, since the former nerve contains no inhibitory fibres.

All these features of the problem appear to harmonize, however, when the vasomotor centre is considered the sole source of inhibitory impulses, and the roots of the vagus are given their normal and generally recognized rôle as paths for sensory or afferent impulses. They are then explainable as follows: By stimulating the *roots* of the vagus, Gaskell sent a stream of impulses *into* the bulb, which passed therein from the vagal nucleus to the vasomotor centre. In the latter, the stimuli became converted into motor or *efferent* impulses, and passed out by vasomotor fibres in the spinal accessory to the vagal trunk. Gaskell's marked effects thus become normal results of the proximity of the exciting current to the bulb, and Langley's statement that the inhibitory fibres arise from the bulbar roots of the spinal accessory is sustained. Giannuzzi's conclusions are also warranted, since he excited the afferent vagal root and the efferent spinal accessory root. Nor are Waller's observations invalidated, since destruction of the spinal accessory involved destruction of its vasomotor fibres, i. e., of the path for cardioinhibitory impulses. Under these conditions, the vagal root would represent the *way in* for sensory impulses and the spinal accessory roots the *way out* for vasoconstrictor impulses on their way to the cardiac coronaries.

To establish this conception on a sound foundation, however, it is necessary to show that afferent stimuli capable of causing cardioinhibition reflexly may be carried to the bulb by vagal paths.

Reflex inhibitory phenomena may be awakened from practically any part of the organism. "It has long been known," write Brodie and Russell (64), "that slowing of the heart or arrest of the heart can be brought about reflexly by excitation of almost any afferent nerve of the body if the stimulus be sufficiently great." Particularly sensitive in this connection are the abdominal viscera, especially, according to Tarchanoff (65) and François-Franck (66), when these organs are inflamed. Goltz (67) found that tapping of a frog's intestines or stomach readily inhibited the heart. We have in the pugilistic "solar plexus" blow a familiar cause of reflex inhibition.

Bernstein (68, 15) repeated Goltz's experiment in the rabbit and traced the afferent impulses along sympathetic paths, the spinal cord, the medulla, and thence down the vagal trunk. But since these experiments were performed, the rôle of the vagus in the abdominal viscera has received considerable attention, and it has become evident that these afferent impulses may also follow a vagal path alone. Brodie and Russell (64), for instance, have ascertained experimentally that division of both gastric vagi can reduce and even prevent whatever inhibition (slowing) is obtainable by exciting the stomach or the central end of the divided splanchnics—the latter procedure having also been found by Roy and Adami (69, 15) to produce cardiac slowing. The former investigators concluded, therefore, that "in the cat some of the afferent impulses which produce reflex alteration of the heart rate are carried up the vagi as well as along the splanchnics." They also obtained marked inhibition by stimulating the central ends of vagal fibres distributed to the lungs, and less marked inhibitory phenomena by exciting the vagi on the œsophagus. On the other hand, it is evident that these vagal afferent stimuli are carried to the bulb and thence down the cardioinhibitory fibres in the vagal trunk. Foster (17), for example, says that "reflex inhibition through one vagus may be brought about by stimulation of the central end of the other," referring to the vagus in the neck. This agrees with the well-known fact that the vagus is exclusively sensory at its origin.

It seems clear, therefore, that the vagus is capable of provoking cardioinhibition by transmitting stimuli *to* the bulb and that, as stated, the intensity of the effects obtained by Gaskell on stimulating the root of the vagus was due to the proximity of the nucleus of this nerve. He reproduced artificially, in fact, the process of reflex inhibition; the stimuli entered the bulb by *the vagal paths* and left it with the vasomotor fibres of the spinal accessory.

Again, in the bulb proper, such a process entails stimulation, not merely of the specific cells functionally connected with the heart, but of the entire vasomotor centre, since we cannot consistently admit that there are special inhibitory paths from all parts of the body to the heart by way of the bulb. A rise of the blood pressure throughout the entire body due to general vasoconstriction should occur, therefore, in addition to the inhibitory phenomena.

Mayer (70) has shown that "when the cardiac nerves are intact, a rise of blood pressure is soon *followed* by a slowing of the heart." (64) Evidently the arterial tension precedes the heart-slowing. Again, Mayer and Pribram (71) having obtained reflex inhibitory slowing of the heart of mammals by exciting the stomach, found "that the slowing of the heart was accompanied by a rise of blood pressure" (64)—meaning, of course, the general blood pressure. Finally, the concurrence of general vasoconstriction and inhibition is clearly shown in the following lines of Starling's (29): "Whatever be the method by which asphyxia is caused, the venous blood circulating in the medulla oblongata stimulates both the vasomotor and the cardioinhibitory centres, so that the arterioles are contracted and the heart-beat slowed." This coincidence of blood pressure rise and inhibition, however, applies to *reflex* inhibition only, i. e., inhibition brought about through the intermediary of the vasomotor centre by afferent stimuli.

The elevation of the general vascular pressure is absent, on the other hand, when the peripheral end of the cut vagus is stimulated below the vasomotor centre, i. e., between the latter and the heart. As is well known, a weak current then merely slows the heart; a stronger current, however, will not only *not* provoke an increase of the general pressure, but, by constricting the coronaries excessively, will cause this pressure to *fall*. "The result of stimulating the vagus is well shown on the blood pressure curve," writes Foster, "the effect of complete cardiac inhibition on blood pressure being most striking." Referring to the couple of beats that follow the application of the current, he adds: "Immediately after the last beat there is a sudden fall of the blood pressure."

Having now traced the afferent vagal impulses to the bulb and ascertained that these in turn excite the vasomotor centre, the next question in order is the following: Where do the vasomotor filaments in the spinal accessory root enter the vagal trunk on their way to the heart?

Waller (72) found that division of the vagus between the ganglion of the root and that of the trunk annulled, after degeneration, its influence on the heart. "One may then ascertain," he writes, "that galvanic excitation has lost all power on the heart, larynx, lungs, etc., and that in every way this nerve has become an inert cord." This experiment was repeated by Gad and Joseph (73), who, moreover, ascertained that the œsophagus was influenced in the same way. Langley also writes in this connection: "I have made a similar experiment, and come to the same result as regards the fibres to the œsophagus (lower cervical and thoracic portion), the stomach, the intestines, and the heart." We can easily understand now why this procedure annulled the inhibitory power of the "vagus," although this nerve *per se* does not cause inhibition: the vasomotor fibres it contained were also severed.

But the leading feature of these experiments, as viewed from my standpoint, is that the nerve was cut *above* the ganglion of the trunk, for this shows that since the inhibitory power of the vagus was annulled by the resulting degeneration, the vasomotor fibres of the accessory must enter the trunk above the ganglion of the trunk. Again, it indicates that we cannot ascribe inhibition to the numerous sympathetic fibres which the heart receives from the cervical sympathetic. These two features demonstrate, therefore, (1) that the bulb alone is concerned with inhibitory phenomena, and (2) that it is between the bulb and the ganglion of the trunk that the inhibitory fibres enter the vagus.

As to the exact spot at which this occurs, we have not far to seek. As is well known, the spinal accessory soon after leaving the bulb sends, as it curves downward, a thick bundle of fibres to the ganglion of the root of the vagus—immediately, therefore, above the part of this nerve severed by Waller, Gad, and Joseph, and Langley. Waller also observed, as previously stated, that section of the spinal accessory roots annulled the cardioinhibitory powers of the vagal trunk. Grossmann (74) has questioned the cardioinhibitory power of the spinal accessory roots. As stated by Langley five years later, however, "so far as experiments have gone," the bulbar roots of the spinal accessory contain the cardioinhibitory fibres, and Kreidl (96) has recently shown that while not all the roots of the spinal accessory provoke cardiac inhibition, this effect is obtained by stimulating the *uppermost* bundle of fibres of the bulbar root. This is the shortest path from the vasomotor centre to the ganglion of the root. Thence the fibres pass into the ganglion of the trunk and from this ganglion, in turn, we have a straight path to the heart *in* the trunk of vagus, as stated by Waller, but through vasomotor fibres.

On the whole, the foregoing analytical research appears to me to warrant the following deductions:

1st. *Inhibition of the heart is not caused by impulses transmitted to this organ by the vagus or spinal accessory nerves per se.*

2nd. *Inhibition is due to deficiency of blood in the walls of the heart, due in turn to narrowing of the coronary arteries.* (Brown-Séquard, 1853.)

3rd. *The vagus contains vasoconstrictor fibres which terminate on, and cause narrowing of, the coronary arteries.* (Porter, 1895.)

4th. *The bulbar vasomotor centre is the source of the cardioinhibitory impulses transmitted to the heart by the vasoconstrictor fibres in the vagal trunk.*

5th. *The cardioinhibitory impulses of the vasomotor centre leave the bulb by vasoconstrictor fibres in the uppermost root of the spinal accessory, enter the ganglion of the root of the vagus and pass down the vagal trunk to the coronaries.*

6th. *Reflex inhibition of the heart can be caused by vagal stimulation of the vasomotor centre.*

7th. *In reflex inhibition, the afferent (sensory) impulses enter the bulb by the roots of the vagus and reach its nuclei; these in turn excite the adjoining vasomotor centre; the inhibitory impulses of this centre then pass to the heart by the efferent path described in the fifth deduction.*

(*To be concluded.*)

INTUSSUSCEPTION.*

By JOHN F. ERDMANN, M. D.,

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Within the past few years I have contributed several articles on *intussusception* in *children*, in each of which I have strongly maintained that this disease, barring a few accidental cases, is one that demands prompt surgical interference. Each successive case I see impresses me more and more with the necessity of making operations of urgency in these cases, and of not temporizing with air inflation or water injections. The diagnosis is not difficult, although the symptomatology, as given in former textbooks on diseases of children, etc., should be rewritten with a view of placing all stress upon blood or bloody mucous stools, and not upon the presence of a sausage shaped tumor. For, in over 60 per cent. of a series of twenty-six cases seen by me, twenty-three of which I operated on, no tumor of any kind was palpable per rectum or through the abdominal wall. I do not find, upon searching my histories, a single instance in which blood, bloody stool, bloody mucus, or bloody serum was not found, either upon the diaper, in the commode, or expelled from the anus after digital examination.

Sudden pain is almost invariably the first symptom that the child manifests, then a degree of shock varying in intensity and efforts at defecation take place; these are followed by manifestations of spasmodic pains; a peculiar whining cry or fits of crying. In the first hour or two the abdomen is lax and no marked evidences of pain are produced upon palpation; tumor is not felt unless the intussusception is of considerable extent and is taking place rapidly. After a few hours, depending entirely upon the degree of obstruction, abdominal distention and evidences of complete obstruction occur. Although some fæces and gas may be expelled with the bloody rectal contents mentioned, they are due entirely to the fact that these contents were below the point of obstrucion, and are expelled by the efforts at expulsion induced by the presence of the tumor. When a tumor is felt it is not usually the proverbial sausage shaped tumor of our didactic days, but is more apt to be round or nodulated and moderately movable. Recently, in operating upon a subacute case of six days' duration, a tumor was found that in every possible manner simulated a freely floating kidney. This case will be cited further on.

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* Being part of the Symposium upon Abdominal Surgery in Young Children, read before the County Medical Society, New York, December 28, 1903.

There is invariably an accelerated pulse and an elevation of temperature of from one degree to two degrees and a half. I feel that a portion of the high temperature seen in the majority of my cases has been due to absorption of some of the decomposed, foul smelling, bloody, rectal contents that were present in every instance.

Treatment.—Rectal enemas in the first few hours are not productive of harm, but may, though rarely, be followed by reduction.

Admitted that one meets occasionally with a reduction by the use of enemas, nevertheless this very important fact must be remembered, i. e., that the whole mass may be reduced but the ileocæcal junction and one or more inches of the ileum. This being so, all the symptoms clear up for a time. They again return and necessitate operative interference at a time when the conditions of this region are not nearly so favorable to reduction, and may even require excision. This condition was well demonstrated in my sixteenth case, a male child, seven months and a half old. Duration eight and three-fourths hours; injection used by the father, a leading pædiatrician in this city, Dr. H. M. Silver and myself, was followed by a perfectly tranquil picture, but realizing the possibility of this condition of incomplete reduction, we all felt that the risk of exploration would be far less than that taken by leaving matters rest for further manifestations. That our fears were not groundless was proved by the evidence of a mass at the cæcum, which consisted of almost three inches of the ileum and the entire appendix. Reduction was readily accomplished, the appendix was removed, and recovery followed. I should, therefore, not feel satisfied that reduction had taken place, even if the child should have no further manifestations of pain, etc., unless this was followed in a short time by a movement of the bowels that we could feel satisfied had come from beyond the supposed site of the previous intussusception; and that in the waiting interval for a movement we should be prepared to proceed at a moment's notice with the operative measures. The use of enemas previous to operating is offered as a suggestion, and I can say that clinically it is of very valuable assistance, as there is no doubt that the injections reduce a portion of the intussusception, and any agency or procedure that limits operative time must of necessity diminish shock in direct proportion. Although these little patients bear operative interference quite well, it is quite significant that my greatest mortality rate occurred in those cases which required the longest time for reduction and that these cases were also the ones of longest duration. Enemas as a means of reduction are not advised after six hours' time has elapsed from the first positive symptoms, as, after this period, much valuable time is lost by such procedure.

Chloroform has been the anæsthetic used in all cases operated on by me, for the theoretical reason that vomiting may be a causative factor in producing this condition; therefore, the anæsthetic that is the least liable to induce postoperative vomiting, which might reproduce the intussusception, should be used unless its danger to life in other ways is greater.

The abdomen is prepared, as in all emergency operations, with a scrub by means of gauze pads and green soap, etc.

The incision is invariably made in the middle third of the right rectus, and does not usually exceed two inches, to begin with; the index finger explores the abdomen, and then, if the tumor cannot be delivered upon the abdominal wall or into the incision, the latter is enlarged. Should the tumor be of considerable size, it is advisable, and even necessary, to reduce it in part as it lies in the abdomen, by compressing the distal end of the tumor in the proximal direction, i. e., so that the escaping intussusceptum can be seen or felt escaping toward the cæcum in colonic or ileocæcal varieties, and toward the duodenum in the enteric variety.

Traction as a means of reduction should never be used, except in the lightest possible manner, and then only with a view of directing the expulsion of the intussusceptum in its proper course.

Sometimes reduction occurs with a distinct pop; this is seen in the colonic and enteric varieties, but when the ileocæcal valve is a part of the mass, great difficulty is often met with in reduction of the final portion. A little patience and gentle compression, aided with a backward and forward motion of the unreduced mass, allied to attempts at reduction and production of the condition, is usually followed with success. Occasionally a blunt instrument introduced between the intussuscipiens and the intussusceptum is of benefit in breaking up any adhesions, and may also be employed to greatly dilate the tonic contracted intussuscipiens.

When, as reduction proceeds, the tumor advances toward the right iliac region, it is advisable to bring the mass out of the abdomen before finishing the reduction. In each case, eleven in number, that I have operated on since January, 1902, I have removed the appendix before closing the abdominal incision, and in all but one of these, the appendix was a portion of the intussusceptum. My reason for making the incision in the right rectus is due to the fact that the majority of cases are those invading the cæcum and colon; and such being the case, the most frequent site of final reduction is that of the right lower quadrant of the abdomen. Even if the case is one of the sigmoid or enteric variety, this incision can be enlarged sufficiently to approach the most remote parts of the abdomen in children, without subjecting the patient to any danger of a large hernia.

In case of inability to reduce the intussusception or when gangrene of the gut exists, excision with end to end anastomosis in the enteric or colonic varieties, and end to side anastomosis in those cases requiring excision of portions of both large and small intestines, is necessary. Although occupying a few moments' more time, this should be done before the patient is taken from the operating table. In one case of over five days' duration, in a male four months old, I was compelled to excise for gangrene and irreducibility six inches of the ileum and all of the large intestines to within four inches of the rectum, making an anastomosis between the ileum and the lower portion of the sigmoid. Death followed in a few hours.

Before closing the abdomen care should be taken to examine thoroughly the abdominal contents for multiple intussusceptions; the term multiple is used in contradistinction to the terms double, triple, etc., given by Edred M. Corner, M. B., in his article on Pathology and Classification of Intussusception, etc. (*Annals of Surgery,* November, 1903), to those cases in which double, etc., invagination takes place in one intussusception.

After reduction, the abdominal incision is sutured in the usual manner, and a very tightly applied dressing to the abdomen is used. The after treatment is of great importance. Paregoric, in sufficient dose, is to be administered every three hours, to control peristalsis; barley water and milk, proportions varying with the child's age, are employed, and a small amount of bismuth, etc., is used.

The first day or two the child may have all the evidences of a foul, putrid enteritis, with a temperature of from half a degree to two degrees elevation, the latter being thoroughly consistent with primary union in the wound.

My work for the past eleven months consists of five operations with one death. The latter patient was doing nicely for twenty-four hours when it suddenly died. Dr. Francis Huber, to whom I am indebted for the case, was of the opinion that death was due to status lymphaticus.

I cannot but feel that the citation of two cases, one of spontaneous reduction several hours after enema, and one of a subacute variety of over six days' duration with recovery after operation, will be of sufficient interest to repay us for the time occupied in recording them in detail.

CASE I. *Spontaneous Reduction.*—A short time ago a case was referred to me by Dr. Francis Huber at about 11.30 in the morning. As I was unable to reach the house before 2 o'clock, I sent my nurses and assistants to prepare for operation so that no time should be wasted. Upon their arrival at 1.30 o'clock, they were told that the child had just had a distinct fæcal movement, so that operation would not be necessary. The history of the case is as follows:

Baby, five months old; was well up to 6 p. m. of the preceding day when, suddenly, it was taken with a rectal discharge of pure blood, followed by vomiting. The mother said the child had agonizing pains occurring at frequent intervals. When seen by Dr. Francis Huber, at 11 o'clock of the following morning, i. e., the morning after the onset, the child was greatly depressed; abdomen relaxed; no stool since preceding day; no tumor was palpable externally; rectal examination was followed by the escape of about one ounce of offensive bloody discharge; no mass to be felt in the rectum or bimanually. The history further showed that an enema had been given some time before midnight, but nothing in the line of injections had been used following this time until the patient was seen by Dr. Huber. He, feeling that the symptoms were so pronouncedly those of intussusception, deemed it unadvisable for any further interference other than surgical. I was then called and ordered all preparation as above stated, when, at 1.30, I was telephoned of the distinct fæcal movement having taken place, and that the child's general condition was that which we see after a reduction for intussusception. This spontaneous reduction evidently took place somewhere between twelve and fourteen hours after the injection had been used, and followed within an hour after the abdominal and rectal examination made by Dr. Huber. The mother said that from the time of the examination the vomiting and pain ceased, and that between 1 and 1.30 p. m. the bowels began to act.

The after history of this patient was also typical of the cases we have reduced by operative procedure—that is, there was a foul smelling, greenish diarrhœa which is almost invariably present, and is due to a superficial necrosis of the mucous membrane.

In a comment by Dr. Huber on this case to me, later, he said that in view of the history, symptoms, and appearance of the baby with its foul enteritis (characteristic), he concluded that this was a fortunate case of spontaneous reduction, feeling that there could be absolutely little doubt on this score. I, personally, feel that this case was reduced largely through the manipulation, abdominal and rectal palpation, which simulated a massage, and in all probability some knuckle of gut was reduced by Dr. Huber's examination. I certainly do not feel that the enema given about midnight could have any influence whatever at so remote a time.

Case II. *Subacute Intussusception.*—Operated upon after a period of over six days' duration with recovery. I am indebted to both Francis and Joseph Huber for this case. Dr. Joseph Huber says:

"Nathan U., seen for the first time Sunday, January 25, 1903 (the prior history having no bearing on the present illness, is therefore omitted). The child looked well; temperature was 99° F.; he complained of pain in the abdomen; the pain was paroxysmal in character and not localized in any special area. The mother was positive in her statements that the bowels had moved twice daily up to the previous twenty-four hours. Codeine one-sixth of a grain hourly, high injections, and cold or warm applications were advised.

"January 26th; restless night, temperature 99° F., same paroxysmal pain, slight resistance of right rectus, bowels moved twice after injections, a. m. and p. m.

"January 27th; temperature 99.6° F., condition the same; restless with pain in paroxysms all night. At 11.30 a. m. I saw the boy in consultation for the first time. General condition excellent, pulse good and about 80 to the minute; respiration natural and not accelerated; tongue clean, no odor to breath; heart and lungs negative. Abdomen: both recti tense, no pains in the right iliac fossa; palpation negative, as was also examination per rectum; no retention of urine or delay in the urination; no evidence of shock or collapse. The patient insisted upon getting out of bed to use the chamber. Between the paroxysmal pains he would play with his toys and took great pride in blowing a fish horn. No blood or mucus in the stools at any time.

"*Symptoms.*—Pain referred to the umbilical region and tenderness in this area were constant. Pressure over McBurney's point negative. Colicky pains, recurring at irregular intervals and severe in type, caused the boy to roll about and cry out. Both recti tense. There was some interference with the functions of the bowels as they did not act as readily as in health. No urgent symptoms being present, it was decided to await further developments. If no improvement occurred in twenty-four hours an exploratory laparotomy was suggested, the suspicion tending in the direction of a mild inflammation of the appendix.

"January 28th; temperature 100° F., pulse 104; p. m. temperature 99° F. Restless all night, pains in paroxysm continue. Two good fæcal movements followed injections made by nurse. Dr. John F. Erdmann was now requested to see the patient in consultation and suggested an early exploratory operation.

"January 29th; temperature 99° F., pulse 110; very restless and in pain all night. Bowels moved well (distinct fæcal masses) after injection. The necessary arrangements having been made the child was sent to Gouverneur Hospital and operated upon by Dr. Erdmann at 3.30 p. m."

When I first saw the little patient, Unger, with Dr. Joseph Huber, he had all the manifestations of an appendicitis without any shock. He had had some so-called results from enemata. I suggested to them that the boy be submitted to operation as soon as possible. He was admitted to the hospital the next morning, January 30, 1903, for operation, and when under ether, upon abdominal and lumbar palpation no tumor was found in the appendicular region; but upon subcostal palpation, a tumor about the size, and absolutely the shape, of an infant's kidney was displaced and could be brought down into the right iliac region. This mass would slip back into the loin exactly as a floating kidney would, but it was evident that the tumor was intraperitoneal. The abdomen was opened, with a view of exploration, through the right rectus. Digital examination detected a tumor involving the cæcum and colon with a slight portion of the ileum. This tumor proved to be an intussusception, which was readily reduced; the appendix was removed, and the abdomen closed without a drain. The patient made a perfect recovery, and was discharged to his home in ten days.

This case, without question, was one of those varieties, subacute in character, no adhesions interfering between the separate layers of the intussusception, in which the bowel was not sufficiently constricted to produce the characteristic bloody discharge, or to induce complete obstruction. When I saw the child I spent quite a length of time at the history, with the possibility of an intussusception in view; but at this time, all manifestations were those of appendicitis, except the constitutional manifestations due to pus, which one would naturally suspect at the end of five or six days, and I therefore suggested, as above stated, exploratory laparotomy. The question of appendicitis was readily eradicated when the child was under the anæsthetic.

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The New Bronx Hospital.—On April 28th, the city filed plans for the erection of a five story brick city hospital, 30 by 43 feet, in the Southern Boulevard, 218 feet north of Pelham Avenue; also plans for the building of a four story brick power house, laundry and help's quarters, 60 by 84 feet, in the rear of the hospital, in Crotona Avenue and Southern Boulevard, and a laundry extension, 45.8 by 86.8 feet; also a two story brick stable, morgue, and quarters for help, 124 by 32 feet, and an extension, 32 by 34 feet, at the southwest corner of Crotona Avenue and Southern Boulevard, and also a five story brick house for nurses, 59.6 by 49.3 feet, at the northeast corner of Crotona Avenue and Southern Boulevard. The total estimated cost is $560,315.

PROSTATIC CRISIS.

By SAMUEL H. FRIEND, M. D.,

MILWAUKEE, WIS.

The object of this paper is to show that one of the early symptoms of tabes, the perineal pain, is located in the prostate gland.

It has been my privilege in the past fifteen years to observe closely three patients afflicted with tabes. In the first ten years of this period, I searched long for one of the initial symptoms of the disease, namely, the perineal pain. My first two patients complained of an intense pain in the perinæum, and especially in the rectum, after sexual intercourse. The third patient was awakened one night out of a sound sleep, after having had an emission, by an excruciating pain in the rectum. As described in his own words, "The pain was so excruciating that I could hardly keep from yelling aloud, and it seemed to me as though some one was pulling out the rectum with tremendous force." The whole body was bathed in sweat. These pains, or as I call them, this "crisis," recurred in each patient from three to four times a year, with diminishing intensity, and at the end of six years disappeared. Each crisis came on at night after an emission, with two exceptions—in one of the patients they occurred twice in the day time, at the noon hour, while riding in street cars. There had been no emission. In all the patients after the second year the point of greatest intensity of the crisis changed from the rectum to the length of the perinæum, and was deeply seated. Then the reflected effect upon the rectum was not present. The pain is the same kind as are the lightning pains, with the exception that the prostatic pains last steadily for from three to five minutes, and do not recur. The lightning pains, on the contrary, last from one second to half a minute, and may continue to come and go for hours, with one half, one, and two minute intervals. In order to find out the seat of the pains I instructed my patients (1) to make pressure all over the perinæum, to find whether the perinæum was soft and whether they could determine any tenderness;[1] (2) to palpate the rectum and feel whether there was a tenseness of the rectal sphincter; and (3) to palpate with the finger up the rectum, to find the point of greatest tenderness. After each crisis the patients reported to me, (1) that the tissues of the perinæum were yielding and not tender; (2) that the rectum was soft, and that they had no pain on inserting the finger up the rectum; and (3) that the point of tenderness was situated up the rectum in the anterior wall, at a point corresponding to the prostate gland.

To ascertain whether there was a spasm of the muscles, one of my patients emptied the bladder at the beginning of a mild crisis, without any trouble. At another time immediately after a severe crisis no sensation was felt on emptying the bladder.

I conclude, then, that the prostate gland is the seat of the perineal pain, and that this pain should be named "prostatic crisis."

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[1] In using the word "tenderness," I do not refer to the tenderness of an inflammatory pain, or to that of a foreign body, but rather to the tenderness associated with lightning pains. As in lightning pains, this tenderness persists during the paroxysm only. I refer to such tenderness as that.

MUCOUS COLITIS WITH SPECIAL REFERENCE TO TREATMENT.*

By F. J. RUNYON, M. D.,

CLARKSVILLE, TENN.

Mucous colitis (*Synonyms:* Membranous enteritis, tubular diarrhœa, nervous colitis, and mucous colic—the latter being described by some as an independent affection) is frequently one of the most persistent and annoying affections we are called upon to treat. Though rarely indeed fatal it does not tend to spontaneous recovery, but, on the contrary, gradually grows worse under neglect or ill advised treatment. It is an affection that I believe is frequently either overlooked or its correct nature not apprehended. Really its pathology is not yet understood, there being widely dissenting views as to its ætiology. Some think obstructions the rule in its causation, viz., hæmorrhoids, hernia, tumor, affections of the uterus or appendages, enlarged prostate, enteroptosis, etc. Nor is it surprising that some attribute its causation to the much abused liver, an organ apparently deemed by many a fruitful source of almost all diseases. Not a few consider it entirely dependent upon the nervous system, and regard mucous colitis as a secretory neurosis. The marked nervous phenomena usually accompanying the disease lend color to the view. There are others still who hold that hysteria is the cause. Personally, I do not believe that hysteria is ever the cause of it, though it is frequently one manifestation, nor do I believe that the cause is always the same. It is usually, in my opinion, the result of mechanical irritation, irritation resulting from chemical processes in the intestinal canal, or from fermentative processes, the result of germs in the intestinal tract.

The disease is usually characterized by abdominal pains, frequently of a colicky nature, abdominal soreness or tenderness, and the expulsion per rectum of mucus in greater or less amounts—often large quantities being passed at a single stool—which frequently contains casts of the bowel, perhaps a foot or more in length. This mucus may or may not be blood tinged. Constipation is the rule, diarrhœa the exception. When constipation exists, frequently hard scybalous masses are passed, each ball looking as if wrapped in thin tissue paper except at the ends, where it appears to have been detached from some other piece. Blood is oftener present when there is diarrhœa than when constipation exists.

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* Read before the Middle Tennessee Medical Association at Clarksville, Tenn., May 22, 1903.

Usually there are various associated phenomena, such as dyspepsia, abdominal distention, and hysteria, with all its varied manifestations. As a rule there is marked depression. Indeed, so often is this a symptom that the condition has led me to suspect the disease and inquiry has elicited its existence; for, let me here state, pain is not present in all cases and the passage of mucus may not be mentioned by the patient.

The colicky pain usually precedes the expulsion of the mucus, and following this the bowels are often very sore, this being manifest especially over the cæcum, the flexures of the colon, and the sigmoid flexure. The lower part of the small intestine and the rectum are sometimes involved in this affection. When, as a result of a purgative or an enema, the scybalous masses are expelled, there shortly follows a second, or even a third, action, containing a large quantity of mucus—frequently casts many inches in length, and perhaps some blood.

The prognosis is favorable if the disease is correctly treated, but even then the disease may persist for months, and relapses are not infrequent.

Treatment. It is most important in this affection to obtain the confidence and cooperation of the patient, for in many cases suggestion is of great value and should be constantly employed. I desire to lay special stress on this point, as it has proved of great benefit to me. In a case I now recall, I often stated to my patient " Whenever I can get you to believe you are well, you *are* well." This—*after all local symptoms had apparently disappeared*—repeated, reiterated, suggested and insisted upon by me and by the nurse—finally resulted in the complete relief of a most obstinate case.

If the case is at all severe—if there is present much abdominal pain and soreness, if much mucus is discharged, and especially if this is blood tinged and diarrhœa is present—the patient should be put to bed and kept there till acute symptoms at least have subsided. When these have *well* subsided, the patient should be forced to be up and out.

The diet is here of great importance. If constipation is present the diet should preferably be liquid. And here let me state that milk, so universally recommended, I consider one of the very worst articles of food. If constipation is present it favors the formation of scybalous masses and thus the persistence of the disease; for scybalous masses certainly aggravate the condition; or, if diarrhœa is present, it predisposes to intestinal fermentation. I prefer beef juice and broths, and these made more nutritious by the addition of bread or some of the cereals and subsequently strained; or powdered beef peptonoids can be added to this. Many of the prepared foods here serve a useful purpose, as malted milk, Mellin's food, etc. Always look well to the nutrition of the patient, but avoid all foods that may mechanically irritate the bowels and all foods that tend to add to the existing constipation. Of course foods allowed should be of easy digestion. I also allow fruit juices.

On the other hand, when there is diarrhœa, I prefer usually rather a dry diet, as beaten biscuit, toasted soda biscuit, or toasted light bread and crackers, rice, etc.; broiled meats *in moderation*, as steak, the thigh of a young chicken, game, etc. Tea in moderation is allowable. After the acute symptoms have subsided in both forms I do not restrict the diet so rigidly, but give my patient a rule to go by something like this: Any food easy of digestion that contains no *coarse substances*, and that is simply prepared, may be taken. This rules out corn bread, oatmeal, tomatoes, etc. I also tell them to avoid pastry, fried dishes, and sweets, and at the same time advise them as to diet according to the condition of the bowels, i. e., constipation or diarrhœa. The general hygienic condition should in all cases receive appropriate attention. Cold baths and massage and electricity are now indicated and all are powerful remedies; and it must be remembered that whatever is a power for good *may* be a power for evil, so these should be used with judgment. Electricity is largely of value on account of its mental effect. General tonics, or whatever else tends to improve the general condition of the patient, are of benefit, provided they do not tend to irritate the intestinal tract.

Again, *elimination as a principle* is indicated in almost all of the intestinal affections where irritation is present. If the cause of the colitis is mechanical the canal should (if possible) be kept free from irritants. Hence the formation of scybalous masses *must* be prevented before a cure can be accomplished. If the cause is due to chemical decomposition and the presence of irritating matter, or to the presence and multiplication of germs, the canal should be swept out and kept as clean as possible. So, practically, the indications are here the same, and to meet this, I have my patient take each morning before breakfast enough Epsom salts to act from one to three times. I have him find his own dose. This tends to remove any of the above mentioned causes. The so called liver medicines and all irritating purgatives should be strictly avoided, as the intestinal canal is already greatly irritated and is made still worse by such measures. Long after the patient has recovered, the bowel is still over sensitive, and an irritating purgative will often result in severe tormina and bloody stools.

At night, an hour before retiring, I direct the patient to take, in the recumbent position, an injection of just enough warm normal salt solution to cleanse the bowel. He should not try to retain this, but as soon as sufficient has been injected to cause discomfort the patient should allow it to return. Then, an hour later, I have him inject into the bowel (better through a Wales bougie) an ounce of sweet almond oil containing about five grains of iodoform and ten grains of bismuth subnitrate in an ounce of hot water. If blood is present, I frequently use with advantage fluid hydrastis, and in either event insist that the patient retain the last injection all night. The oil is soothing and helps to overcome the constipation and to prevent the formation of the scybalous masses; or, in case diarrhœa is present, by its soothing effect it lessens the number of discharges. Instead of so much almond oil I sometimes use, when diarrhœa is present, less of this and add to the mixture mucilage of acacia. I first got the idea of using the oil mixture or the hydrastis from Dr. Mathews, of Louisville. The above treatment, followed with judgment, will cure nearly all cases. Of course, when due to a tumor or to polypoid growths, etc., this will fail, and an operation may be indicated. For the specially obstinate cases, a right colotomy is sometimes done, and I have seen it suggested that the appendix be utilized for the purpose in these obstinate cases of washing out the colon, the point of the syringe being introduced into the appendix, previously exposed and opened for the purpose. The appendix is left exposed and utilized for this as long as it is deemed advisable.

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Dr. Ambroise Auguste Liébault, of Nancy, the founder of treatment by hypnotic suggestion, died recently at the age of eighty years. Born at Faières in the Meurthe Department on September 16, 1823, he studied medicine at Strasburg and took his doctor's degree in 1850. He soon abandoned surgery and devoted himself to the study of hypnotism. After practising for a year at Pont Saint Vincent he settled in Nancy, where he opened a clinic for the gratuitous treatment of poor patients by suggestion. In this way he soon secured a large field for observation, and he published the results of his researches in 1866 in a work, entitled Sleep and Certain Analogous States. He was the precursor of Charcot in the investigation of these phenomena.

EXPERIMENTAL RESEARCHES ON RESUSCITATION AFTER DEATH FROM CHLOROFORM.*

MASSAGE OF THE HEART BY VARIOUS METHODS. PROLONGED INFUSION. EXHIBITION OF HOYT'S PUMP AND OF THE KEMP-GARDNER MODIFIED INTUBATION TUBE FOR ARTIFICIAL RESPIRATION, ETC.

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AND
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NEW YORK,
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(*Concluded from page 878.*)

CASES RESUSCITATED.

Our time will merely allow me to refer briefly to a few of our tracings which demonstrate the method of resuscitation. The tracing[1] which I pass around to you shows the process up to period after return of heart beat to normal. We refer to it as Fig. 1. Intervals are 2″ each marked on the tracings.

Trace "A."

Respiratory action ceased first.
Pulse was still detected by the touch, 2′ 20″ later.
Heart action disappeared in manometer.
Tracings 4′ 14″ after cessation of respiration.
Artificial respiration was begun { 2′ 24″ after heart had stopped. 6′ 36″ after respiration had stopped. }

The chest was opened 2′ 42″ after heart had stopped.

The heart was gradually exposed and is carefully examined by sight, touch and compression, 3′ 46″ after heart beat had stopped, according to manometer tracings.

No heart beat was detected, not even a partial pulsation. Heart perfectly inert; the animal was placed 26″ later 1 inch. Nélaton's position.

Manual compression of the heart was begun 8′ 36″ after respiration ceased, and 4′ 24″ after manometer tracings ceased.

[Note the endeavor to imitate the dicrotism of the pulse by means of special manipulation of the fingers during compression.]

Faint resistant throb of the heart was first felt 2′ 46″ after manual compression was begun.

The heart beat alone 3′ 28″ after manual compression, and continued to do so thereafter.

This animal lived twenty-four hours and performed its normal functions meanwhile. It succeeded in tearing out the stitches and opened up the wound of the thorax, dying as a result.

For convenience of study, this special tracing

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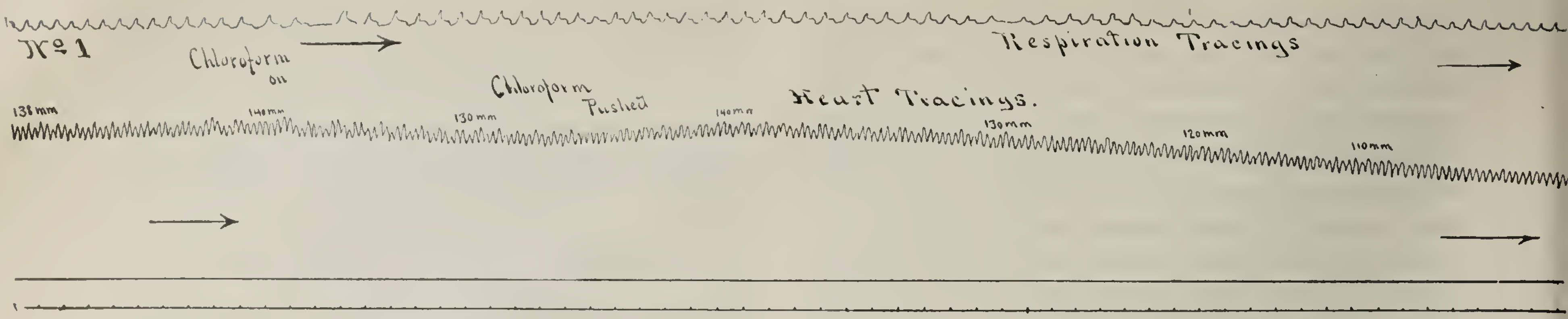
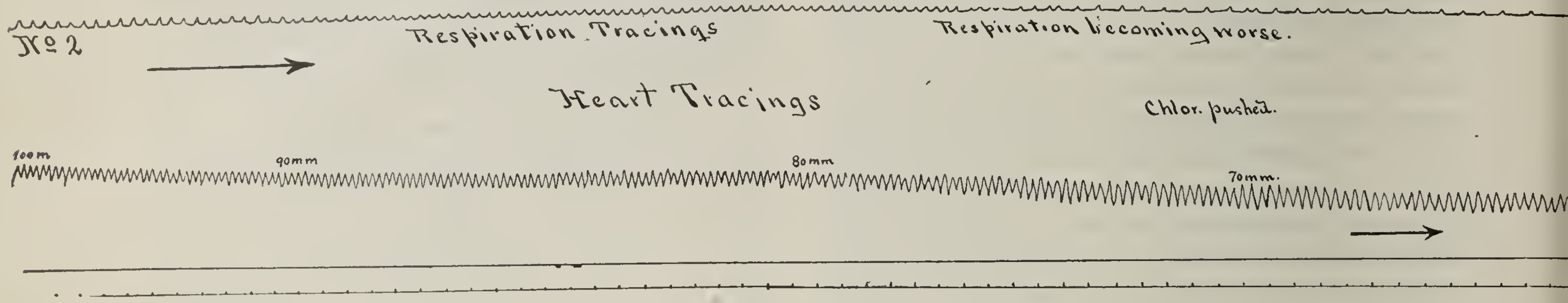
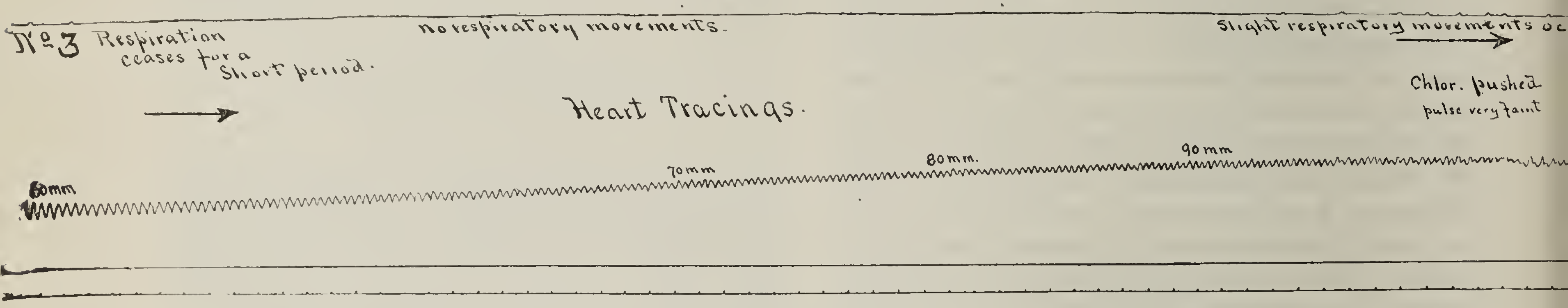
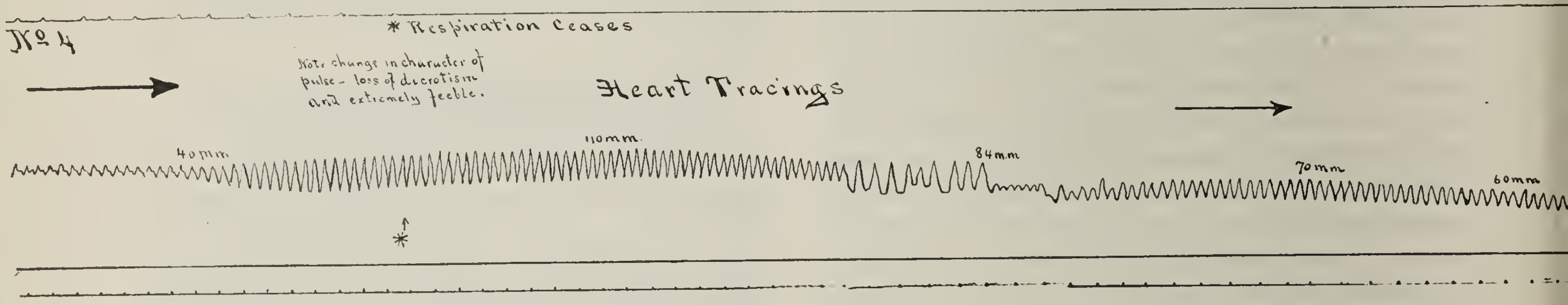
* Read before the Medical Association of the Greater New York, at the New York Academy of Medicine, May 11, 1903.

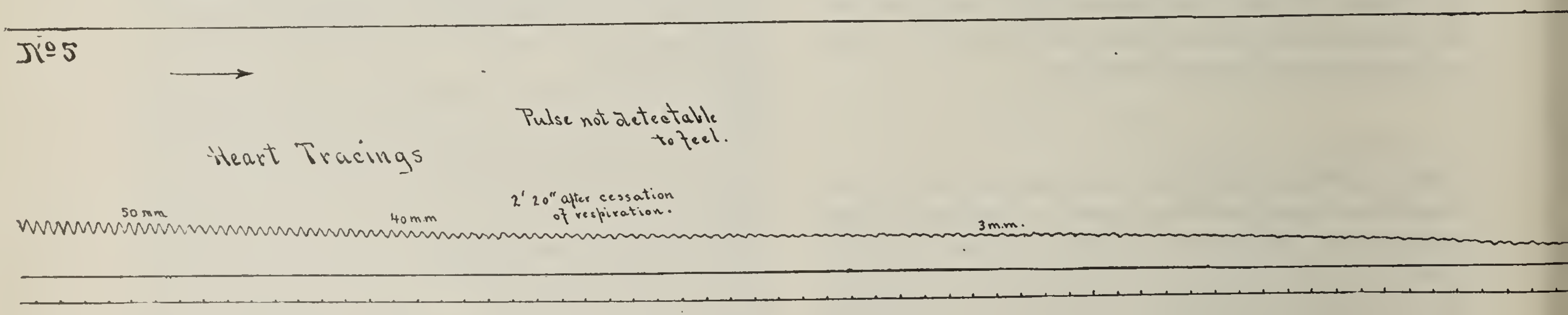
[1] It was necessary in photographing the tracings for publication to cut them and arrange them in regular sequence, as in Fig. 1.

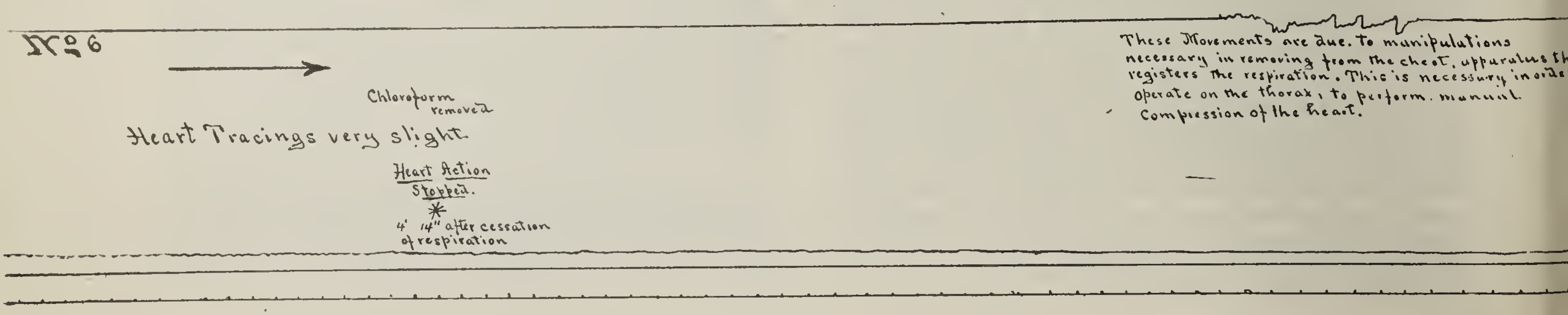

No 1
Chloroform on
Respiration Tracings
Chloroform Pushed
Heart Tracings.
138 mm
140 mm
130 mm
140 mm
130 mm
120 mm
110 mm

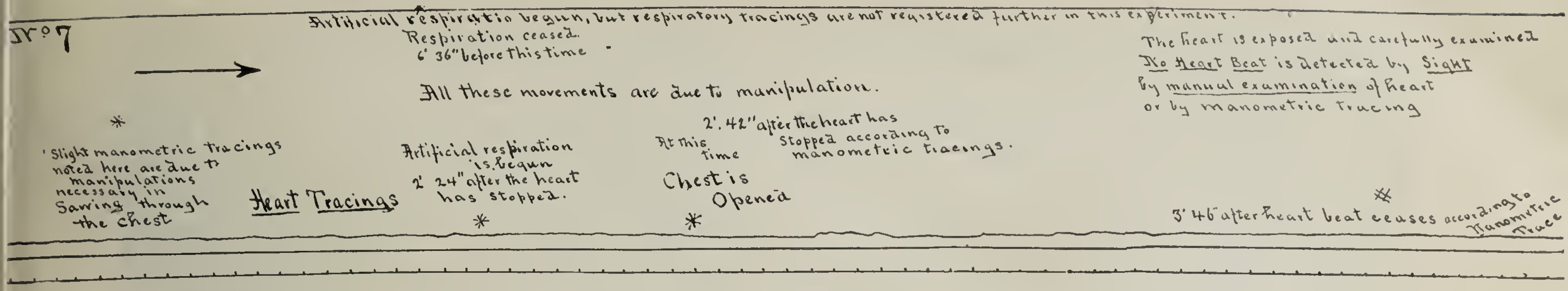

No 2
Respiration Tracings
Respiration becoming worse.
Heart Tracings
Chlor. pushed.
100 m
90 mm
80 mm
70 mm.

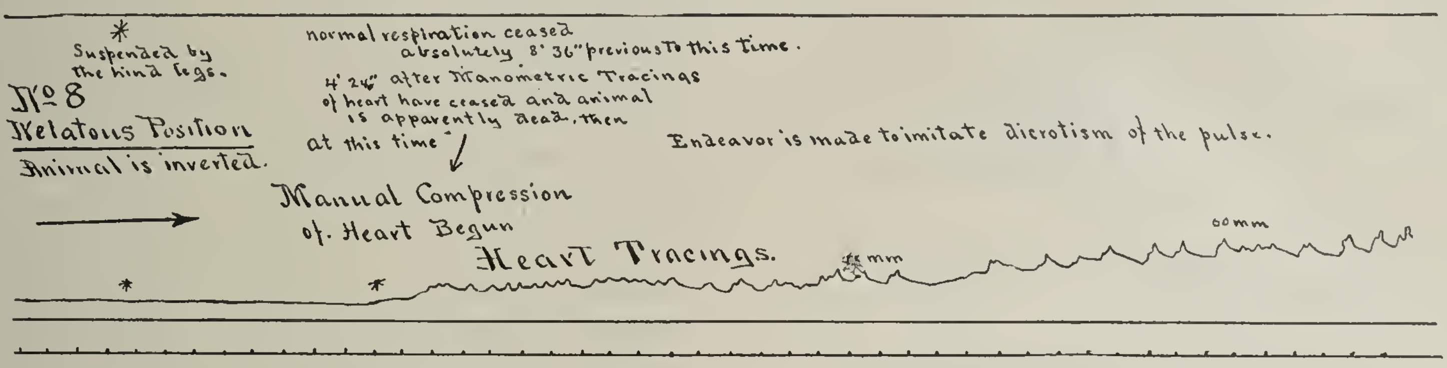

No 3 Respiration ceases for a short period.
no respiratory movements.
Slight respiratory movements oc
Heart Tracings.
Chlor. pushed
pulse very faint
60 mm
70 mm
80 mm.
90 mm

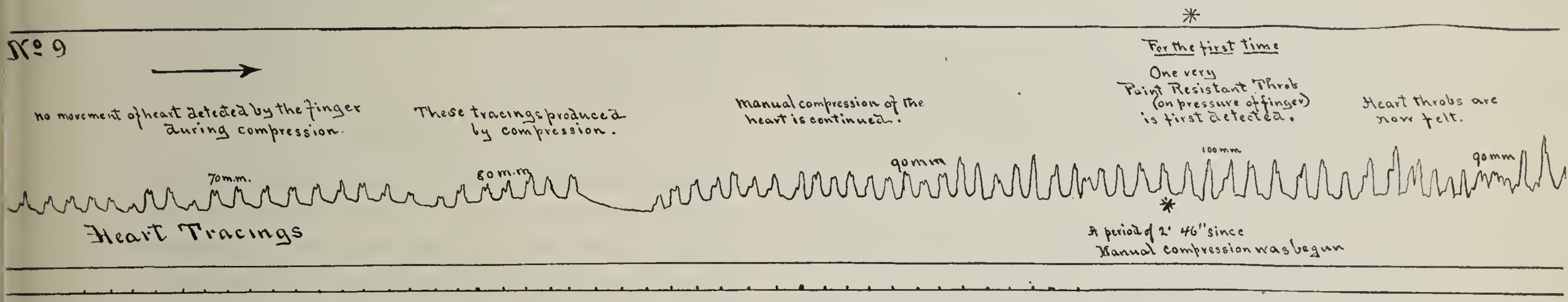

No 4
* Respiration Ceases
Note change in character of pulse – loss of dicrotism and extremely feeble.
Heart Tracings
40 mm
110 mm.
84 mm
70 mm
60 mm
*

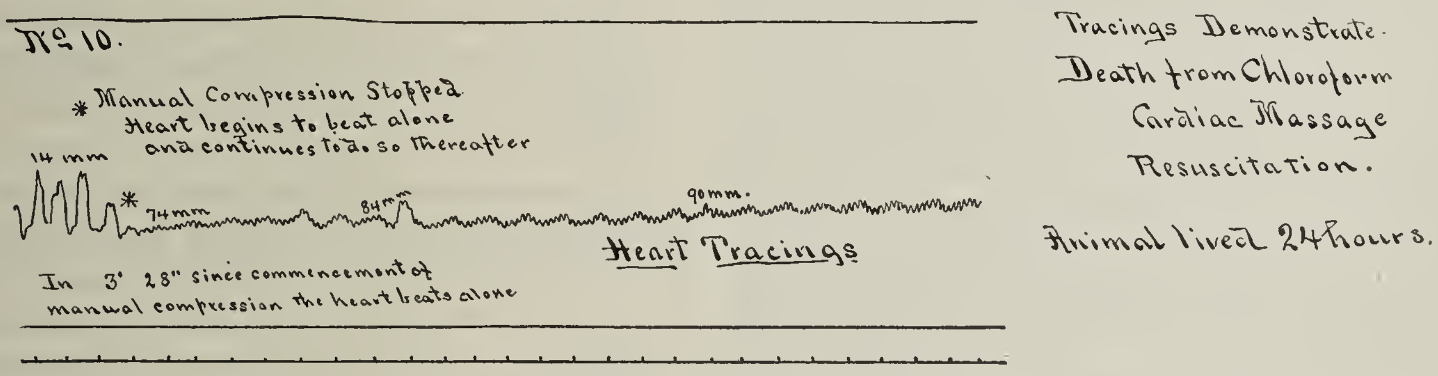

No 5
Pulse not detectable to feel.
Heart Tracings
2' 20" after cessation of respiration.
50 mm
40 mm
3 mm.


No 6
Chloroform removed
Heart Tracings very slight.
Heart Action Stopped.
*
4' 14" after cessation of respiration
These Movements are due. to manipulations necessary in removing from the chest, apparatus th registers the respiration. This is necessary in orde operate on the thorax, to perform. manual. Compression of the heart.









was cut shortly after this point for use this evening. The other tracings which I show you are complete, and show the other steps of the procedure, the preventive infusion for shock, etc.

You will note, mounted for inspection, a set of tracings in which cardiac massage was performed through a trephine opening in the sternum. This animal lived for fifteen hours. Here is another set of tracings, the subject of which lived for eighteen hours.

On May 8, 1903, assisted by Dr. Gardner and in the presence of Dr. Douglas H. Stewart and Dr. John E. Traub, who will discuss our paper this evening, I killed a dog with chloroform. The thorax was opened and the heart carefully examined by these gentlemen and was found to be absolutely without motion. The dog lay there for eleven minutes. We then started artificial respiration by means of the pump and intubation tube, which I show you this evening, and also commenced cardiac massage. This animal was not subjected to infusion, or even inversion. We restored it to life in a few minutes; we then roughly sewed up the thorax with heavy thread —under no antiseptic precautions. This animal lived for five hours.

Our most remarkable case was one in which the heart was absolutely pulseless for "sixteen" minutes. We worked "forty" minutes to resuscitate this animal. We took no care of the dog, in order to give a severe test; and even so, it lived for two hours, the heart and respiration returning to normal.

HOYT'S PUMP FOR ARTIFICIAL RESPIRATION.

This instrument which I now show you, a simple apparatus for artificial respiration, was devised for us by Mr. J. T. Hoyt, electrical expert to the physiological laboratory of the College of Physicians and Surgeons, Medical Department of Columbia University. Mr. Hoyt also made for Dr. Thomson and myself the oncometer, for experiments on the kidney, which instrument was demonstrated by us several years ago.

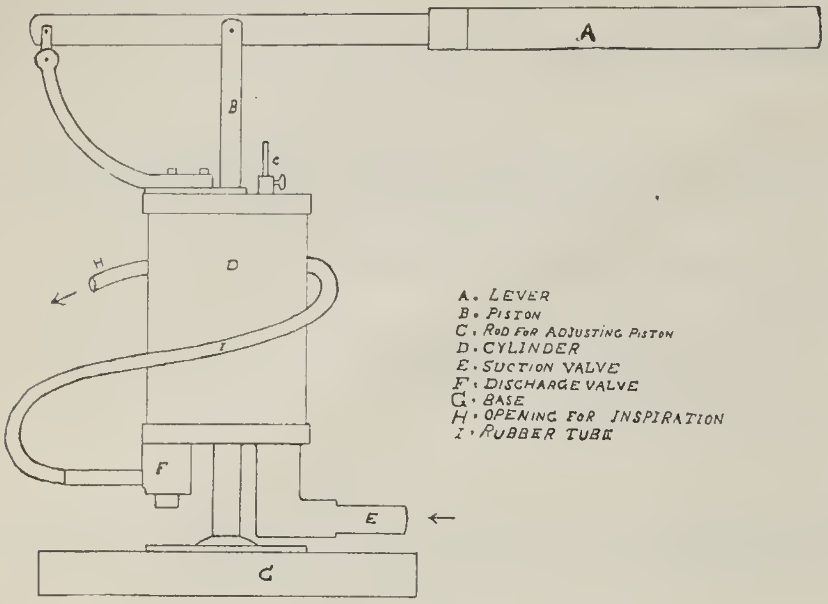


FIG. 2.—Hoyt's pump for artificial respiration.

The pump (Fig. 2) is furnished with entrance and exit valves at the base, can be clamped to a table, and is readily taken apart and packed in a valise; with a Y attachment oxygen and air can be given in combination. An improvised filter for the air can be attached, or a simple method devised to carry the air through gauze impregnated with an anæsthetic, so that an operation on the lung can be carried on and collapse of the organ prevented. This instrument is a somewhat rough model. Each full stroke of the piston represents twenty-two cubic inches of air; the normal inspiration tidal air being about twenty[2] cubic inches in the adult, according to Hutchinson, if I remember correctly. A small governing rod is arranged to regulate the height of the piston stroke, and markings are placed on the rod. By this means the stroke can be regulated, and each stroke will thus correspond in length to that required to inflate the chest of the infant or child, as well as the adult. This portable pump we believe to be extremely useful in resuscitation in cases of collapse on the operating table, in drowning, gas or opium poisoning, and in respiratory failure in the new born.

Only a few days ago we employed this small pump, with our new intubation tube and in conjunction with cardiac massage, in the successful resuscitation of a dog killed by chloroform. Dr. D. H. Stewart and Dr. John E. Traub, who are with us this evening, witnessed this procedure.

We have also demonstrated that this method is applicable to the human subject, by numerous experiments on the cadaver. The same gentlemen witnessed these procedures as did also Dr. Thomas L. Bennett.

In connection with the subject of forced artificial respiration, I wish to refer to an apparatus devised by Mr. Hoyt for experiment at the physiological laboratory of Columbia University. This air pump is run by electricity; gives the proper inspiratory and expiratory pauses; and can be so regulated in power and rapidity, as to be adaptable to animals, from the turtle or mouse, through the ascending grades, to man. It can also be employed on the larger animals. I advisedly say that I consider *no operating room complete without* this apparatus; and would suggest that some of our eminent surgeons present should investigate it in person. A few strokes of our pump, as shown on this dog, demonstrate the method of inflation. The curve of our intubation tube and fittings is adapted to the human subject, and the method can be demonstrated better on the cadaver, as with this dog there is much escape of air. It will perform its work, however, with these animals.

THE KEMP-GARDNER INTUBATION TUBE FOR ARTIFICIAL RESPIRATION.

In our experiments with dogs, I believe that I neglected to state that in some cases we employed preliminary tracheotomy, and performed artificial respiration through a tube connected with this. We found that the animals were apt to aspirate dust, etc., by this means; also that there was more shock, and more liability to later infection.

Mr. Hoyt then devised for us a curved glass tube for intubation of the animals, which proved eminently successful. From a study of this tube, of the Fell-O'Dwyer tube for artificial respiration, and of the O'Dwyer tube for intubation, we devised the present instrument, Fig. 3, which I now show you, and which is practically an O'Dwyer tube with a hollow handle. The part entering the larynx is somewhat shorter than the O'Dwyer tube, and the distance between the bulbous enlargement which rests on the vocal cords

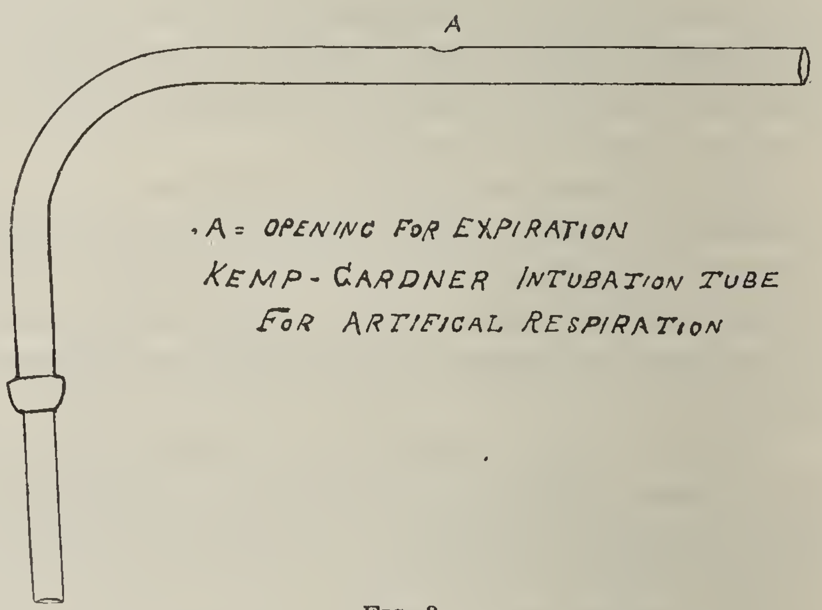

A
A = OPENING FOR EXPIRATION
KEMP-GARDNER INTUBATION TUBE
FOR ARTIFICAL RESPIRATION

FIG. 3.

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[2] We would note that each stroke of the piston of this pump displaces 550 c. c. of water, which equals 22 cub. inches of air, since 500 c. c. equals 20 cub. inches.

and the curvature at the base of the tongue, is slightly longer, to allow for the extended position of the head when the patient is inverted. The instrument appears rather long, but I assure you the relations are correct. Dr. Frank Hartley kindly split the tongue, inferior maxilli, hyoid bone, and larynx of a cadaver for us, and the tube was accurately fitted. Furthermore, if you compare our tube with the Fell-O'Dwyer instrument, you will note that the bulbous enlargement on our tube about corresponds to the middle of the bulb of the Fell-O'Dwyer apparatus, though the latter seems shorter, on account of the size of the bulb.

Smaller intubation tubes will be made for us to fit infants and children.

There is a small opening in the upper surface of our tube, which, by means of the thumb, can be regulated as an expiration valve. This instrument possesses the merit of cheapness and simplicity, and we believe is much less liable to damage the soft parts—the larynx and cords—than is the Fell-O'Dwyer instrument. It is easy to instruct in its use. We believe intubation of the larynx to be the only accurate method of securing perfectly satisfactory artificial respiration.

On the other hand, our instrument can be made with a single hollow handle and smaller and shorter intubation tubes to fit by a screw thread.[3]

The new pump and intubation tube can be secured at Stohlmann & Pfarre, 107 East Twenty-eighth Street.

In summarizing the result of our experiments, I wish to call your attention to the following important points:

INFUSION.

The temperature of the normal saline solution, as Dawbarn has demonstrated, should be 120° F. The temperature of the aortic blood is 102.5° to 103.5° F. There is great loss of temperature in the passage of the saline solution through the tube and cannula, and if the solution is employed at 105° F., as is often advocated, it will reach the heart at a lower temperature than that of the blood, and any result attained is due to the filling of the vessels and not to the heat.

The heat, however, as a cardiac stimulant is one of the most important factors. Note, for example, the application of cloths, wrung out of boiling water, directly over the heart, as a stimulant, as advocated by some of our noted surgeons. A temperature of the infusion at 120° F. is correct; no damage occurs to the blood, as has been demonstrated under the microscope. This solution actually reaches the heart at about 110° F. If a higher temperature, 125° to 130° F., is employed, some crenation of the red cells also occurs. A preventive infusion should be given on the first appearance of signs of shock. If this fails, a slow infusion, one and a half litres, occupying forty-five minutes, and continuously trickling into the vessel at a temperature of 120° F., can be given. This eliminates the danger of the possibly production of pulmonary œdema. We will presently report a case in point. Dr. Dawbarn, who discovered by his experiments the correct temperature for infusion, is with us this evening.

COMPLETE INVERSION OF THE PATIENT, NÉLATON'S POSITION.

The importance of complete inversion of the patient cannot be overestimated. The semi-oblique or oblique position of the patient, we believe to be insufficient. Dr. Dawbarn advises hooking the legs over the edge of the table at the knee joint, and completely inverting the patient. He will describe the method in person.

The importance of this feature was especially called to our attention by the following experiment:

By a too rapid infusion, we caused a severe pulmonary œdema. By complete inversion of the dog, accompanied by artificial respiration, we were enabled to pump out the lungs, the fluid literally flowing from the animal's mouth like water from the tap. This would further suggest to us in cases of drowning, the value of hooking the knees over the shoulders, and performing artificial respiration in this position. It would seem more serviceable in clearing the chest and larynx, than the present methods in the practically dorsal position. It is undoubtedly more serviceable in stimulating the heart. I believe that some of our older authorities advocate this position. Dr. Traub will report two successful cases resuscitated by this method.

ARTIFICIAL RESPIRATION.

Regarding artificial respiration, I would call to your attention that in a large percentage of cases it is improperly performed. I state this from personal observation, as well as from the statement of others in many of our large hospitals. One prominent surgeon informed me that in such emergency he always took charge of this himself. This is not as it should be. From our own numerous experiments, we secured better results by the employment of a force pump. It would be a simple matter to instruct the staff in the use of such an instrument, and in the employment of the Fell-O'Dwyer tube, or intubation with our own instrument. A few lessons on the cadaver are all that would be necessary. Practically, after respiratory failure, the conditions would be the same.

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[3] The instrument is also made with a hollow metal handle, the laryngeal portion being of soft rubber, to avoid damaging the parts.

Before closing I shall cite to you an interesting case, which demonstrates the value of prolonged infusion in shock, and which also shows at least that I have the courage of my convictions, and have tried cardiac massage in an endeavor to resuscitate a human subject.

In the summer of 1901, Dr. William H. Thomson called me in consultation to a young girl in this city. She had a large subphrenic abscess from traumatism over the liver and was septic. I operated at once. The kidneys and heart were in poor condition. Dr. J. F. Hasbrouck administered nitrous oxide. About a quart of pus and blood was removed. The patient began to fail rapidly.

Inversion was practised at once. One quart of normal saline solution was injected into the rectum, and this was all absorbed. A preventive infusion of saline at 120° F., 1 litre, as advocated by Dawbarn, was at once given, the process of infusion occupying about twelve minutes. The patient apparently rallied nicely, but was still kept somewhat inverted. The operation was completed, and I was picking up my instruments, when suddenly the patient went into the worst shock that I have ever seen; jactitation, wandering, and finally unconsciousness, pulse imperceptible, gasping respiration and pupils dilating.

The patient, I should state, weighed a trifle less than 90 pounds, and hence the actual weight of blood under normal conditions would be $^1/_{13}$ of the body weight, or not quite 7 pounds.

This patient had, therefore, already taken into her circulation 1 quart, or 2 pounds, by rectum, plus 1 litre or over 2 pounds, by direct infusion; in all, over 4 pounds.

The patient was again inverted, artificial respiration was started, strychnine was administered hypodermically. An infusion was again deemed absolutely necessary, but special care had to be exercised, in order not to produce pulmonary œdema, in view of the quantity already added to the circulation. A very slow continuous infusion, lasting forty-five minutes, was then given—in all, one litre and a half at 120° F.

In all, therefore, over 7 pounds was added to the girl's circulation, as much as the original volume of fluid in the vessels. The patient recovered from the shock. Two days later the blood showed less than 50 per cent. red cells. Profuse diuresis came on, and lasted for several days. I have never seen recovery in the human being from such profound shock; nor have I knowledge of so large a quantity of fluid in proportion to the body weight being added to the circulation, with a successful issue for the patient.

The shock in this case was undoubtedly due, not to the anæsthetic, which was nitrous oxide, but to the sudden relief of intraabdominal pressure, by evacuating the large amount of pus and blood, and the consequent sudden dilatation of the abdominal vessels, the typical bleeding into her own vessels, as described by Dr. Hobart A. Hare. Dr. Hasbrouck assisted me in the infusion which I have just described.

The patient developed metastatic abscesses, which were opened in turn, and finally it was necessary again to administer an anæsthetic, to open a large accumulation in the left side of the abdomen. Nitrous oxide was again administered, the operation being simple, and lasting only about five minutes. Shock again came on, and was again relieved by infusion and other methods. The patient was apparently doing well, when she suddenly collapsed and died almost instantaneously. The father who was present gave me permission to try massage of the heart, and I followed out Method 3, which I have already described. Dr. Hasbrouck and I worked over the patient for some time, but without success. The case was in every respect a most unfavorable one, the subject being pyæmic, and in addition weakened by several previous operations. The attempt to save life was certainly justifiable. I can fairly assert, I believe, that this was the first case of cardiac massage performed on the human subject in this country.

In conclusion, let me say that we believe the procedure of massage of the heart to be both sound therapeutics and perfectly justifiable in all cases of death from chloroform, or from any anæsthetic, from drowning and allied conditions, when all other means of resuscitation have failed at our hands.

Noting that the return to life in one of our cases occurred after persistent efforts lasting forty minutes, we would advocate cardiac massage for at least an hour to an hour and a half before giving up the case. This but corresponds in duration to the methods employed in drowning. Of course, artificial respiration and inversion of the patient should be kept up all this time, and we believe the pump and intubation tube to be serviceable in these cases.

The surgeon does not hesitate nowadays to open the pericardium, or to suture an incised wound of the heart. The method of massage of the heart that we have already described seems to us certainly a less radical procedure, and under the conditions we have noted, to be perfectly justifiable.

Our Subscribers' Discussions.

A SERIES OF PRIZE ESSAYS.

[*Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:*

XXIX.—How do you treat nocturnal incontinence of urine? (Under adjudication.)

XXX.—What are your achievements in improvising surgical instruments and appliances? (Under adjudication.)

XXXI.—By what means have you ever saved a person supposed to have been drowned? (Answers due not later than May 16th.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of $25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED*) that the answers be short, if practicable, no one answer to contain more than six hundred words.*

Only subscribers to the New York Medical Journal and Philadelphia Medical Journal *(including regular and volunteer officers of the Medical corps of the United States Army, Navy, and Marine Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.*]

The prize of $25 for the best essay submitted in answer to question XXVIII has been awarded to Dr. D. H. Reed, of Washington, D. C., whose article appears on page 885, of our issue for May 7th.

PRIZE QUESTION NO. XXVIII.

THE DIAGNOSIS OF SMALLPOX IN THE PAPULAR STAGE.

(*Concluded from page 888.*)

Dr. William Flegenheimer, of Richmond, Va., writes:

As it is very important to make an early diagnosis of smallpox, to find out what we can rely upon to make a diagnosis in the papular stage is a point well taken. The question might be answered in a word—*experience*—for if your experience is sufficient an early diagnosis is almost always possible.

But in order to answer the question intelligently, let us first consider the symptoms of the papular stage, which I will outline below, make an inquiry carefully into the history of the case, ascertain the epidemic conditions existing at the time, and lastly find out the susceptibility of the patient. The symptoms of the papular stage are as follows:

Near the end of the third day the eruption makes its appearance in small red spots like flea bites; these are first observed on the forehead, face, and neck, next on the wrists, and, gradually increasing in number and size, extend, in the course of a day or two, over the whole surface of the body, the legs and feet being always the parts last affected.

The fever, which has been quite high in the initial stage, begins to abate as soon as the eruption appears; the pulse diminishes in strength and quickness, the pain in the back, headache, and sickness at the stomach are greatly relieved, the patient is not so restless and the sleep is more refreshing.

The numerous red points constituting the eruption are from the first slightly elevated above the skin; on the second day their base becomes enlarged and feels hard to the touch; on the third day, beyond which the eruption seldom continues to be thrown out, a small vesicle, or pock, having a central depression and containing a thin limpid fluid, shows itself on the summit of each pimple. The pocks are now of about the size of a small pea, and with an inflamed border of a damask red color more or less vivid according to circumstances; on the sixth day, reckoning from the beginning of the eruption, the central depression disappears, and the fluid, which was at first thin and limpid, is changed to a yellow color and presents the appearance somewhat of an abscess. On the following day the pustules on the forehead, face, and parts where the eruption first appeared burst, and on the eighth day, still counting from the date of the eruption, scabbing begins, first on the forehad, face, and head, then gradually over the whole body.

The mucous membranes, as well as the skin, are also attacked by the typical exanthem, and in a like manner—the mucous membranes of the upper part of the body, corresponding to the skin of the head and face, later on the rectal mucosa, and in females that of the vulva and vagina are attacked at about the same time as the skin near these parts.

The mucous membranes may always be relied upon to show the characteristic pocks, and one should never neglect to inspect carefully the mucous membranes of the mouth and throat; for it sometimes happens in varioloid and the mild forms of smallpox that there are very few completely developed pocks to be seen on the skin. However, it makes no difference with the mucous membranes whether the smallpox is mild or malignant, the typical exanthem invariably breaks out upon them.

The smallpox papule itself is distinctly characteristic. It has a peculiar feel to the touch, which has been described as like that of a small shot underneath the skin. It is stated by men of experience that a correct diagnosis may be made by this sign alone.

Now, then, in summing up, I will say, in answer to the question at the head of this paper, that the following points, when all are taken into consideration, may be relied on in the diagnosis of smallpox in the papular stage:

1. The characteristic morphological character of the true variola papule.
2. The epidemic conditions existing at the time.
3. The susceptibility of the patient (whether he has been vaccinated).
4. The initial subjective symptoms, such as the fever, headache, lumbar and sacral pain, etc.
5. The time of the appearance of the eruption and the mode of its distribution upon the skin and mucous membranes.
6. The peculiar and characteristic course of the fever in smallpox—high in the initial stage and falling regularly as the eruption appears, but renewing its intensity with the beginning of suppuration.

Dr. R. Byington, of York, Pa., writes:

The absence of any characteristic test for smallpox compels us to depend for our diagnosis upon the history, constitutional symptoms and physical signs of the disease.

While the history of the onset, with the constitutional and local symptoms, is the most important of our aids in making a diagnosis, still it is wise to take into consideration the probability of the patient's having been exposed to the disease and the vaccination history. Yet care must be taken not to lay too much stress on the fact that the patient has or has not been exposed, for many of those exposed never contract smallpox, seeming to be naturally immune, while, on the other hand, cases occasionally occur where there seems to be no possible source of contagion. The same may be said of the importance of the vaccination history. Learn these facts of history if possible, but do not base your diagnosis on them alone.

The history of the attack, with its onset, as presented to us by the patient, varies greatly in different cases, especially in respect to severity, usually from two to five days previous to the appearance of the papular eruption. The patient has a chill followed by a marked rise in temperature and a full, rapid pulse. Severe headache, with nausea and vomiting, is usually present, while extreme aching pains in the back and neck and extending into the extremities are characteristic. Prostration is usually well marked, while in the severer cases delirium not infrequently exists. If the disease occurs in children, convulsions are common. These symptoms continue unabated up to the appearance of the papular eruption, when they diminish markedly in severity. Often for a day or two previous to the appearance of the papules a scarlatinalike or measly rash may occur on the inner surfaces of the thighs and in the axillæ. This rash may be absent or may be general.

While the foregoing is a fairly accurate history of the majority of the cases, a few patients are almost entirely free from constitutional symptoms, complaining principally of the eruption.

The physical examination of such a patient shows little besides the characteristic eruption. The patient looks sick—the face is flushed, the tongue is coated, and often there is a tremulous pulse, rapid, full, and regular. The spleen is usually moderately enlarged.

The eruption, the most characteristic symptom of the disease in this stage, consists of papules—small infiltrated areas, $\frac{1}{4}$ to $^1/_5$ cm. in diameter—distinctly raised, not inflamed, and having the characteristic shotty feeling to the finger. The papules do not coalesce, but in the confluent form may be very thickly scattered. They are all in the same stage of development, papules, vesicles, and pustules never occurring at the same time. The skin between the papules is sometimes swollen and inflamed, especially in the confluent form.

The eruption, resembling at first macules rather than papules, appears first along the junction of forehead and scalp, extending from there up into the hair and down over the face. Other favorite spots for its appearance are, the wrists, the flexor surfaces of the forearms, the palms of the hands and soles of the feet, and the mucous membrane of the mouth. In the severest forms the eruption may be general.

The urine may be normal or contain some albumin with hyaline and granular casts. In this stage the blood is normal or there is a slight leucocytosis.

The papular syphilide and chickenpox are the only diseases that might be confounded with smallpox in this stage. But the history, the marked constitutional symptoms with the severe pains in the head and back preceding the appearance of the eruption and then diminishing in severity on its development, and the characteristic eruption should be sufficient to prevent any error in diagnosis.

Dr. J. M. Mason, of Birmingham, Ala., writes:

In considering any papular eruption, the presence of an epidemic of smallpox or the history of exposure to smallpox should immediately put the physician on his guard. He should then carefully look for the presence or absence of signs of recent successful vaccination. The history of the illness for the three or four days preceding the appearance of the eruption should next be carefully inquired into, for the mode of invasion is the distinguishing feature of smallpox. If the eruption is that of smallpox and the patient has been under observation from the beginning of the disease, or if a reliable history can be obtained, it will be found that there has been a period of invasion lasting three or three and a half days.

The severity of the invasion symptoms varies, but in every case of variola they are present. Usually there is a history of chill, fever, intense headache, and backache, accompanied often by nausea and vomiting, and sometimes, in children, by convulsions. In milder cases the chill may be absent, the temperature lower, and the gastric symptoms perhaps wanting, but the headache and backache will practically always be severe enough to hold the patient's attention. On the evening of the third or morning of the fourth day these symptoms disappear and the papules come out. This abatement of severe symptoms upon the appearance of the rash is the distinguishing feature of smallpox, and is our most reliable guide in arriving at a correct diagnosis.

The rash at first is usually petechial, but papules soon form, increase in size, and may have a hard, shotty feel. During the papular stage the patient feels well and comfortable, and usually leaves his bed. Frequently he is much surprised at the extensive eruption which begins to appear. No matter how few papules appear, some will always be found on the face or forehead. Further than this, I do not believe anything sufficiently definite for diagnostic purposes can be said concerning the arrangement or location of the rash, for in recent epidemics the eruption has varied from a few scattered pustules to the severest forms of confluent smallpox. The papular stage is of short duration, and vesicles appear within from thirty-six to forty-eight hours.

Smallpox in its later stages may be confounded with many other diseases, but in the papular stage it will only be necessary to distinguish the disease from varicella, measles, rötheln, the papular syphilide, and possibly acne.

Varicella.—Invasion symptoms are usually absent, and are never of the length or severity of those of variola. The eruption of varicella is usually vesicular from the beginning, but when it is preceded by papules they are of very short duration. In some cases of varicella, headache, fever, etc., come on with the appearance of the eruption or immediately follow it, but the following points have enabled me to distinguish such cases from smallpox: In smallpox the headache, fever, etc., precede the eruption for three or three and a half days, and disappear upon the appearance of the eruption. In these cases of varicella there is no fever or headache until the eruption, or, perhaps, a few hours before it, but the symptoms persist and often increase in severity after the eruption has appeared.

Measles and Rötheln.—The invasion symptoms and the length of invasion do not correspond with those of smallpox. The symptoms do not abate with the appearance of the rash; the eruption remains papular.

Papular Syphilide.—Invasion symptoms do not correspond with those of smallpox, and a history of syphilis or the presence of other secondary signs is usually present. Fever, when present, does not disappear when the eruption appears.

Acne.—The eruption occurs without fever and is not accompanied by the invasion symptoms of smallpox.

Dr. George Edgar Hoffman, of Rochester, Ind., writes:

In making a diagnosis of smallpox in the papular stage, I rely on the eruption, its location and character; the concomitant symptoms and history of the case; the absence of vaccination; and the likelihood of exposure. Regarding the location of the eruption, I consider the sites and sequence of its appearing; the places of its predilection; the situations peculiar to it. The eruption makes its first appearance, and is most abundant, on those parts of the body exposed to the light and weather —the face and hands. I always inspect the back of the hands and wrists for the first appearance of the eruption in a suspected case. Conversely, the eruption is sparsest, and later in appearing, on the protected parts, while the opposite holds in chickenpox.

The eruption may appear simultaneously over the body; as a rule, it appears on the trunk in about twenty-four hours after its first appearance, extending downward to the extremities by the third day, or the sixth day of the disease. Cases vary exceedingly, the closest scrutiny reveals but a few pocks in some, while in others they cover the body. All the pocks of a region are of the same stage of development, though those of other parts of earlier appearance will be further advanced. The papular stage lasting two days, those on the face and hands will be well formed vesicles, while those on the trunk and extremities are yet papules. In chickenpox the eruption comes out in successive crops, pocks of different stages of development being side by side. The pock of chickenpox is a vesicle from its first appearance, wanting the true papular stage.

A characteristic feature in the distribution of the eruption of smallpox is that places affected by irritation will give rise to the eruption prematurely, and it will be limited strictly to the area affected by the irritant. A pimple, or scratch, or chafed spot where the collar rubs the neck, or the braces the shoulder, or the waistband the waist, or the garter the leg, or the scarification of vaccination, or the area of vesication from a blister, burn, or chemical irritant, etc., will fill with pocks among the first to appear, mapping out the region irritated. In a man having shaved with a razor after a son with the disease had used it, the eruption was a day earlier, and was fuller than anywhere else, on the left cheek and side of his neck, where, being right-handed, he shaved close.

An eruption corresponding to that on the skin occurs at the same time with it on the mucous membranes exposed to the air, especially those of the mouth and throat. Also diagnostic is the occurrence of the eruption on the palms of the hands and soles of the feet. If the eruption is found in the mouth and on the palms, there will be no question as to the diagnosis; in no other disease do these conjointly occur.

With regard to the character of the eruption, I consider its induration; its course of development; its time of appearing. The one positive characteristic of the papule of smallpox is the shotty feel it gives to palpation. The pock is first noticeable as a minute red spot in the skin, disappearing on pressure. In three or four hours it has increased in size, has become raised into a papule, and is hard and red; in twenty-four hours it is as large as a pea, intensely red, with the induration which distinguishes it. It begins to show at its apex a forming vesicle and loses its papular character. The eruption begins as a rule toward the end of the third day of fever.

In an epidemic of discrete smallpox coincident with one of chickenpox, it was often impossible to tell the disease from the eruption alone. But wherever the eruption followed several days of fever some case traceable directly to it would show all the characteristic lesions of smallpox, while those in which the eruption was not preceded by fever in no case proved to be smallpox.

The concomitant symptoms upon which I most rely are the abatement of the fever and its attendant symptoms and the appearance of the tongue. The fever abates and its attendant symptoms disappear upon the occurrence of the eruption. In some cases I have noticed a rash simulating the rash of measles appearing on the second day at the height of the fever and persisting till after the true eruption of smallpox appeared. Contrary to the observation of others, in my cases it was the precursor of the severer form of the disease, all these cases becoming confluent. In measles the fever rises with the occurrence of the rash, while it falls in smallpox.

The tongue in smallpox has a distinguishing yellowish-gray coating. In a case of syphilitic eruption accompanied with fever the absence of the peculiar coating on the tongue served to exclude smallpox, suspected, in its diagnosis.

The antecedent symptoms of aid in diagnosis, I find, are the epigastric or lumbosacral distress; the initial fever; the mode of onset. Nausea and vomiting occur in most cases, and with children and often with women the abdominal distress replaces the intense backache so pronounced in men as to constitute a distinguishing symptom of the disease. The fever distinguishes the disease from chickenpox, local skin affections, and drug eruptions. The rather sudden onset distinguishes the fever from that of typhoid.

Absence of vaccination and probable exposure to the disease are confirmatory in diagnosis. None of my three hundred cases occurred in a person previously vaccinated. Vaccination is a complete protection against the mild form of smallpox which prevails among us. A suspected eruption appearing in a person successfully vaccinated always has proved not smallpox, in my experience. A woman whom I had vaccinated (as public vaccinator) after exposure to smallpox, had a suspicious eruption some time after, while the scar of vaccination was still unhealed; relying on the vaccination, smallpox was excluded, which the further development of the case confirmed.

Therapeutical Notes.

Hepatic Colic.—*Journal de médecine interne*, for February 1, 1904, gives Chauffard's emulsion:

℞	Olive oil	150 to 400 grammes (5 to 13 ounces);
	Cognac	15 grammes (½ ounce);
	Yolks of egg	2.
	Menthol	50 centigrammes (7½ grains).

M. Take in the morning, in two doses, with fifteen minutes' interval.

Vaginitis.—Lutaud prescribes, according to *Journal de médecine de Paris*, for January 17, 1904, the following:

℞	Carbolic acid crystals	1 gramme (15 grains);
	Bismuth subnitrate	6 grammes (90 grains);
	Glycerin	25 grammes (⅝ ounce);
	Water	1 litre (1 quart).

M. Inject a small quantity after irrigating the vagina with boric acid solution.

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SANITARY INSTRUCTION IN THE PHILIPPINES.

It is exceedingly satisfactory to learn from the December report of the Philippine board of health that during that month there was put into operation in Manila a course of instruction for provincial health officers, and that those who composed the first class highly appreciated the teaching. It is to be hoped and expected that such instruction will aid powerfully in diffusing efficient sanitation through the archipelago. We read that the course, which extends over a period of four weeks, is wholly practical and is intended to make up for deficiencies of previous training and to induce the provincial boards of health to adopt prevalent methods of executing sanitary work. It is announced that the course will be repeated monthly until all the presidents of the provincial boards have enjoyed its advantages.

The teaching relates to municipal sanitary work at a district health station, including the inspection of houses and of articles of food, the diagnosis of plague and cholera cases and the removal of the sick, inoculation against the plague, the treatment of houses in which that disease is found, and the disinfection of houses. In addition, several days are spent in the work of port quarantine and the disinfection of ships, under the chief quarantine officer, and attention is given to the observation of the several methods in vogue of receiving and disposing of excreta and to plumbing inspection; the clinical and post mortem diagnosis of epizootics and the inspection of butchers' meat; the preparation of organic prophylactic products; the management of hospitals for various infectious diseases (plague, cholera, smallpox, leprosy, and venereal diseases), with the disposal of the dead; and the keeping of sanitary records, with the calculation of vital statistics and the preparation and use of reports.

It will be seen that such a course covers very fairly the field of ordinary sanitary work. Besides the items enumerated, it extends to inoculations against rinderpest and to the saving of crops by the use of fungus against locusts, so that it partly includes the work of an agricultural board. It is to be hoped that the day is not far distant when the Philippines will be practically delivered from the gravest of the pestilential diseases. Already, as we learn from the report, there has been a noteworthy diminution of their ravages.

THE HEALTH OF CHICAGO.

That portion of the annual message of the Honorable Carter H. Harrison, mayor of Chicago, that relates to the health of the city has been published in pamphlet form, and it is with pardonable pride that the commissioner of health, Dr. Arthur R. Reynolds, points to the fact that, with the exception of a single term, he has been the commissioner during the entire period of sanitary improvement covered by the mayor's review. We have frequently had occasion to commend Dr. Reynolds's administration of his important office, and we are sure that the praise bestowed upon it by Mayor Harrison is well merited.

According to the showing, Chicago has at present a lower death rate than that of any other one of the principal cities of the United States, and at a smaller cost in proportion to the population. The Chicago death rate is set down as 16.2 to each thousand of the population, while that of New York is given as 25.4, the cities of Cleveland, St. Louis, Buffalo, Cincinnati, Pittsburgh, San Francisco, Baltimore, Philadelphia, and Boston being ranged between the two in an advancing mortality rate corresponding to the order in which they are here mentioned. And it is at the lowest rate of expenditure, 10 cents per capita, that Chicago keeps her death rate down. In the matter of expense San Francisco shows to the least advantage; it costs the metropolis of the Pacific coast 64 cents per capita for sanitation, but perhaps this high rate is partly due to the recent campaign against the Oriental plague. Boston and New York spend 30 cents per capita each.

The mayor mentions what he regards as the important features in the work of the health authorities of his city. The first of them has to do with the supervision and inspection of the milk supply. "which," says the mayor, "has resulted in giving Chicago the best milk and cream of any large city in the country." Perhaps this statement is based largely on inference, but we have no doubt that the commissioner's activity has been of vast advantage in the reduction of infant mortality. The cost of the milk inspection service for the year 1903 was $8,915, while the license fees and fines collected amounted to $52,864. The mayor suggests that a portion if not the whole of this excess of $43,949 of receipts over expenses should be applied to an extension of the work in the direction of careful inspection and supervision of the milk supply at the points of production.

Among the other special features of the health commissioner's work mentioned by the mayor are efforts in preventive medicine, especially with reference to consumption, diphtheria, influenza, pneumonia, scarlet fever, smallpox, and typhoid fever—specifically, the "campaign of education" with regard to pulmonary tuberculous disease, the resumption of systematic public vaccination, the promotion of the antitoxine treatment of diphtheria, and information given to the public as to the quality of the water supply, based upon daily chemical examinations. All these are matters of the greatest importance in preserving the health of a community, and we congratulate the people of Chicago on the vigilance with which their health commissioner has attended to them. It is to be hoped that the city will be able in the future to keep its death rate and its sanitary expense rate down to the present figures or perchance show still greater improvement. The facts given by Mayor Harrison should prove an incentive to the sanitary officials of other cities to do all that may be possible to secure equally good results.

THE ORIGIN OF SEXUAL CHARACTERISTICS.

Deviations from the normal sexual characteristics and organs have always excited in the professional mind a mystery and an interest due in large part, perhaps, to the inability to explain the origin of the pseudohermaphroditic condition; in another part, no doubt, to the grotesqueness and curiosity attaching to these abnormities. Embryology has taught us much, in more recent years, as to the actual development of the genital organs; yet some of its problems still remain unsolved.

We are at an entire loss to understand, for instance, why the genital gland, which is apparently laid down in a normal manner, and which is derived from the union of normal ova and spermatozooids, should take on a partial overgrowth of the characteristics of one sex to the detriment of those of the other, giving rise to a pseudohermaphroditism. And we have no logical embryological data to account for the presence of ovarian or testicular tissue alone in those instances in which the external genital organs are seemingly those of both the male and the female. The contention of Herbst that the genital gland is developed for a considerable time before the rest of the genital apparatus and exercises a decided postembryonal influence upon the latter, has always seemed to us an attempt to explain sexual character in an *a priori* manner. Medical literature is becoming more and more enriched by serious studies along these lines, and observers are no longer content merely to note an abnormity without seeking an explanation.

Within the last year Neugebauer and Landau abroad and Goffe and Brickner in this country have contributed to the general subject. Halban has taken up the special consideration of the sexual characters (*Archiv für Gynäkologie,* LXX, 2), and reaches the conclusion from his experimental and clinical studies that there is no ground for the belief that the primitive genital gland exercises a developmental influence upon the homologous sexual apparatus or an inhibitory effect upon heterologous organs. He contends that the rudiments of the genital organs cannot be the same for both sexes. At an early time, either before or after impregnation, the ovule possesses its sex-determining impulse, which is absolutely determining for the genital gland as well as for the rest of the sexual organs. In other words, the sex of the ovule is predetermined by influences which are still beyond the ken of our microscopes. Halban suggests, in fact, that the differences between the male and female genital gland may be "methistological" or even chemical.

This predetermination must, of course, be of hereditary character, and is, therefore, distinctly in line with the theory of Weissmann. Upon this theme Halban does not touch, but it has an important clinical corollary in that sex determination cannot be influenced by external means, if Halban's contentions are correct; and they have had, it might be added, the theoretical sanction of many keen observers.

Halban's further views are necessarily of interest, and must be briefly reviewed. For the explanation of pseudohermaphroditic characters he assumes a double sexual impulse residing in the primitive genital gland, which leads to an incomplete development of heterologous organs. The gland, ovary or testicle, exercises at the time of puberty a "protective" influence, seeking, as it were, to evoke the full sexual characteristics of a single sex, to save the individual from being a reproach to Nature; but these secondary characteristics may be developed, as is generally accepted, even in the absence of an homologous genital gland. The author takes up the question of psychical hermaphroditism, and discusses the congenital perversions and the loss or retention of the *nisus sexualis* in women whose ovaries have been removed. As to the latter, it is certainly true that the feminine psychical state persists even after double oophorectomy, and the secondary physical characteristics also remain unchanged; so that it is doubtful if an operation in itself can alter, especially can diminish, the sexual distinction, and it becomes more than likely that it is the absence of the ovaries which is accountable for any possible change in sexual desire.

The weak point in Halban's argument lies in his effort to explain the great development of the secondary sexual characteristics at the time of puberty by the influence of the genital gland. For if the original gland is endowed with the characteristics of both sexes and thus leads to the development of the organs of both the male and female, there is no reason to assume that its faculty is changed and that it can become imbued with the power of trying to make an imperfect being perfect. Nature, moreover, is known for her relentless and inexorable cruelty, and she prefers to extol the exactness of her unflinching law to the production of somatic harmony. Many of the secondary sexual characteristics, further, can be developed to their full perfection without the influence of the genital gland, so that Halban's view on this point is seriously open to question and cannot be accepted.

His whole study, however, is exceedingly suggestive and is thoroughly convincing. The subject is one which lends itself to detailed observation, and much clearer views on sexual characteristics, on the perversions, on abnormities, and on maldevelopments are sure to obtain when the systematic study of "the origin of things" is more persistently and more widely followed.

THE TUBERCULOSIS EPIDEMIC AMONG THE STREET SWEEPERS OF THE CITY OF NEW YORK.

The daily papers of the past week made the startling announcement that one fifth, and according to some, one third, of the street cleaning force of New York had contracted tuberculosis. These statements were confirmed by the declaration of Commissioner Woodbury, who, as we all know, is a physican of large experience. It has been stated that five years' work as a street cleaner of New York makes the average individual a consumptive. When we consider that every employee in the street cleaning department must be carefully examined and found to be in perfect health before being admitted into the service, when we further consider that street cleaning is an outdoor occupation, and, lastly, that in European cities, as for example in Berlin, the street sweepers show the smallest morbidity and mortality from tuberculosis and other diseases among that city's laboring population, the medical profession may well ask itself why conditions are so different in New York?

To the close observer it is not difficult to find an explanation. In well regulated European cities the streets are frequently sprinkled before they are swept; here the sweeping is almost invariably done dry. Now, it is not the tubercle bacillus alone which renders our street cleaners consumptive, but it is the constant inhalation of all kinds of dust and the consequent irritation of the pulmonary surfaces, which make the invasion of the germ of tuberculosis more easy. The sweeping of streets in the dry state should be considered as a crime against our fellowmen. It is not the air, but the dust in the air, which renders New York such a dangerous place, particularly in summer, to people predisposed to pulmonary troubles. While, as a natural consequence of being in closer proximity to the dust, the street cleaners are the first to suffer, the citizens at large who are obliged to remain in New York during the summer months suffer also to a considerable degree. We are all apt to breathe the irritating and infectious dust raised by sweeping, by gusts of wind, by street cars, and by automobiles. Those who wish to get an idea of the amount of dust in the atmosphere of New York on a dry day I advise to watch for a few moments in the vicinity of the Circle at Eighth Avenue and Fifty-ninth Street.

Something effectual must be done to stop this source of tuberculosis and other diseases of the respiratory organs in our metropolis. If street cleaning as it is done now renders the average employee consumptive within a few years, the sources of tuberculous infection are increased; furthermore, the majority of the street cleaners being of the poorer classes, they will become burdens to the community the moment they cease to be breadwinners. By a wise decision of the city authorities there is now an increased provision for water supply to the city. This should be used immediately for extensive sprinkling of all the streets of New York. The few private sprinkling companies are in no way adequate to cope with the situation. Instead of forbidding individual house owners to use a hose for sprinkling purposes in front of their houses, though they may possess a water meter, such a procedure should rather be encouraged. No street should be swept without being previously sprinkled, and the gutters in the streets should be flushed daily, except in freezing weather. To forbid people to spit altogether when outdoors is unreasonable and any such law would not be carried out, but a law could be enforced which made spitting in the gutter permissible, but expecorating on the sidewalk and in the middle of the street punishable by a severe fine. Besides all these precautions, street cleaners could be provided with respiratory masks as an additional protection, particularly in very dusty localities.

To aid future prophylaxis it might be interesting to find out how many of the street cleaners that have become tuberculous are total abstainers, moderate or heavy drinkers, for there is no doubt in my mind that the excessive use of alcohol has rendered some of them more susceptible to the invasion of the tubercle bacillus.

New York is, however, face to face with another problem at this moment besides the prevention of the spread of tuberculosis among its street cleaners. In the examination of all the street cleaners, which has been instituted by order of the commissioner, a large number of the employees will be found tuberculous and in need of immediate treatment. What is going to be done with them? Our general hospitals are filled, and even if we had accommodations in them, they are no places to treat consumptives. The facilities existing now in New York for the treatment of consumptives without means are extremely limited, and the few institutions devoted to the exclusive care of this disease are filled to overflowing. A proper place to treat those unfortunate street cleaners who have fallen victims to tuberculosis in the performance of their duty would be a municipal sanatorium. We have none, and it takes time to build one. Yet there should be no delay, and in view of the warm weather coming upon us a tent colony would now answer the purpose of a sanatorium very well indeed, and could be established in a week or two. There are enough suitable sites in the surrounding counties where such a colony could be established, and where, with good hygienic and dietetic treatment, under proper medical supervision, all the affected street cleaners could be taken care of and given the best possible chance for cure. No time should be lost in inaugurating the above mentioned preventive measures or in the establishment of a municipal tent sanatorium for the consumptive street cleaners.

S. A. KNOPF.

TEMPORARY SERVICE IN THE NEW YORK CITY HOSPITALS.

We learn from the Board of Trustees of Bellevue and Allied Hospitals that graduates in medicine who may be desirous of serving as substitutes for members of a house staff during their absence on leave may apply to the superintendent of Bellevue Hospital, First Avenue and East Twenty-sixth Street, presenting their credentials as to time and place of graduation, hospital experience, and references. The allied hospitals are the Gouverneur, Harlem, and Fordham. Such service is of great value to young graduates who have not been so fortunate as to obtain a regular appointment.

MOSQUITOES AND THE HOUSETOP TANKS.

Under this heading, rather more than a year ago (in our issue for March 28, 1903), we pointed out the necessity of screening the tanks if mosquitoes were to be banished from New York. The *Brooklyn Daily Eagle* for last Friday says: "There are in all the country few places more troubled by mosquitoes than is lower Manhattan. That is because they are bred in the tanks that surmount the buildings there." We are glad of the *Eagle's* aid in our endeavor to balk the mosquito in the tank, and we hope the health department will give its attention to the matter as well as to that of filling up surface depressions that lodge collections of water for several days after every smart shower.

PLACENTOPHAGIA IN A WOMAN.

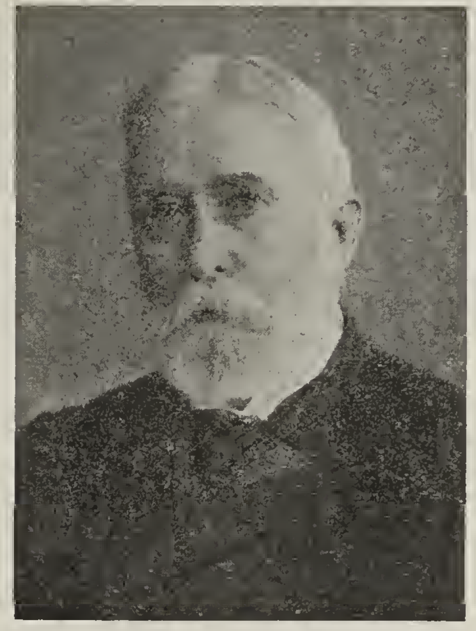
There is no telling to what length an irresistible desire may carry a person. At a recent meeting of the Société française d'obstétrique, de gynécologie et de pédiatrie *(Médecine orientale,* April 10th) M. Reverdin, of Geneva, reported the case of a woman who, immediately after her confinement, called imperatively to see the placenta, and then bit it, acting, as she afterward said, under an irresistible impulse.

Obituary.

ROBERTS BARTHOLOW, M. D., LL. D.,

OF PHILADELPHIA.

Roberts Bartholow, A. M., M. D., LL. D., professor emeritus of materia medica, general therapeutics, and hygiene in Jefferson Medical College, of Philadelphia; Fellow of the College of Physicians; Member of the American Physiological Society; honorary member of the Société médico-pratique de Paris, and of various national, state, and county medical societies; formerly professor of the practice of medicine and clinical medicine in the Medical College of Ohio; author of a treatise on the practice of medicine, a practical treatise on materia medica and therapeutics, a manual of hypodermic medication, the Russell and Jewett prize essays and prize essays of the American Medical Association and of the Rhode Island Medical Society, etc.; died in Philadelphia on Tuesday, May 10th. He was born in Maryland, on November 28, 1831, and received his literary education in Calvert College, Maryland, graduating from this institution in arts. He pursued his medical studies in the University of Maryland, where he graduated in 1852. Mount St. Mary's College, of Maryland, subsequently conferred upon him the degree of LL. D. Dr. Bartholow joined the medical staff of the army in 1856, serving for eight years, and from this experience wrote the book, entitled *Qualifications for the Medical Service.* He resigned from the army in 1864 to accept a professorship in the Medical College of Ohio, in Cincinnati, in which institution he occupied the chairs of theory and practice of medicine and clinical medicine, and became dean of the faculty. In 1879 he went to Philadelphia, and has since then been connected with the faculty of the Jefferson Medical College. Dr. Bartholow has written numerous prize essays, and his *Practical Treatise on Materia Medica and Therapeutics* and that on the *Practice of Medicine* brought him great distinction. The latter work has been translated into Japanese; the former is in its eleventh edition, and more than 60,000 copies of it have been sold. He leaves a son, Dr. Paul Bartholow, who is already eminent in the profession.



Dr. Bartholow made a decided impress upon the medicine of his time. It is not too much to say of him that he stemmed the tide of "therapeutic nihilism," a phrase introduced by himself, if we remember aright. His reputation was much enhanced by the Cartwright lectures, *On the Antagonism Between Medicines and Between Remedies and Diseases*, which he delivered in New York in 1880. For many years he was undoubtedly looked upon as the most prominent American authority on therapeutics. The simplicity and impressiveness of his style of writing account very largely for his eminence as a teacher. The loss of Dr. Bartholow, though he lived to more than the three score and ten and was active in professional matters to the last, will long be felt acutely.

News Items.

Society Meetings for the Coming Week:

Monday, *May 16th.*—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

Tuesday, *May 17th.*—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

Wednesday, *May 18th.*—New York Academy of Medicine (Section in Genitourinary Diseases); New York Society of Dermatology and Genitourinary Surgery (private); Woman's Medical Association (New York Academy of Medicine); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

Thursday, *May 19th.*—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

Friday, *May 20th.*—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Postgraduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynæcological Society; Manhattan Medical and Surgical Society (private).

Changes of Address.—Dr. William A. de Watteville, to 371 Lexington Avenue, between Fortieth and Forty-first Streets. Dr. John O. Roe, to 44 Clinton Avenue, South, Rochester, N. Y. Dr. J. W. Sherer, to the southeast corner of Twelfth and Wyandotte Streets, Kansas City, Mo.

NEW YORK

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending May 7, 1904:

	Week end'g April 30.		Week end'g May 7.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	1,398	46	1,836	39
Diphtheria and croup	409	62	382	40
Scarlet fever	419	26	391	23
Smallpox	6	..	1	..
Chickenpox	44	..	78	..
Tuberculosis	490	199	411	197
Typhoid fever	40	6	18	8
Cerebrospinal meningitis	30	70	..	77
Totals	2,756	409	3,117	384

The Increased Fees at Columbia.—It is stated that thirty-five medical students will leave Columbia on account of the unexpected increase in the annual fee, from $200.00 to $250.00.

Manhattan State Hospital, West.—An interesting author's reading was given at this hospital on May 11th, by Miss Martha Young, assisted by the hospital orchestra, under the direction of Mr. George Kazamek.

Visiting Neurologist to the City Hospital.—After due election at the May meeting of the medical staff, Dr. W. B. Pritchard, of 105 West Seventy-third Street, has been appointed visiting neurologist to the city hospital by the commissioner of charities.

The New York State Medical Association will hold a stated meeting on May 16, 1904, at the New York Academy of Medicine, with the following programme: Presentation of clinical cases or reports, pathological specimens, new instruments, etc. Papers: Bacteriopathology in Cerebrospinal Meningitis, by Thomas Wood Hastings, M. D.; Clinical Symptoms and Treatment of Cerebrospinal Meningitis, by Joseph E. Winters, M. D.; History of the Work Done in the Legal Department, by James Taylor Lewis. A collation will be served at the close of the meeting.

The New York Academy of Medicine.—The section on Medicine will meet Tuesday evening, May 17, 1904, at 8.15 o'clock. Order: Presentation of Cases; Clinical Reports: Notes on Some Uncommon Forms of Nervous Diseases, by Dr. L. Pierce Clark; Papers: Reports on the Dispensary Treatment of Tuberculosis in New York City. (a) The Modern Tuberculosis Dispensary, with report from the health department, by Dr. S. A. Knopf; (b) Gouverneur Hospital, by Dr. Stella J. Bradford; (c) The Vanderbilt Clinic, by Dr. Linsley R. Williams; (d) Bellevue Hospital, by Dr. James A. Miller; (e) Throat, Nose, and Lung Hospital, by Dr. J. L. Barton; (f) Use of X Ray in the New York Health Department Dispensary, by Dr. C. T. Graham Rogers. A discussion will follow. Charles H. Lewis, M. D., chairman; E. E. Smith, M. D., secretary, 26 East Twenty-ninth Street.

The American Therapeutic Society.—The fifth annual meeting will be held at the Academy of Medicine, New York, June 2, 3, and 4, 1904, with the following programme:

Presidential Address, Howard H. Barker. Symposium: Recent Advances in Anæsthesia, by Dr. Reynold Webb Wilcox, of New York; Dr. Torald Sollmann, of Cleveland, Ohio; Dr. Millard F. Thompson, of Washington, D. C.; Dr. Edward J. Keipe, of Buffalo, N. Y.; Dr. Willam James Morton, and Dr. Samuel G. Gant, of New York. Symposium: The Combat with Infection. Infection and Immunity, by Dr. Thomas E. Satterthwaite, of New York; Physiological Problems, by Dr. William H. Porter, of New York; Antisepsis in Surgery, by Dr. Robert T. Morris, of New York; Antisepsis in Medicine, by Dr. J. N. Hall, of Denver, Col.; Protective Inoculation, by Dr. George F. Butler, of Alma, Mich. Symposium on Recent Advances in Special Therapeutics: Ophthalmology and Otology, by Dr. D. B. St. John Roosa, of New York; Gynæcology, by Dr. J. Thomas Kelly, Jr., of Washington; Surgery, by Dr. Carl Beck, of New York; Materia Medica, by Dr. Arthur A. Stevens, of Philadelphia; Physiological Therapeutics, by Dr. Solomon Solis Cohen, of Philadelphia; Electrotherapeutics, by Dr. William James Morton, of New York; Orthopædia, by Dr. Russell A. Hibbs, of New York; Dermatology, by Dr. Edward Bennet Bronson, of New York; Laryngology and Rhinology, by Dr. Charles H. Knight, of New York; Genitourinary, by Dr. James Peterson, of New York; Pædiatrics, by Dr. Noble P. Barnes, of Washington; Obstetrics, by Dr. Egbert H. Grandin, of New York; Neurology, by Dr. Frederick Peterson, of New York; The Medical Treatment of Appendicitis, by Dr. Arthur J. Hall, of Washington, D. C.; The Need of Revising Our Dose of Stimulation, by Dr. Eli H. Long, of Buffalo, N. Y.; The Treatment of Chronic Colitis, by Dr. Jesse Shoup, of Washington, D. C.; The Ætiology and Treatment of Arteriosclerosis, by Dr. Oliver T. Osborne, of New Haven, Conn.; Arthritis Deformans and Its Treatment, by Dr. Louis Kolipinski, of Washington, D. C.; The Therapeutic Value of Mechanical Vibration, by Dr. Henry Ling Taylor, of New York. Changes or additions to the programme must be sent at once to N. P. Barnes, secretary, 212 Maryland Avenue, N. E., Washington, D. C.

Final Steps Taken to Consolidate the Societies and Associations of New York State.—At a meeting of the Joint Commitee of Conference, held at the New York Academy of Medicine, May 6, 1904, the following resolutions were passed:

Resolved, That the president and the secretary of the Joint Committee of Conference be authorized and directed to make a certificate provided for the tenth paragraph of the agreement, and the counsel of the committee be directed to proceed with diligence to obtain a final order for the consolidation of the corporations, pursuant to the terms of the agreement, and that the form of the certificate to be made by the chairman and the secretary, be in the form of the draft certificate submitted to this committee, which is as follows:

Supreme Court,
New York County.

In the Matter
of
The Application of the Medical Society of the State of New York, and The New York State Medical Association, for an order consolidating the said corporations, pursuant to the Act, Chapter 1, of the Laws of 1904.

This is to certify that the Joint Committee of Conference mentioned in the agreement for the consolidation of the Medical Society of the State of New York and the New York State Medical Association, which agreement was unanimously adopted by the Medical Society of the State of New York, at its annual meeting at Albany, on January 26, 1904, and by the New York State Medical Association at a special meeting of the association held in New York, on March 21, 1904, has not ordered the submission of said agreement or of any questions in connection therewith, to the county medical societies or associations, referred to in said agreement, and that the conditions precedent to an application to the court for an order consolidating the Medical Society of the State of New York and the New York State Medical Association have been fully complied with; and this certificate is made pursuant to the "tenth" paragraph of said agreement.

In witness thereof, the undersigned, Abraham Jacobi, chairman of the Joint Committee of Conference, and Wisner R. Townsend, secretary of the Joint Committee of Conference. do hereunto subscribe their names at the City of New York this day of May, 1904.

Thirty out of thirty-five county associations have ratified. One, Onondaga, has refused to ratify, four have not yet reported.

The associations that have ratified represent a membership of 1,711, and those that have not acted a membership of 42. The one refusing to ratify has 14 members.

Ratifications have been received from 47 out of the 51 county societies, four have not yet acted. Those which have ratified represent a membership of 5,569. Those which have not yet acted, a membership of 164.

According to the agreement, article ten, declares "that whenever the chairman and secretary of the Joint Conference Committee shall certify that the conditions precedent to an application to the court have been fully complied with, the presidents of the respective corporations shall, and they are hereby authorized and required in the name and behalf of their respective corporations, to petition the Supreme Court for an order to consolidate in accordance with the terms thereof.

Therefore all county associations and societies that have not ratified will be asked to appear before the court at a specified date, appointed by the court, and show cause why the consolidation should not be completed according to the terms of the agreement, despite their failure to ratify.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Weew end'g April 30.		Week end'g May 7.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	23	8	26	5
Diphtheria	71	9	71	9
Scarlet fever	89	6	102	3
Typhoid fever	298	45	277	38
Consumption	..	73	..	86
Cerebrospinal fever	..	..	..	..

Professor Charles S. Sherrington, the noted physiologist of Liverpool, was the guest of the University of Pennsylvania last week.

The Nurses' Associated Alumni of the United States, which, with the affiliated societies represent a membership of about 5 000 trained nurses, met in Philadelphia this week.

Dr. E. E. Montgomery, professor of Gynæcology of the Jefferson Medical College of Philadelphia, will give a reception at the college on June 6th, at 6.30 p. m., to the members of the class of 1874.

Dr. Anita Magee, of Philadelphia, who has taken a staff of volunteer nurses from America to Japan, has been appointed manager of the military hospital at Matsuyama by the directors of the Japanese red cross society.

Smallpox in Delaware County.—It appears that Delaware County is again threatened with a smallpox epidemic. During the past week the disease has been discovered in Media Uplan, and in Springfield Township, near Swarthmore.

Jewish Hospital.—The Citizens' Committee of Olney are trying to procure by subscription a new ambulance for the Jewish Hospital of Philadelphia, in recognition of the good work done by the hospital. It is stated that they are progressing favorably with the work.

William M. Geary, formerly superintendent of the Philadelphia Hospital, died last week in Philadelphia. Mr. Geary was formerly also recorder of deeds in Philadelphia. His death is mentioned in these columns on account of the many friends among the physicians which he made while superintendent of the almshouse.

The Mount Sinai Hospital Association of Philadelphia has bought a property on Fifth and Wilder Streets, which will be used as a hospital and dispensary, and is expected to be ready for occupancy about the middle of June. An additional building is to be erected at the rear of the property, and will be a fully equipped hospital.

Jefferson Medical College.—The commencement will be held at the Academy of Music, on May 27th, and the commencement address will be delivered by George F. Baer, LL. D., president of the board of trustees of the Franklin and Marshall College, and president of the Philadelphia and Reading Railway.

Polyclinic Hospital.—The Polyclinic Hospital during April, 1904, treated 1,959 new cases in the dispensaries and 6,517 return visits were paid, making a total of 8,476 cases treated in the dispensaries during the month. In the receiving ward 615 cases were treated during the same period and 128 patients were admitted to the wards of the hospital; while 108 were discharged.

New Training School for Howard Hospital.—A four story nurses' home will shortly be erected on a lot at the southeast corner of Broad and Catherine Streets, adjoining the Howard Hospital. The plans upon which John W. Emery is estimating call for a brick, fire proof structure, 30 by 30 feet. A sun parlor, 14 by 36 feet, for the use of convalescent patients will be placed on the south side of the building.

Dr. William Barton Hopkins, a prominent physician of Philadelphia, died at his home last week. At the time of his death Dr. Hopkins was a surgeon to the Pennsylvania Hospital, as well as to the Orthopædic Hospital and Infirmary for Nervous Diseases, and had formerly been for many years a surgeon to the Episcopal Hospital of Philadelphia. He was the author of several treatises on surgical subjects.

The Health of Philadelphia.—There has been a slight, but comparatively very slight, abatement in the prevalence of typhoid fever in Philadelphia, as shown by the report issued by the bureau of health last week. Smallpox, although it has considerably decreased, is still existing and maintaining a more or less regular average. There has been an unusually large number of deaths from pneumonia since January. There is a slight decrease in the number of deaths from tuberculosis.

Presbyterian Hospital Training School of Philadelphia.—Graduation exercises were held on May 3rd in Princeton Church, by the Presbyterian Hospital Training School for Nurses. Music was furnished by the church choir, and the speakers were Reverend J. Addison Henry and Dr. W. E. Hughes. Diplomas were awarded to Anna E. Abele, Maude G. Burnes, Mary B. Beattie, M. Louise Beaty, Beatrice Blackstock, Agnes C. Browne, Mary B. Cameron, Mildred Clark, Beatrice E. Connely, Ethel H. Fisher, D. Elizabeth Johnson, Willon Jordon, Mabel A. Metzger, Sophia D. Roese, Julia F. Sharpless, M. Katharine Thatcher, Myrtle M. Weaver, and Mary N. Wenger.

Pennsylvania Society for the Prevention of Tuberculosis.—At the annual meeting of the society, held in Philadelphia last week, the following officers were elected: President, Dr. Howard S. Anders; secretary, Dr. Ward Brinton; vice-presidents, Dr. J. Solis Cohen, Dr. Guy Hinsdale, Dr. Lawrence F. Flick, Dr. Benjamin Lee, Dr. S. A. Knopf, Dr. A. E. Roussel, Dr. Samuel G. Dixon, Dr. M. P. Ravenel, Samuel Castner, and Samuel Scoville, Jr.; directors, Dr. Joseph Walsh, Dr. D. J. McCarthy, Dr. George W. Norris, Dr. M. P. Ravenel, Dr. J. Solis Cohen, Dr. Howard S. Anders, Dr. Ward Brinton, Dr. Lawrence F. Flick, Dr. A. E. Roussel, Samuel Scoville, Jr., and Dr. Leonard Pearson.

GENERAL

Statement of Mortality in Chicago, Ill., for the Week Ending May 7, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on the U. S. Census Bureau's estimated mid-year populations of 1,932,315 for 1904 and of 1,873,880 for 1903:

	May 7, 1904.	Apr. 30, 1904.	May 9, 1903.
Total deaths, all causes	539	561	672
Important causes of death—			
Acute intestinal diseases	18	15	16
Apoplexy	20	19	13
Bright's disease	31	53	41
Bronchitis	19	23	28
Consumption	76	62	69
Cancer	19	24	25
Convulsions	7	6	12
Diphtheria	8	8	7
Heart diseases	43	45	45
Influenza	..	2	8
Measles	..	1	18
Nervous diseases	21	29	32
Pneumonia	120	114	178
Scarlet fever	4	7	12
Suicide	6	7	9
Typhoid fever	6	12	6
Violence (other than suicide)	32	26	27
Whooping cough	..	1	9

Only consumption and pneumonia, among the important causes of death, show any material increase in the number reported during the week—14 of the former and 6 of the latter more than in the previous week. The total deaths from all causes are 22 fewer than for the week of April 30th and 133, or more than one fifth, fewer than for the corresponding week of 1903. In proportion to population the figures show decreases of 3.8 and 21.9 per cent. respectively.

The excessive mortality that has obtained from the two specified diseases since the first of last November still keeps up, and all previous records, both in this city and in New York, have been far distanced this season. At the close of office hours on Saturday, May 7th, the reported deaths from all causes, from consumption and from pneumonia in each city, since November 1, 1903, were as follows:

	New York.	Chicago.
Total deaths, all causes	42,249	15,329
Deaths from consumption	4,706	1,636
Deaths from pneumonia	9,119	3,443
Proportion per cent. of all deaths—		
From consumption	11.1	10.6
From pneumonia	21.5	22.4

These figures show that, while New York has had a 4.7 per cent. excess of consumption mortality as compared with this city, Chicago has had a 4.2 per cent. excess of pneumonia mortality.

Scott County, Ky., Medical Association—A Correction.—The list of officers of this association was incorrectly given in our issue of April 30th. The correct list is as follows: President, Dr. Levi McLain; vice-president, Dr. Thomas Close; secretary, Dr. T. E. Biery.

Antivivisectionists Again Defeated in Massachusetts.—The antivivisectionists met with another defeat in the Massachusetts House on May 4th, the adverse report of the probate and chancery committee being accepted and the bill desired by the petitioners being rejected, 35 to 90.

Medical and Chirurgical Faculty of Maryland.—At the one hundred and sixth annual meeting of this society at Baltimore, concluding April 28th, the following officers were elected: President, Dr. Edward N. Brush; vice-presidents, Dr. Samuel T. Earle, Jr., Dr. D. C. R. Miller, and Dr.

Julius A. Johnson; secretary, Dr. John Ruhrah; treasurer, Dr. T. A. Ashby.

A Reported Antidote for Snakebite.—It is stated that Dr. Weir Mitchell announced at the annual banquet in Washington of the Association of American Physicians on May 10th, that he had received a communication from Dr. Noguchi, of Japan, to the effect that the latter had discovered a positive antitoxine for snake venom. Dr. Noguchi is working under a grant from the Carnegie Institution at the Serum Institution in Copenhagen.

New York State Medical Examiners.—The State board of regents have reappointed the following members of the State board of medical examiners: Dr. J. P. Creveling, of Auburn; Dr. Eugene Beach, of Gloversville; Dr. L. A. Martin, of Binghamton; Dr. John B. Garrison, of New York; Dr. Eli Denny, of Oneonta, and Dr. D. E. Ensign, of McGrawville. A limited charter has been granted by the board to the training school for nurses connected with St. Peter's Hospital. Albany. A permanent charter has been granted to the Rensselaer library.

South Carolina Board of Medical Examiners.—The State medical society, at its recent session in Darlington, April 22nd, nominated the following physicans as members of the board of medical examiners: First district, W. P. Porcher, of Charleston; second district. T. G. Croft, of Aiken; third district, O. B. Mayer, of Newberry; fourth district, Davis Furman, of Greenville; fifth district, R. A. Bratton, of Yorkville; sixth district, J. L. Napier, of Blenheim; seventh district, S. C. Baker, of Sumter; at large, W. M. Lester, of Columbia. On his return the governor appointed the nominees and they held the examination in Darlington on the 26th of April.

The Late Sir Philip Crampton Smyly, M. D.—Sir Philip Crampton Smyly died in Dublin, Ireland, on April 8th, very suddenly of cerebral hæmorrhage. He was president of the Laryngological Association of Great Britain, vice-president of the Section of Laryngology at the annual meeting of the British Medical Association in London, president of the Irish Medical Association, president of the Irish Medical Schools' and Graduates' Association, and next month he was to have become president of the Leinster Branch of the British Medical Association. He was consulting surgeon to the Dublin Hospital for Diseases of the Throat, Nose, and Ear, the Rotunda Hospital, and the National Children's Hospital.

The New Hampshire Society for the Prevention of Consumption has been organized with Dr. O. B. Douglass as chairman; Dr. John H. Neal, of Rochester, treasurer; Dr. H. T. Fontaine, secretary, and Dr. E. O. Crossman, Dr. I. A. Watson, Dr. E. Mitchell, and Dr. D. S. Adams completing a temporary executive committee. The headquarters of the society is at Concord. The following by-laws state the object of the organization and the conditions of membership:

1. The name of this organization shall be the New Hampshire Society for the Prevention of Consumption.
2. The object of this society shall be: To instruct consumptives in the ways and means to prevent the spread of the infection, and to better their physical condition.
3. A contribution of $25 at one time shall constitute a life membership, and such a member may vote at each meeting of the society.
4. A contribution of $1 or more shall constitute an annual membership, and such a member may vote at each meeting of the society for one year.
5. The authority shall be vested in an executive committee composed of seven members to be elected annually by a majority vote of the members present.
6. These by-laws may be changed at any regular meeting of the society called for the purpose.

In a circular sent out by the committee it is further stated, in substance, that the society is intended to furnish a means whereby the crusade against consumption, which is active in nearly all civilized countries, can be carried on upon a wider scale in New Hampshire. The committee invites the cooperation of the public.

The Detroit, Mich., College of Medicine has graduated the following:

Robert C. Allen, of Harbor Springs, Mich.; Charles H. Anderson, of Brunswick, Mich.; Lester W. Bellow, of Waterloo, N. Y.; Albert Bernstein, of Detroit; Julius E. Block, of Cherokee, Ia.; Roscoe Broughton, Jr., of Paw Paw, Mich.; George C. Burns, of Tremont, Mich.; Thomas J. Callan, of Detroit; Clarence D. Chapin, of Silverwood, Mich.; George W. Chisholm, of Windsor; Guy M. Claflin, of Adrian; Oscar G. Cowley, of Peck, Mich.; David A. Dickson, of Galt, Ont.; Theophilus C. Dolan, of Windsor; Thomas J. Dowling, of Chatham, Ont.; Charles W. Eastman, of Seneca Falls, N. Y.; George H Ensing, of Kalamazoo; Claude B Erwin, of Oak Grove, Mich.; John O. Gaston, of Brook, N. Y.; Arlon H. Gifford, of Augusta, Mich.; Henry G. Harris, of Port Huron; Edward H. Hayward, of Detroit; Randolph J. Hersey, of Montreal, Que.; Ernest H. M. Highfield, of Detroit; Jesse J. Holes, of Battle Creek; Richard G. James, of Detroit; George E. Johnsin, of Hawarden, Ia.; Karl H. Kellogg, of Battle Creek; Morris B. Landers, of Bonsville, Mass.; Henry W. F. Law, of Hanna, N. D.; William C. Lawrence, of Detroit; Charles B. Leonard, of Detroit; C. Bradford Lundy, of Detroit; Alexander J. Mackenzie, of Point Edward, Ont.; John Masselink, of Oakland, Mich.; Edward G. Martin, of Harbor Springs; Calvin McCarroll, of Detroit; James McCarroll, of Detroit, Mich.; Daniel McFayden, of Detroit; James F. MacGeagh, of Detroit; Tom C. McIntyre, of Forest, Ont.; Charles H. McLean, of St. Mary's, Ont.; Martin H. Nester, of Rogers, Mich; Stanley O. Newcomb, of Carleton, Mich.; Otis E. Newsome, of Vandalla, Mich.; Kenneth Noble, of Monroe, Mich.; Charles F. Pequegnot, of Sandwich, Ont.; Howard W. Pierce, of Detroit, Mich.; Otto L. Ricker, of Cadillac, Mich.; Robert A. Risk, of Mackinac, Mich.; Eugene E. Robb, of Metamora, O.; George P. Sackrider, of Owosso, Mich.; M. J. Schwanz, M. D., of Detroit, Mich.; Benjamin A. Shepard, of Hillsdale, Mich; De Witt L Sherwood, of Ypsilanti, Mich.; Charles E. Skinner, of Detroit, Mich.; Henry V. Smith, of Detroit, Mich.; Ralph C. Smith, of Detroit, Mich.; Okey M. Staats, of Ravenswood, W. Va.; Ray C. Stone, of Battle Creek, Mich.; Philander B. Taylor, Jr., of Clio, Mich.; Arthur Turner, of Windsor, Ont; George H. Voelkner, of Detroit, Mich.; Mason E. Vroman, of Vicksburg, Mich.; Joseph Wantoch, of Newark, N. J.; Felton D. Watts, of Detroit, Mich.; Bryant Weed, of Edwardsburg, Mich.; Robert E. Weeks, of Augusta, Mich.; Archibald B. Wickham, of Chesaning, Mich.; John T. Wood, of Woodbridge, N. H.; Charles O. Woodbridge, of Harrow, Ont.

American Gynæcological Society.—The twenty-ninth annual meeting of the American Gynæcological Society will be held in the Medical Library, Boston, on May 24th, 25th, and 26th.

Programme: The Surgery of the Gallbladder and Bile Ducts, by Dr. William H. Wathen, of Louisville; The Treatment of Gallstones Found as Coincidence in Abdominal or Pelvic Surgery, by Dr. John W. Clark, of Philadelphia; The Treatment of Gonorrhœa, by Dr. Henry T. Byford, of Chicago; Ureterolithotomy, by Dr. J. Wesley

Bovée, of Washington; Nephrectomy for Primary Tuberculosis of the Kidney, with Report of Four Cases, by Dr. Hiram N. Vineberg, of New York; A Practical Demonstration of Cystoscopy, by Dr. William R. Pryor, of New York; Hypertrophies and Inflammations About the Urinary Meatus, by Dr. Robert L. Dickinson, of Brooklyn; The Surgery of the Urethra, by Dr. Ely Van de Warker, of Syracuse; Pyelitis Complicating Pregnancy, by Dr. Edwin B. Cragin, of New York; A Second Case of Renal Decapsulation for Puerperal Eclampsia, by Dr. George M. Edebohls, of New York; A Case of Cystadenoma Serosum (Cystoma Papillare), by Dr. George Tucker Harrison, of New York; The Primary Repair of Lacerations of the Cervix, by Dr. Edward P. Davis, of Philadelphia; Primary and Intermediate Operations on the Cervix, by Dr. Barton Cooke Hirst, of Philadelphia; The Practice of Cervix Repair Five Days After Delivery, by Dr. Robert L. Dickinson, of Brooklyn; General Considerations on Repair of the Cervix, by Dr. J. Montgomery Baldy, of Philadelphia; Lacerations of the Uterus Extending Beyond the Vaginal Junction, by Dr. Malcolm McLean, of New York; Incomplete Rupture of the Uterus, by Dr. J. Whitridge Williams, of Baltimore; The Preventive Treatment of Pelvic Floor Lacerations, by Dr. J. Clifton Edgar, of New York; Immediate Repair of Lacerations of the Perinæum, with Special Reference to Placing the Sutures Before the Lacerations Occur, by Dr. Lapthorn Smith, of Montreal; Recent Lacerations of the Pelvic Floor, by Dr. Henry C. Coe, of New York; Uniformity in Pelvic and Cranial Measurements, by Dr. A. F. A. King, of Washington; The Value of Non-Operative Local Treatment, *per se,* in Gynæcology, by Dr. Willis E. Ford, of Utica; The Value of Non-Operative Local Treatment in Pelvic Disorders, by Dr. W. P. Manton, of Detroit; The Value of Non-Operative Local Treatment of Pelvic Disease of Women, by Dr. Fernand Henrotin, of Chicago; The Value of Local Treatment Preparatory to Operation, by Dr. Henry C. Coe, of New York; The Value of Postoperative Local Treatment, by Dr. J. Riddle Goffee, of New York; The Implantation of the Human Ovum in the Uterus, by Dr. Charles Sedgwick Minot, of Boston; Report of a Case of Ovarian Pregnancy, by Dr. J. Clarence Webster, of Chicago; Relation of the Appendix to Pelvic Disease, by Dr. Reuben Peterson, of Ann Arbor; The Streptococcus in Connection with Gynæcological Surgery, by Dr. Hunter Robb, of Cleveland; Nature of Indications for Operation in Fibromyomata of the Uterus, by Dr. Charles P. Noble, of Philadelphia; Bathing During Menstruation, by Dr. J. Clifton Edgar, of New York; Plastic Surgery of the Cervix Uteri, by Dr. Henry P. Newman, of Chicago; A New Uterine Obstetrical Dilator, by Dr. Philander A. Harris, of Paterson.

Civil Service Examinations—New York State and County Service.—Open competitive examinations for the State and county service will be held in various cities throughout the State, May 21, 1904, for the positions mentioned below. Appointments to positions in the county service will be made when practicable from the general eligible lists for the State and county service, residents of the county being preferred for such appointments.

Intending competitors must fill out application blanks and file them in the office of the commission before noon of May 16th. Candidates having applications on file will be given ample notice of the time and place of examination most convenient to the place of residence. No one will be admitted to the examination without the official notice (form E-8) from the chief examiner of the commission. So far as practicable the commission will notify and examine persons who are unable to complete their applications and file them by the time specified, provided notice by letter or telegram of such inability and of their desire to be examined, stating the place and kind of examination desired, reaches the office in time to permit the shipment of supplies for the examination, but it cannot agree to do so, or accept responsibility for delay or miscarriage of requests, circulars, applications, or notices.

Competitors must be at least twenty-one years of age, and must be citizens and residents of New York State, except as otherwise indicated. Nonresidents will be admitted to the examinations for physician of the fourth grade and resident physician, subject to the provisions of regulation X that in case the eligible list contains the names of three or more residents of New York State they shall be preferred in certification over nonresidents. The commission will endeavor to arrange for the examination of non-residents for these positions by the United States local examiners most convenient to their places of residence.

The time allowed for each examination is six hours, except as noted below. No competitor is allowed to take more than one kind of examination on the same day.

List of Positions and Requirements.—Apothecary, State hospitals, prisons, and institutions. Open to men and women. $40 to $60 a month and maintenance. Applicants must be licensed pharmacists of the State of New York. The examination consists wholly of questions relating to pharmacy. The commission has been unable to obtain sufficient eligibles for these positions.

Matron and superintendent of nurses, State Hospital for Incipient Pulmonary Tuberculosis. $50 a month and maintenance. Candidates must be graduates of a hospital training school for nurses. Subjects of examination and relative weights: Housekeeping, management of help, nursing and care of patients with especial reference to pulmonary tuberculosis, 7; education, experience, special training, and personal qualifications, 3.

Physician, fourth grade, State hospitals and institutions. See special circular for this position.

Resident physician, State Hospital for the Treatment of Incipient Pulmonary Tuberculosis. $1,500 a year with quarters and maintenance. Duties to be prescribed by the medical superintendent under the direction of the board of trustees. Candidates must be regularly graduated physicians and have had at least two years' experience in the practice of medicine, including one year's experience in a general hospital. Subjects of examination and relative weights: Written examination, covering anatomy, physiology, materia medica and therapeutics, chemistry, theory and practice, surgery; also a special examination in pathology of pulmonary tuberculosis in bacteriology and descriptive laboratory methods, 6; practical examination in the physical diagnosis of diseases of the chest, in the examination of sputa, blood, urine, and other pathological material, 4. The written examination will be held in Albany only on May 21st. The practical test will be held at Albany on May 20th.

Intending competitors should file applications as early as possible, and at least five days before the date selected for examination. Applicants for examination in Albany or New York should indicate in their applications their preference for any particular date and also what grades of examination they desire to try. For application blank, address Chief Examiner, State Civil Service Commission, Albany, N. Y.

Pith of Current Literature.

PRESSE MEDICALE.

March 23, 1904.

1. Variations in Weight in the Course of Scarlatina, By M. GARNIER, and SABARÉANU.
2. Chats on Electricity. Physiology of the Electric Current; Its Properties, By A. ZIMMERN.

1. **Weight in Scarlatina.**—Garnier and Sabaréanu experimented by weighing patients clad only in their nightshirts every morning at the same hour. An enema was administered previously if the bowels had not moved. In health variation in weight is very slight. In scarlatina, loss of weight was usually rapid, but the gain was great during convalescence. In a few cases, the weight did not diminish till several days after the onset of the disease. Polyuria is one of the causes, although compensated for by the drinks administered. As soon as full diet is allowed, increase of weight is rapid, unless some complication supervenes. The curve of weight usually follows that of the temperature. After the third week, the weight seldom increases.

2. **Chats on Electricity.**—Zimmern begins this paper by an ironical reference to static machines, which he says Charcot drew from a deserved obscurity for the benefit of distinguished neurasthenics of both sexes. The pile transforms chemical energy into electrical energy; the dynamo doing the same for mechanical energy. The accumulator receives electrical energy, stores it as chemical energy and gives it back as electrical energy again with a small " rake off " for its trouble. Tension is equivalent to electromotive force of which the dynamo can generate most. The volt is the unit of electrical measurement, comparable to the metre, and the more volts, the higher tension. Difference of potential is difference of voltage.

March 26, 1904.

1. Epidural Injections. Actual State of the Question Particularly in Incontinence of Urine, By F. CATHELIN.
2. Evolution of Creosote Medication. A Pharmacological Study, By F. BOUSQUET.

1. **Epidural Injections.**—Cathelin begins his article with a history of this form of medication including Ewald's researches in America. He was struck with the effect of cocaine and serum injections on the bladder sphincter and tried them on an old woman suffering from urinary incontinence with the result of giving her bladder control for twenty-nine hours after one injection. Subsequently Cathelin obtained 75 per cent. of cures in children suffering from the same trouble. He believes the injection acts by traumatism and compression, exerting a dynamogenic influence on the vesical medullary centre. In one case, in an old man, the injections had the effect of causing considerable effort to expel the urine. Such injections, according to other authors, allay pain, lower temperature, and, in painful orchitis, cut short the disease, especially when there are no bladder lesions. They have been useful in impotence. Four injections often suffice to cure an obstinate incontinence. Finally, they are apparently valuable in all cases of pain in the submammary region.

2. **Creosote Medication.** — Bousquet introduces his subject with an interesting résumé of the history of pharmacy up to the revolutionary epoch of synthetic chemistry. Creosote was discovered, in 1832, by Reichenbach, and was first used in phthisis. Of the preparations made from creosote, the writer thinks thiocol to be the most valuable medicinally as being comparatively tasteless, odorless, soluble, and non-caustic; its value in phthisis and bronchitis is indisputable.

LYON MEDICAL.

March 20, 1904.

1. Treatment of Lupus; Phototherapy, By CARLE.
2. Chlorosis and Neurasthenia, By REURE.
3. The Water of Contrexéville, By ETTERLEN.

1. **Lupus.**—Carle, with 19 patients, obtained by the Finsen light 6 definite cures, 3 improvements warranting cessation of treatment, 6 relapses in from 3 to 8 months, and 4 failures. His cures, he states, were real, and not merely apparent as in so many cases treated with antiseptics and caustics; and we may hope for still better results as our handling of the light improves. The relapses were due to insufficient treatment, the operators being misled by the apparent cure, and the rays not having had time to penetrate below the surface. The treatment should be repeated again and again after apparent cure, lasting not less than six months, and séances should last at least three quarters of an hour. Curetting and cauterization are valuable auxiliaries in lupus of the extremities. Lactic acid may be used on mucous surfaces. Sclerous tissue, after operation, undoubtedly prevents full action of the light. With the sole disadvantage of expense, the Finsen light leads as a therapeutic measure in lupus.

2. **Chlorosis and Neurasthenia.**—Reure attributes the former to some nervous disturbance; for both he prescribes rest, aerotherapy, hydromineral treatment, hydrotherapy, and electrotherapy. Rest should be had out of doors and amid beautiful scenery. An alkaline, gaseous, and iron water is beneficial, without the indigestible sulphates; but laxatives will be required with such a water, especially on account of the weak intestines of the invalids. Electrotherapy, the writer admits, may act merely by suggestion, but he strongly advises its use.

3. **The Contrexéville Water.**—Etterlen discusses the effects on this water of boiling, which renders the sulphates more soluble and more active; if the boiling is prolonged, part of the sulphates become transformed into sulphides. For stout uricæmics, dyspeptic or constipated, therefore, 150 grammes (5 ounces) of the boiled water should be added to their daily allowance of the cool water, and the same régime may obtain whenever a laxative action is desired.

BERLINER KLINISCHE WOCHENSCHRIFT.

April 4, 1904.

1. On the Vibratory Sense, By GOLDSCHEIDER.
2. Late Liver Abscess Following Tropical Dysentery, By P. K. PEL.
3. Latent Foci of Tuberculosis and Tuberculin Diagnosis in the Light of Modern Research (*To be concluded*), By G. CORNET.
4. Aniline Treatment in Trypanosome Disease, By P. EHRLICH, and K. SHIGA.
5. Tremor Paralysis After Accidents (*To be concluded*), By K. RUHEMANN.

2. **Late Liver Abscess.**—Pel says the usual course is for an abscess of the liver to develop immediately following dysentery, although several authors have reported cases in which there has been a considerable interval of time before the abscess appeared. In one of Pel's cases, fifteen years elapsed before the secondary disease appeared. In this case the patient ran subnormal temperatures for a long time before the operation, after which the temperature again became normal. In a second case, twenty-one years passed after the tropical dysentery before hepatic abscess developed, and in a third case eleven years. In none of the cases, could microorganisms be found in the pus, either because they had not developed or because they had disappeared.

4. **Aniline Treatment in Trypanosome Disease.**—Ehrlich and Shiga state that the trypanosomes are the evoking agents of several tropical diseases of animals, and perhaps of the sleeping sickness of man. The authors infected mice with the blood of guinea pigs which had been ill with trypanosome disease, and then injected them with solutions of trypanred, an aniline dye of which Ehrlich is the recent inventor. The parasites rapidly disappeared from the blood of the mice, but recurrences were frequent. The same result was obtained when the dye was given internally. In rats and dogs, recurrences were more frequent than in the mice. A moderate result was also obtained when the nagana disease was implanted upon the animals. The authors explain their results as being due to an active immunity evoked by the aniline dye, but that it is but temporary, permitting foci of the disease to renew themselves. They compare these recurrences to those seen in malaria and syphilis, in which also a drug evokes conditions which lead to an active immunity.

ROUSSKY VRATCH.

February 21, 1904.

1. Talma's Operation in Ascites of Cirrhosis, By B. S. KOZLOVSKY.
2. The Present Status of Our Knowledge Concerning Pityriasis Rosea, By A. I. LANTZ.
3. The Weight of Children Born in Cases of Narrow Pelvis, By S. S. KHOLMOGOROFF.
4. On Mineral Mud Baths in Caucasus (*Concluded*), By G. A. PARYSHEFF.

1. **Talma's Operation.**—Kozlovsky has collected data of 168 cases of cirrhosis operated upon by Talma's method. He emphasizes the fact that spontaneous cures of ascites have occurred in cirrhosis of the liver as the result of vascular adhesion between the liver, spleen, and omentum on the one hand, and the abdominal wall or diaphragm on the other. Charcot said that probably ascites would never occur in cirrhosis if these adhesions were formed in all cases. Talma's operation is the most rational method of dealing with ascites, as has been proved both by clinical results and by experiments on animals, but in order to be successful it must be used in the earlier stages, when the function of the liver still has a chance to become normal. The contraindications to this operation are an advanced stage of the disease and the presence of jaundice and acholia, or of general debility or of affections of the heart and kidneys. There is not much difference as regards the exact method of suturing the peritoneal surfaces, so far as results are concerned, but the author prefers to suture the omentum into the wound itself. Drainage is to be avoided in this operation. As regards facility of execution and absence of danger, this procedure does not differ from exploratory laparotomy.

2. **Pityriasis Rosea.**—Lantz concludes from a study of this disease that it has nothing to do with ringworm. The term herpes tonsurans maculosus et squamosus, used by the Vienna School, should not be used, and instead, the name suggested by Gibert, pityriasis rosea should be adopted. The disease is not very rare, and in Moscow it forms from two to three per cent. of all skin diseases. It affects almost exclusively persons twenty to forty years old, and occurs with equal frequency in both sexes. The largest number of cases was seen during the first four months of the year, and in the autumn. The disease is not contagious, but it is frequently associated with recent syphilitic infection and with scabies. The origin of the disease is unknown, but the latest bacteriological and microscopical investigations point to the probability that the eruption is of toxic origin, and is analogous to the erythemas. The eruption of pityriasis rosea often closely resembles that of syphilitic roseola, and it must also be distinguished from ringworm, seborrhœal eczema, psoriasis, and chronic pityriasis.

3. **Weight of Children Born of Women with Narrow Pelves.**—Kholmogoroff does not agree with Pinard that the average weight of children born of women with narrow pelves is greater than normal, or with La Torre that the weight of these children is equal to that of infants born of women with normal pelves. In the average case the weight of infants born through narrow pelves is less than the weight of those born through normal pelves. The author bases this conclusion chiefly upon measurements of the heads of fœtuses found in narrow pelves, assuming with La Torre, that the size of the head corresponds to the weight of the fœtus. He reserves the confirmation of his conclusions for a later paper. His tables show, also, that in narrow pelves the children of multiparæ are heavier than those of primiparæ. There was a larger number of boys born of women with narrow pelves than of girls.

February 28, 1904.

1. The So Called Recurrent Fibroids of the Uterus, By V. S. GROUSDEFF.

2. A Temporary Dressing for Gunshot Wounds, By L. L. Levshine.
3. Situs Viscerum Inversus Universalis. By M. Ziemps.
4. On the Biology of Trypanosoma (*To be concluded*), By V. L. Iakimoff.
5. The Influence of Freezing on the Heart Muscle, By A. N. Zime.
6. Purgatin as a Purgative, By A. G. Strielkoff.
7. A Case of Appendicitis in Which the Appendix Contained Oxyurides, By A. P. Morkovitine.
8. Absence of the Humerus, By A. B. Katchkatcheff.
9. Report of the Surgical Work of the Gynæcological Division of the Kieff City Hospital, 1900 to 1901 (*To be continued*), By G. O. Sianozhenski.

1. **Recurrent Fibroids.**—Grousdeff reports the case of a woman aged forty-four years, who presented a typical recurrent fibroid. This term was introduced 50 years ago by English gynæcologists, such as Hutchinson, Callender, Paget, etc., to designate the tendency of some uterine polypi to return rapidly after removal. Although a number of investigators have studied this condition, it still presents many unsolved questions. The majority of authors believe these recurrent fibroids to be, not fibroids in the proper sense, but sarcomas arising from the myometrium. There is a difference of opinion as to whether they are primary sarcomas or degenerated fibromyomas. In the case reported the polypi recurred ten months after removal. A hysterectomy was performed, but the uterus itself was not found to be the seat of a tumor. The microscopical examination showed that the uterine wall presented only inflammatory changes. The polyp showed the structure of a sarcoma. Six months after the opration the patient was again seen and showed a tumor in the pelvis near the bifurcation of the large vessels. The diagnosis was a sarcoma of the lymph glands, and a third operation was performed, consisting of the removal of these glands, so far as they could be reached. The patient made a good recovery, and examination of the gland showed the presence of a typical sarcoma. The author thinks that the polyp in these cases of recurring fibroid is really a primary sarcoma. A radical operation is indicated, whenever this diagnosis is made.

2. **Temporary Dressing of Gunshot Wounds.**—Levshine suggests the following improvement of the first aid packet to be furnished to every soldier in the field. The packet consists of a linen bag, in which a second bag of waterproof material is placed. Within this bag there is a square piece of rubber adhesive plaster 10.5 cm. long and 8 cm. wide. In the centre of this is an opening 2.5 by 1.5 cm. In order to make this dressing stiff, the plaster is wrapped in paper and placed in a special envelope of prepared gauze. The plaster must be easily detachable from the gauze, but sufficiently adhesive. The oval opening is covered with aseptic or antiseptic gauze, in pieces 8 by 4.5 cm., arranged in 15 or 16 layers. The advantage of this dressing is that it obviates the necessity of handling the surface which comes into contact with the wound. This is the great fault of the present emergency packet of the army and navy, which consists of a bandage, two gauze compresses, and a small quantity of cotton.

7. **Pin Worms in the Appendix.**—Markovitine reports a case of appendicitis in a man aged twenty-two years in whom the appendix contained about a dozen live pin worms. These parasites were found in various sizes and stages of development, and a large number of eggs were also seen in the cavity of the appendix. The appendix is a quiet corner, remote from the intestines where the fæcal masses are constantly moving, and is very well adapted for the development of parasites. Even the administration of cathartics and anthelmintics does not interfere with the growth of parasites in the cavity of the appendix. It is not astonishing, therefore, that parasites play a prominent rôle in the causation of appendicitis.

March 6, 1904.

1. The Principles and Problems of Operative Obstetrics, By A. A. Anufrieff.
2. On the Technics of Laryngectomy Under Local Anæsthesia, By R. R. Wreden.
3. Methods of Injecting Lymphatic Vessels, By G. M. Josifoff.
4. Decidual Cells in Endometritis, By F. N. Tavilldaroff.
5. Small Celled Sarcoma (Lymphosarcoma) of the Retroperitoneal Glands in a Girl Three Years Old, By P. J. Korolkoff.
6. On the Biology of Trypanosoma (*Concluded*), By V. L. Iakimoff.
7. Report of the Surgical Work of the Gynæcological Division of the Kieff City Hospital, 1900 to 1901 (*Continued*), By G. O. Sianozhenski.

2. **Removal of the Larynx Under Cocaine.**—Wreden reports a case of cancer of the larynx in which he removed this organ under local anæsthesia. The substitution of local for general anæsthesia in this operation is very desirable, because of the frequency of postoperative pneumonia which follows laryngectomy in spite of the latest forms of cannulæ with tampons which are employed during this procedure, when chloroform is given. In the case reported the patient received one gramme of a one per cent. solution of morphine and 0.0012 gramme of scopolamine 15 minutes before the operation. The first step was tracheotomy under cocaine. Then the larynx was removed according to Billroth's method from below upward, a one per cent. solution of cocaine being injected into the lines of insertion of the muscles to be divided and into the mucous membrane of the larynx along the incision. Altogether 12 hypodermic syringefuls of this solution were used. The operation was entirely painless.

3. **Injection Mass for Lymphatics.**—Josifoff recommends the use of a mixture of hot gelatin with India ink for injecting lymphatic vessels. The injections are made by puncturing into the parenchyma of a lymph gland. The gelatin mass is prepared by adding four leaves of gelatine to half a glassful of water, mixing with enough India ink to obtain a good color, and finally straining through a linen. This mass has a great advantage over the ordinary injection masses used for lymphatics, and the preparations injected with it

keep very well. The preparations must be kept for a time in alcohol and may then be transferred to two per cent. solution of formaldehyde.

4. **Decidual Cells in Endometritis.**—Tavilladaroff says that decidual cells are never found in the stroma of the endometrium in the glandular forms of endometritis. Cells resembling the decidual are found in the interstitial and mixed forms of endometritis, but only in the superficial layers. These cells lie at some distance from one another among the comparatively normal cells of connective tissue. It is not likely that a decidua be mistaken for an inflamed mucous membrane, save on macroscopical examination. Under the microscope, however, such a mistake is impossible. The author concludes that the presence of decidual cells in the form of compact groups is characteristic of pregnancy, and may be so considered in medicolegal cases.

RIFORMA MEDICA.

March 16, 1904.

1. On Gaseous Gangrene, By F. IACOBELLI.
2. The Increased Decomposition of the Ammoniacal Compounds and the Increased Elimination of the Carbonates in Pseudophosphaturia, By A. CAMPANI.
3. Contribution to the Microchemical Detection of Strychnine in Toxicology, By F. PONZIO.

1. **Gaseous Gangrene.**—Iacobelli has isolated a bacillus in two cases of gaseous gangrene, which is apparently identical with that found by Legros, and styled by the latter the " septic aerobic bacillus." Iacobelli does not consider this bacillus identical with the aerobic variety of the bacillus of Welch, for the characters of these germs differ widely. He believes that gaseous gangrene does not arise from the activity of a specific microbe, but is usually due to the bacillus of Welch-Fraenckel, though occasionally to another bacillus. Iacobelli's germ is a short, slightly curved rod, uniform in thickness, with rounded ends; it is arranged in chains containing from two to six elements; rarely a larger number. It stains well with aniline dyes; resists Gram's solution; and the contained oval bodies resist the specific spore-stains. It is very motile, and grows on ordinary media; is a facultative anaerobe, and grows very slowly and sparely when oxygen is excluded. It is quite resistant to antiseptics, and does not produce any gas in culture media to which sugars are added. Guinea pigs inoculated with shreds from gangrenous wounds containing these bacilli perish in twenty-four hours, but do not present any gaseous gangrene.

2. **Pseudophosphaturia.** — Campani's researches, published in 1903, showed that in this condition there was no excess of total phosphoric acid eliminated, nor any abnormal proportion between the alkaline and the earthy phosphates, but that there was a precipitation of the latter, together with earthy carbonates, owing to a distinct diminution in the acidity of the urine. He proposes to modify the term phosphaturia into a more accurate one, "pseudophosphaturia," to distinguish this condition from true phosphaturia or "phosphatic diabetes." In Campani's new researches he shows that the urine of persons with pseudophosphaturia, when heated, gives off more vapor of ammonia than normal urine, because the ammonium compounds in these urines are more readily dissociated, and not because of any increase in the quantity of these compounds. This quantity is directly proportionate to the acidity of the urine. The latent form of phosphaturia described by Freudenberg is a carbonaturia exceptionally found in normal persons after a special diet or alkaline medication. An excess of carbonates is always accompanied by an increased " dissociability " of the ammonium compounds, even in normal individuals who happen to have carbonaturia. The precipitation of the earthy phosphates (the pseudophosphaturia of neurasthenics) is caused by a lessened acidity of the urine which is always accompanied by an increase of carbonates, and therefore by a greater dissociation of the ammonium compounds. These phenomena constitute a very constant and definite group.

3. **Microchemistry of Strychnine.**—Ponzio has used the following method for the isolation and detection of strychnine in cases of poisoning. The stomach of the cadaver under investigation is closed at both ends, removed from the abdominal cavity, and opened along the greater curvature. The contents are collected in a porcelain capsule and the mucous membrane is washed with distilled water, which is also poured into this receptacle. The diluted contents are then filtered several times, until they are perfectly clear. Two c. c. of this filtrate are then evaporated on the water bath to a syrupy consistence, and again diluted with absolute alcohol, filtered, and evaporated on the water bath. The residue is diluted with distilled water to which ammonia has been added, to give it a strongly alkaline reaction, and the mixture is shaken with 2 c. c. of chloroform in a separator. The chloroform solution is allowed to stand, and a few drops of the clear portion are evaporated on slides, leaving enough alkaloid to give detection microchemically. By this method very satisfactory results are obtainable, and if the dose of strychnine was over five centigrammes, a single drop of the chloroform solution is sufficient to give characteristic strychnine crystals. This method is applicable, however, even if only one centigramme of strychnine has been administered. The usual color reactions of strychnine may be obtained with this residue under the microscope, and are satisfactory for identification.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE

March 20, 1904.

1. On the Action of Mercuric Chloride in Experimental Anthrax Infection in Refractory Animals, By D. CALAMIDA.
2. Cysticercus of the Brain, By D. MARAGLIANO.
3. The Treatment of Tuberculous Peritonitis, By L. MISEROCCHI.
4. Bacteriological Researches on Two Cases of Typhoid Fever with Sudden Onset and Rapid Fall of Temperature, By C. QUADRONE.
5. On the Morphology of the Tubercle Bacillus, By F. ZUCCOLA.

1. **Mercuric Chloride Injections in Anthrax Infection.**—Calamida found that the injection of mercuric chloride in non-fatal doses, given half an hour before an infection with anthrax in dogs was always followed by death from anthrax. The same substance injected into hens did not over-

come their natural resistance against anthrax. Digitalin, injected after the inoculation of anthrax, counteracted the injurious effect of the mercuric chloride, in virtue of the intense leucocytosis which the former produced. The unfavorable effect from mercuric chloride probably depends upon its special influence on the white blood cells. The fact that fowls resist anthrax in spite of injections of mercuric chloride shows that their leucocytes are more resistant.

3. **Medical Treatment of Tuberculous Peritonitis.**—Miserocchi reports 19 cases of tuberculous peritonitis which he treated purely by medical methods with very good results. The treatment consisted in forced feeding, rest and iodides, both locally and internally. Tincture of iodine or an ointment of potassium iodide was applied locally. The author emphasizes the fact that surgical treatment is indicated only in the simple ascitic form of tuberculous peritonitis, and that surgeons refuse to operate in the dry and cheesy form of the disease, fearing the common complication of intestinal fistula as the result of injuries to the gut during the operation. The ascitic form is the milder type of the disease, and can be successfully treated medically, and even the dry and cheesy form, in which surgery fails, can often be greatly benefited by medical means. Of the 19 cases reported, 15 recovered. Of 14 cases reported in detail, eight were ascitic and four both ascitic and fibrocaseous, while in two there was no fluid, but only dry and cheesy tubercles. A milk diet was used in all the cases at first, and intestinal antiseptics were employed, but the chief reliance was placed on the iodides.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

May 7, 1904.

1. Laboratory Aids in Clinical Diagnosis, By C. E. Ruth, and A. S. Rider.
2. A Case of Circular Insanity Studied from Clinical, Differential, and Forensic Standpoints (*Concluded*), By Richard Dewey.
3. Some Graphic Observations on Ankle Clonus, By Agustus A. Eshner.
4. Medical Education and Preliminary Requirements, By George H. Simmons.
5. Multiple Loose Bodies in the Knee Joint, By John Prentiss Lord.
6. What Should Be the Physician's Position in the Body Politic? By H. Bert Ellis.
7. The Army Medical Department. A Historical Sketch (*To be continued*).

2. **Circular Insanity.**—Dewey's paper covers twelve pages of print and four pages of plates. The author believes the case merits study from several points of view. With reference to diagnosis owing to the conflicting opinions expressed by experts during the patient's lifetime, as to the form of mental disease; also in a medicolegal sense, on account of the great number and variety of legal contests growing out of the patient's mental condition, in which he himself actively and often brilliantly participated. The case also incidentally involves the study of a remarkable personality, and the clinical history consists largely in the narration of extraordinary acts, "antics," and vagaries of a mad but acute and brilliant mind. Finally the findings resulting from the examination of the brain present much of interest in both a positive and negative sense.

3. **Ankle Clonus.**—Eshner, at the suggestion of S. Weir Mitchell, undertook a series of graphic observations of ankle clonus, in order to determine if, like the knee-jerk, it could be reinforced by motor influences, with the result that such reinforcement was at times appreciable to the hand of the observer in contact with the foot, particularly after the clonus had been going on for some time, and as indicated in some of the tracings in the form of increased frequency of movement. The clonus was in some instances induced by means of the hand applied to the ball of the foot and in other instances by means of traction applied from behind the patient through an elastic band. Most of the tracings were made with the aid of two tambours.

5. **Loose Bodies in the Knee.**—Lord reports the case of a man, thirty-three years old, from whose knee he removed a large number of loose bodies by means of a very radical operation. An incision was made as for a Volkmann resection of the knee. The patella was sawn transversely, the lateral and crucial ligaments divided, which exposed the whole articulation. Four bodies were removed from above the patella. One of these was large and of mulberry shape. Four were removed from under and beside the patellar tendon, and two from the posterior part of the joint, behind the crucial ligaments; these two were, in fact, posterior to the condyles, and much effort was required to dislodge them by the use of curved scissors. The bodies by the patellar tendon required removal by the scissors on account of pedunculated villous attachments. In the localities of the attached bodies the synovial membrane was much thickened and hyperæmic. The patient recovered with a somewhat stiffened knee. However, the after treatment could not be carried out satisfactorily. The author does not recommend the procedure he adopted as a suitable one for all cases.

BOSTON MEDICAL AND SURGICAL JOURNAL.

May 5, 1904.

1. Contribution to the Ætiology of Idiocy and Imbecility, By William N. Bullard.
2. A Sigmoid Band of Unusual Origin. Operation—Relief, By Arthur L. Chute.
3. Massachusetts General Hospital. Clinical Meeting of Staff, Treadwell Library, February 12, 1904. Deviation of Nasal Sæptum, by A. Coolidge, Jr. Use of the Sphygmomanometer, by H. F. Vickery. Two Cases of Crural Monoplegia of Traumatic Origin, by J. J. Putnam. Perineal Prostatectomy, by F. B. Harrington. Finney's Operation for Pyloric Stenosis: Sudden Death in Status Lymphaticus, by James G. Mumford.
4. Action of Resorcin, By F. C. Clark.

1. **The Ætiology of Idiocy and Imbecility.**—Bullard presents a statistical study of the ætiology of idiocy and imbecility. The cases fall naturally into two great classes: (1) The congenital and (2) the non-congenital idiots and imbeciles. Of course in many cases it is impossible to say to which class a particular case should be assigned. Of the 258 cases examined, it was possible to determine the probable origin in 176. Of these 113 were congenital; 63 were non-congenital or acquired cases.

The large proportion of the cases in which the condition was acquired after birth was a surprise. It is, however, quite certain that the greater number of those cases which were not counted for want of definite data belong to the congenital class because the cause is much more evident when it occurs after birth. A hemiplegia or other paralysis or a sudden mental defect following or accompanying an acute illness strikes the attention of any one who is present. The causes of non-congenital idiocy and imbecility are trauma and disease. Trauma is possibly responsible for 19 per cent. of the cases. The most prolific causes of congenital idiocy and imbecility are probably alcohol, syphilis, uterine disease, and the accidents of labor. It is not feasible to follow the author too closely in his analysis of his cases.

2. **A Sigmoid Band.**—Chute reports the case of a woman who was under his care for some time and who presented the following symptoms. About one month after her first labor (delivery by forceps) she went seventeen days without a bowel movement. Her abdomen was slightly distended, but neither tender nor tympanitic. There was no vomiting. An enema moved the bowels. For the next four years there was a constant struggle to overcome her obstinate constipation. Finally a laparotomy was resorted to. It revealed a sigmoid band, one end of which was attached to the abdominal wall. This band was cut and the patient made a good recovery and her constipation was much relieved. The causation of the band is of interest. The author believes that at the time of labor an appendix epiploica got pinched between the rim of the pelvis and the child's head. This allowed the bruised end to adhere to the parietal peritonæum.

MEDICAL RECORD.

May 7, 1904.

1. The Physiological Function of Menstruation and the Part Played Therein by the Falloppian Tubes, By J. RIDDLE GOFFE.
2. Gallstones in the Common Duct, By A. H. CORDIER.
3. Dentigerous Cysts, By CHARLES GREENE CUMSTON.
4. A Case of Recurring Membranous Stomatitis, Associated with Erythema Exudativum Multiforme (Hebra), By LOUIS E. BLAIR.
5. The Hospital Car, Its Equipment, Uses, and Importance, By WILLIAM W. SANFORD.
6. The Prevention of Disease, By JOHN B. HUBER.
7. The Syrian Climates, By HANNA MIKAIL RAHMI.

1. **Menstruation.**—Goffe removed the uterus and one tube and ovary from each of two patients. In both these cases, through a curious accident, the uterine end of the tube left behind became attached to the vagina and its lumen remained patulous. Both these women menstruated regularly for several months after operation, indeed, they continued to menstruate until the author, fearing a tubal pregnancy, closed the orifices of the tubes. In both cases the tubes were sealed five months after the operation. A review of the whole subject of menstruation, both in women and animals, leads the author to announce that his "opinion is that the dominant factor in menstruation is the ovary and ovulation; that from the ovary, or its sympathetic nerve ganglia in the pelvis and abdomen, there springs the impulse for reproduction of the species; that menstruation is a retrograde process, the result of a failure of fertilization of the ovum, and that the tubal mucous membrane as well as the endometrium participates actively in the process of menstruation."

3. **Dentigerous Cysts.**—Cumston reports six cases of dentigerous cysts. He discusses their ætiology, diagnosis, and treatment. The treatment consists in cutting down upon the cyst and then carefully excising all the lining. The first important paper on this subject was by Magitot, and appeared in 1872. In 1885, Malassez wrote his paper and announced his theory that the origin of these cysts was to be sought in what he called the paradental epithelial débris. The author devotes much space to the discussion of both these papers.

4. **Erythema Exudativum Multiforme.**—Blair reports one case. He also gives detailed references to a number which have been reported, and discusses them. Blair's case occurred in a boy aged twelve years who seems to have suffered in all from six attacks. A very brief account of the case would probably give a false impression as to its nature. We therefore will not attempt to condense the history. Koplik, of New York, who saw the patient as he was recovering from his fifth attack, considered the affection to be a condition allied to uriticaria.

5. **Hospital Car.**—Sanford states that the Erie Railroad is about to equip its system with hospital cars. A drawing of the plan of one of these proposed cars is given. It is arranged to contain eight beds, an operating room, and a bath and toilet room. There will also be two suspended beds so arranged as to avoid all jarring.

MEDICAL NEWS.

May 7, 1904.

1. Bellevue Hospital—The Old and the New.
2. The Diastolic Murmur in Diagnosis, By AUSTIN W. HOLLIS.
3. The Influence of Bovine Tuberculosis on Human Health, By MAZYCK P. RAVENEL.
4. Clinical Aspect of Chronic Myocarditis, By JOHN W. BELL.
5. Acute Appendicitis and Its Medical Treatment, By G. N. BEST.
6. Summary of an Experimental Research Into the Use of Alcohol, Nitroglycerin, and Amyl Nitrite in Shock and Collapse, with Illustrative Protocols, By GEORGE CRILE.

2. **Diastolic Murmurs.**—Hollis describes the eight different varieties of diastolic murmurs. The causes of these murmurs are aortic and pulmonary insufficiency, persistent ductus arteriosus, aneurysms, mitral stenosis, cardiorespiratory influences, pericardial and pleuropericardial. Six cases of valvular heart lesions are reported.

3. **Bovine Tuberculosis.**—Ravenel reaches the following conclusions: "At the present time the weight of the available evidence is in favor of the view that the chief source of infection in children, as well as in adults, is the human tubercle bacillus, and that the portal of entry is the respiratory tract. It has, however, been proven conclusively that the bovine tubercle bacillus is responsible for a certain proportion of the death from tuberculosis in chil-

dren, and there is strong evidence at hand to show that the number of children infected from bovine sources is quite large. Whether the number be large or small, it is none the less our duty to guard against the use of milk from tuberculous cattle for food."

4. **Myocarditis.**—Bell devotes his paper chiefly to the consideration of the clinical aspect of myocarditis. He touches only lightly upon the ætiology and pathology of the affection. Chronic myocarditis is too frequently overlooked in practice and our text books give but little space to the subpect. Diagnosis is often difficult as the condition gives rise to no pathognomonic signs. In general it may be said that breathlessness, precordial distress, and irregular pulse, in patients in middle life are warnings that should be heeded and which should be met by theapeutic measures.

5. **Acute Appendicular Inflammation.**—Best asserts that the country practitioner is not always in the position to invoke surgical intervention in acute appendicular inflammation even if such intervention is admitted to be always desirable. The author has grave doubts as to the imperativeness of operations in all cases. At all events there is a field for the medicinal treatment of appendicular inflammation and it is well, therefore, to know what such a treatment consists in. The author's ideas of treatment follow: Thorough evacuation of the bowels; for the pain, deodorized tincture of opium, with either cold or hot applications; the patient should be in bed and on a light diet. Of course the author qualifies some of this advice. The paper as a whole conveys the impression that the author has rather more faith in the medicinal treatment of appendicular inflammation than he has in the surgical.

6. **Shock and Collapse.**—Crile's conclusions may be summarized as follows: Alcohol as a rule will increase the severity of shock. Nitroglycerin and amyl nitrite, on the whole, increase shock.

AMERICAN MEDICINE.

May 7, 1904.

1. The Diarrhœas of Infancy and Early Childhood, By Thomas Morgan Rotch.
2. Examination of the Test Breakfast, By Mark I. Knapp.
3. Two Fatal Cases of "Landry's Paralysis," with Autopsy Findings in One of Them, By Theodore Diller.
4. The Removal of Sæptal Spurs and the Correction of Deviations of the Sæptum by More Rational Methods, By Charles Nelson Spratt.
5. The Efficiency of Local Treatment as a Factor in the Cure of Laryngeal Tuberculosis, By Ross Hall Skillern.
6. A Modification of Existing Methods for Staining Flagella, By O. P. Johnston, and W. B. Mack.
7. Address to the Members of the Philadelphia Pædiatric Society, at Its Eighth Annual Meeting, January 12, 1904, By D. J. M. Miller.

1. **Diarrhœas of Infancy.**—Rotch asserts that, since so much work has recently been done by bacteriologists and pathologists in connection with diseases of the intestinal tract, the time is propitious for a revision by clinicians of their ideas concerning the diarrhœal diseases of infancy and childhood. For the present it will be best to follow the classification of diseases of the intestinal tract adopted in 1894 by the American Pædiatric Society, which was formulated by Holt and Rotch. In this classification the terms summer diarrhœa and dysentery are displaced by the terms ileocolitis and colitis; in this way, substituting for the erroneous idea of disease entities the conception of the anatomical location of the seat of trouble. The author reviews the different clinical manifestations of colitis and ileocolitis and the various causative factors that lead to their development. The treatment for these conditions is yet symptomatic. In general it may be said that ileocolitis should be treated through the mouth, and colitis by the rectum. The serum treatment of it is in the experimental state. Rotch has had 61 cases of diarrhœa examined for the bacillus of dysentery. He gives the following summary of the results: "1. The analysis of these 61 cases showed that the *Bacillus dysenteriæ* proved to be the cause of 16 per cent. of all the 61 cases examined. 2. The *Bacillus dysenteriæ* may cause either the clinical type known as fermental diarrhœa or that known as ileocolitis. In the 10 cases in which this organism was found it caused the symptoms of fermental diarrhœa in 30 per cent. and those of ileocolitis in 70 per cent. 3. Although a causal connection may be demonstrated between the *Bacillus dystenteriæ* and fermental diarrhœa, it was so demonstrated only in 6 per cent. of the cases of fermental diarrhœa examined. 4. On the other hand, the *Bacillus dysenteriæ* is probably the most frequent cause of ileocolitis, as it was so demonstrated in 78 per cent. of the cases examined."

2. **Examination of the Gastric Contents.**—Knapp gives in detail the method he prefers for making examinations of the gastric contents. He lays special stress on the following points. (1) The stomach should be aspirated in the physician's office after a fourteen hours' fast and just before the test breakfast is given. (2) The test meal should consist of exactly 35 grammes of roll and 300 cubic centimetres of water. (3) Both the congo test and the dimethyl tests (Töpfer's) are untrustworthy as absolute indicators of free HCl.

3. **Landry's Paralysis.**—Diller's two cases are remarkable chiefly on account of their duration. In the first cases the duration of the disease was about nine weeks. In the second case death occurred about six months after the onset of the initial paralysis. The author admits that some may look upon the second case as one of multiple neuritis. The case clinically was typically a case of Landry's paralysis, except for its duration, and he believes should therefore be called so.

4. **Operations on the Sæptum.**—Spratt makes a plea in favor of the "flap operation" for the removal of sæptal spurs and the "window resection" operation for the correction of nasal deformities. Few special instruments are required, the time required for these operations is from twenty-five to thirty-five minutes, rarely forty-five minutes; the results are excellent, and the after treatment is simple.

5. **Laryngeal Tuberculosis.**—Skillern does not pretend to advance any new methods for the

treatment of laryngeal tuberculosis. He reviews the well established treatments and concludes: (1) local treatment is always beneficial even if it only relieves the most distressing symptom, *i. e.,* pain. (2) It depends entirely upon the general condition of the patient what form of local treatment is most advisable. (3) While laryngeal tuberculosis in some cases may be entirely cured, there always remains more or less chronic laryngeal catarrh. (4) That extensive surgical procedures in cases in which the lungs are deeply involved except as a palliative treatment are unjustifiable. (5) That extensive curetting should only be employed in those cases in which there is a fair chance of curing the disease and when it is necessary to prolong life a short time. (6) The prognosis depends more on the general systemic condition of the patient than upon the throat lesion. It naturally follows that the more severe the throat lesion the greater the degree of constitutional weakness. (7) If a case is seen at an early stage of its development, the prognosis is good provided of course the concomitant lung disease is responding to treatment. (8) When there is much ulceration and loss of tissue, absolute cure is impossible, but such an amelioration of symptoms may be brought about as to render the patient fairly comfortable for the rest of his existence. (9) The best results are obtained when the tuberculous deposit in the larynx is localized.

LANCET.

April 23, 1904.

1. Fractures of the Skull. (Hunterian Lectures: III), By L. B. RAWLING.
2. The Neurology of Vision. (Arris and Gale Lectures: II), By J. H. PARSONS.
3. The Epidemiology of Enteric Fever and Cholera in Hamburg, By Dr. REINCKE.
4. Three Cases of Renorenal Reflex Pain: Cases in Which the Symptom Pointed to the Sound Kidney Being the Diseased One, By D. NEWMAN.
5. On Some Forms of Pseudoappendicitis (Enterotyphlocolitis—Intestinal Lithiasis), By Dr. BOTTENTUIT.
6. A New Form of Removable Deep Suture for the Prevention of Stitch Sinuses, By L. H. MCGAVIN.
7. The Mental State in Myxœdema, By H. WOLSELEY-LEWIS.
8. A Case of Ulcerative Colitis in Which a Left Inguinal Colotomy was Performed to Control Extensive Hæmorrhage, By H. B. ROBINSON.
9. A Case of Aneurysm of the Aorta Rupturing Into the Pulmonary Artery Associated with Fibrosis of One Lung, By F. J. SMITH.
10. The Treatment of Hypertrophic Pharnygitis and Laryngitis by the Emanations from Thorium Nitrate, By J. G. SHARP.

1. **Fractures of the Skull.**—Rawling begins his third Hunterian lecture by discussing the implication of nerves in basic fractures of the skull. 1. Olfactory nerve. Most fractures involving the anterior fossa pass through the cribriform plate of the ethmoid, and so produce anosmia, either unilateral or bilateral, by injuring the five filaments of the olfactory bulb. 2. Optic nerve. Unilateral blindness is occasionally observed, and may be due to fracture and dislocation of the anterior clinoid process with pressure on the nerve, or to hæmorrhage into the nerve sheath. 3. Nerves passing along the cavernous sinus and through the sphenoidal fissure. The third, fourth, fifth, and sixth nerves are rarely subject to direct injury, but may be compressed by extravasation of blood. The seventh nerve is the one most commonly involved in basic fractures, owing to its complicated intrapetrous course. Facial nerve implication and auditory symptoms are so closely bound up that they must be treated together. The cases can be classified into two main groups: (1) early and partial paralysis of the facial nerve, accompanied by a variable degree of deafness; and (2) early and complete paralysis of the facial nerve, with complete deafness. In the first group are included the great majority of middle fossa fractures, the main trunk of the nerve escaping injury, except in the region of the germ, where it may be compressed by blood clot, temporary symptoms resulting. In the second class of cases the fracture traverses the thin cerebellar fossa and cuts across the petrous bone, thus completely severing the facial nerve and the auditory apparatus. The ninth, tenth, and eleventh nerves, passing through the jugular foramen, are well protected and usually escape injury, although the foramen lies in the path of more than one line of basic fracture. The foramen of the twelfth nerve is practically never involved. Injuries of the head result in definite changes in the body temperature, not due to any special lesion of bone or cortex, but probably to the influence of the injury on the heat regulating centres, the temperature rising as the cardiac and respiratory centres fail. The thermometric changes are so constant that they may be regarded as an almost infallible guide to the prognosis of the case. They can be divided into three groups: 1. The temperature, at first subnormal, undergoes a steady and progressive rise. The prognosis is most unfavorable. 2. The temperature, at first subnormal, rises to 101° F. and remains steady for a short while. This is the crisis of the case; if the temperature rises further the prognosis is gloomy; if it falls, there is hope of recovery. 3. The temperature, at first subnormal, remains so, or does not rise above normal. If the former, the prognosis is very bad; if the latter, very good.

Two distinct varieties of changes in the fundus oculi are seen: (1) a disc with normal outline, the fundus showing marked engorgement of the retinal veins, however; and (2) a fundus presenting all the signs of true optic neuritis. Laceration of the brain substance is one of the most important complications of skull fracture. No part of the brain can be said to be exempt, and the symptoms are usually obscure. Localized convulsions and paralysis corresponding to definite cortical areas are the only definite clinical symptoms.

General treatment. At first the head must be kept low and the heart stimulated, but when reaction begins, the head must be elevated and the body depressed, ice applied to the head and warmth to the body, and free venesection performed. All punctured fractures, and all markedly depressed fractures in adults, simple or compound, urgently call for operative interference. In comminuted vault fractures, the fragments should not be replaced, the use of gold foil and metal plates being preferable.

4. **Renorenal Reflex Pain.**—Newman reports three cases of renal disease, in all of which the pain was most marked on the side opposite to the diseased kidney. This is a rare occurrence, but its possibility should always be borne in mind in operating on such cases.

5. **Pseudoappendicitis.**—Bottentuit states that certain forms of enteritis are frequently confounded with appendicitis, producing crises simulating those of the latter disease. The two most frequent forms are mucomembranous enterotyphlocolitis and intestinal lithiasis. The first can be diagnosticated by its chronic history, and the presence of slimy mucus or false membrane in the stools, the second by the presence of intestinal sand in the movements. The author has never seen either of these conditions lead to or be complicated by an attack of true appendicitis.

7. **Mental State in Myxœdema.**—Wolseley-Lewis describes the various changes which take place in the mental condition of persons suffering from myxœdema, and states that such changes are almost confined to the sphere of action. Either some toxine in the plasma surrounding the motor cells inhibits the chemical processes which originate a motor impulse or the absence of some substance from the blood interferes with the discharge. This toxine is neutralized or this essential substance is supplied by the administration of thyreoid extract; the patients get well and remain well as long as they take thyreoid. The simultaneous exhibition of syrup of the iodide of iron appears to assist its action.

BRITISH MEDICAL JOURNAL

April 23, 1904.

1. Demonstration on Recent Electrotherapeutic Work, with Special Reference to Lupus, Rodent Ulcer, and Malignant Disease, By J. MACINTYRE.
2. Treatment of Röntgen and Radium Rays, By R. MORTON.
3. Some Typical Examples of Röntgen Rays and High Frequency Treatment, with Observations Thereon, By H. W. WIGMORE.
4. The Use of Radium in a Case of Rodent Ulcer, By J. A. B. HAMMOND.
5. Rodent Cancer Treated with X Rays, By G. G. S. TAYLOR.
6. A Microbe Pathogenic to Rats (Mus Decumanus and Mus Ratus) and Its Use in the Destruction of Those Animals, By J. DANYEZ.
7. On the Administration of Chloride of Ethyl and Somnoform Alone or in Conjunction with Nitrous Oxide or Ether, By G. W. B. DANIELL.
8. Intraspinal Cocainization, By A. S. GUBB.

1, 2, 3, 4, 5. **Use of X Rays, Radium, and High Frequency Currents.**—Macintyre discusses the recent electrotherapeutic work in connection with the treatment of lupus, rodent ulcer, and malignant disease. In the two former diseases there can no longer be any doubt of the value of the Finsen light, x rays, and even the high frequency currents. Remarkable results have been attained with all three methods. In malignant disease, however, complete removal of the disease at the earliest stage possible by the surgeon is the only safe recommendation to make. The difference in results may be due to the fact that while lupus and rodent ulcer are known to be due to microorganisms, the ætiology of malignant disease is as yet unknown.

Raymond in discussing treatment by Röntgen and radium rays, states that the changes observed on normal skin under the influence of x rays are pigmentation, erythema, blanching, and loosening of hairs. If the exposures continue dermatitis or x ray burn, appears. This dermatitis may be dry without destruction of tissue, moist with vesiculation, or a dark red angry dermatitis with intense congestion. Finally in the most severe burns the congestion goes on almost to the state of stasis, with necrosis of the skin and subcutaneous tissues. The microscopic changes consist of a slow degeneration affecting chiefly the epithelial cells. The vessels are changed into irregular swollen masses, the lumen being sometimes obliterated. In the treatment of rodent ulcer by the x rays we have a distinct acquisition to medical science, the disease being incurable otherwise. It seems to arise in the sebaceous glands, for the cells of which the x rays have a great affinity. In superficial and localized cancer the x rays can effect a cure. In larger growths the x rays have the disadvantage that they break down the tumor mass, thus liberating toxines, and possibly disseminating the disease. The results are usually good in atrophic scirrhous cancer. Cases of sarcoma are usually too far advanced to be benefited by treatment. In lupus the x rays are as good or even better than the Finsen light, and they do much good also in psoriasis and chronic eczema. In tertiary syphilis, however, they have but little influence. The rays of radium are of two kinds—visible and invisble. As a rule, the greater the self luminosity, the less the therapeutic activity. The chief results attained so far have been in the treatment of rodent ulcer and lupus. Radium is best used in small glass tubes, one inch long, and containing five milligrammes each. Wigmore reports ten cases illustrating the use of the x rays and the high frequency current. He believes in short applications of from five to ten minutes, ceasing treatment when marked dermal congestion occurs. The scar following the use of the x rays is very soft and pliable, with no keloid. Hammond reports a very severe case of rodent ulcer in which the use of radium was followed by a decrease in the pain and a lessening of the discharge, but in which the edges of the ulcer remained unaffected.

Taylor reports a case of rodent cancer which had destroyed the nose of the patient, and which was apparently cured by the use of x rays.

6. **A Microbe Pathogenic to Rats.**—Danyez describes his efforts to exterminate rats in various localities by infecting them with a special coccobacillus which he had found to be pathogenic to those animals. The bacillus was given in bouillon, in which crusts of bread were dipped and used as bait. In Odessa the rats completely disappeared, and likewise in the villages around the town. They did not reappear until brought back to the port by ship. In spite of the freedom with which the virus was distributed, it caused no ill effects among human beings or domestic animals.

Book Notices.

Disinfection and the Preservation of Food. Together with an Account of the Chemical Substances Used as Antiseptics and Preservatives. By SAMUEL RIDEAL, D. Sc. (Lond.), Fellow of University College, London; Fellow of the Institute of Chemistry, etc. London: The Sanitary Publishing Company, Limited. New York: John Wiley & Son, 1903. Pp. 494. Price, $4 net.

This, the third edition, has been entirely rewritten, the author having incorporated with the body of the text the various appendices found in the second edition. The work treats of disinfection and sterilization and the various non-metallic, metallic, and organic substances by which these processes are best brought about, applying these methods to the treatment of air, water supplies, sewage, and various structures inhabited by man or animals, and also to the preservation of food and timber. Chapter XVI, treating of the methods of analysis, giving bacteriological as well as chemical methods for the determination of the value of antiseptics, is of particular interest. A carefully compiled index of ten pages completes this most useful book.

A Laboratory Manual of Physiological and Pathological Chemistry for Students in Medicine. By Dr. E. SALKOWSKI, Professor in the University and Director of the Chemical Laboratory of the Pathological Institute, Berlin. Authorized Translation from the Second Revised and Enlarged German Edition by W. R. ORNDORFF, A. B., Ph. D., Professor of Organic and Physiological Chemistry in Cornell University. Ten Figures and One Colored Plate. First Edition. New York: John Wiley & Sons; London: Chapman & Hall, Limited, 1904. Pp. vi to 263. Retail price, $2.50 and $1.25.

This work, of which the original German is one of the classics in the subject with which it deals, covers completely all the examinations of the secretions and excretions and the methods of analysis of some of the organs of the body, besides embodying a careful selection of the most adaptable methods for the quantitative determination of the various constituents of these physiological materials. The volume is well arranged, the press work being admirable, and the translator may be congratulated upon the successful performance of his task. A short list of reagents and tables of specific gravities and atomic weights, as well as a colored plate of absorption spectra, complete the volume, which may be recommended to all who are interested in the subject.

Transactions of the American Academy of Ophthalmology and Otolaryngology.

This society was formerly known as the Western Ophthalmological, Otological, Rhinological, and Laryngological Association. This name was later changed to the Western Ophthalmologic and Otolaryngologic Association, and on April 9, 1903, it adopted the name of American Academy of Ophthalmology and Otolaryngology. Besides the president's address nineteen ophthalmological and thirteen otolaryngological papers are published, all of a good order of merit. Perhaps where all are so good special mention may seem invidious, yet the reviewer would like to call attention to Dr. Hotz's paper on the operation for cicatricial ectropion, as he thinks it an extremely valuable contribution to an important branch of surgery which should be in the hands of every surgeon likely to be called on to perform such operations. The *Transactions* present a very creditable appearance.

Atlas of the External Diseases of the Eye, Including a Brief Treatise on the Pathology and Treatment. By Professor Dr. O. HAAB, of Zurich. Authorized Translation from the German. Second Edition, Revised, Edited by G. E. DE SCHWEINITZ, A. M., M. D., Professor of Ophthalmology in the University of Pennsylvania, etc. With 98 Colored Lithographic Illustrations on 48 Plates. Philadelphia, New York, London: W. B. Saunders & Co., 1903. Pp. 232. Price, $3.00.

The American editor says " this volume forms an excellent companion book to Professor Haab's *Atlas of Ophthalmoscopy and Ophthalmoscopic Diagnosis*, and is exactly what might be expected from an author of such wide clinical experience and trained observation." Professor Haab speaks of the difficulty of portraying the external diseases of the eye and acknowledges that some cannot be satisfactorily reproduced, but the success he has attained is unqualified. The chromolithographic plates are faithful reproductions of excellent artistic work, and are accompanied not only by verbal descriptions and comments, but also by indications for therapeusis, thus making the work both an atlas and a textbook preeminently useful for all classes of practitioners and students.

Sehproben Tafeln. Mit besonderer Berücksichtigung des militärärztlichen Gebrauchs. Von Dr. BERTHOLD KERN und Dr. REINHOLD SCHOLZ. Berlin: August Hirschwald.

These authors admit the existence of many forms of test types and state that they bring these forward not to add another set, but to meet a distinct need in the accurate determination of vision. Tables I and II are arranged somewhat after the method of Snellen's types, I, using Latin letters; II, Arabic numerals. In Tables III and IV the arrangement is composite. The largest letter, or figure, on the chart is placed singly in the centre. Lines of small characters of various sizes radiate from this in eight directions and cross a background which contains the larger characters, the second in size in a row at the bottom, the third in size at the top, the next adjoining the bottom line, the next adjoining the top, and so on. Table V is the same as Table III with the letters reversed for use with a mirror. Table VI, for testing the near point, has the lines of variously sized small print arranged irregularly together. It seems to the reviewer that the object of the authors is to do away with the uncertainties which attend a subjective examination of vision by arranging the test types so as to confuse the person undergoing examination in regard to the amount of vision revealed. In this way these test types may be useful for the detection of malingering to avoid military service or other distasteful duties and perhaps in other occasional cases, but they can hardly be expected to lessen the difficulties of a subjective examination under ordinary circumstances.

Directions for Laboratory Work in Physiological Chemistry. By HOLMES C. JACKSON, Ph. D., Assistant Professor of Physiological Chemistry in the University and Bellevue Hospital Medical College. Second Edition. New York: John Wiley & Sons; London: Chapman & Hall, 1903. Pp. vi to 148.

This little volume, of which the first edition appeared but a year ago, contains a most concise and clear elucidation of the chemistry of the constituents of the various tissues and secreta and excreta of the body, the author having carefully selected the most approved methods for the identification of the different substances therein contained. It has been written for the use of the author's classes, and may be particularly recommended for teaching purposes. A complete index closes the volume.

Handbuch der Geschichte der Medizin. Begründet von Dr. Med. Th. PUSCHMANN, Weiland Professor an der Universität in Wien. Bearbeitet von Geh. San.-Rat Dr. BARTELS, Berlin; Dr. WOLF BECKER; Dr. IWAN BLOCH, Berlin; Professor Dr. BORUTTAU, Göttingen; Professor Dr. CHIARI, Prag; San.-Rat Dr. LEOPOLD EWER, Berlin; Professor Dr. FASBENDER, Berlin; Professor Dr. FOSSEL, Graz; Professor Dr. ROBERT FUCHS, Dresden; Dr. GEIST JACOBI, Frankfurt Main; Professor Dr. HELFREICH, Würzburg; Professor Dr. HEYMAN, Berlin; Hofarzt Dr. HOFLER, Tölz; Professor Dr. HORSTMANN, Berlin; Professor Dr. HUSEMANN, Gottingen; Professor Dr. IPSEN, Innsbruck; Oberstabsartz Professor Dr. KÖHLER, Berlin; Dr. G. KORN, Berlin; Professor Dr. KOSSMANN, Berlin; Privatdozent Dr. P. TH. MÜLLER, Graz; Privatdozent Dr. NEUBURGER, Wien; Dr. FREIHERR FELIX v. OEFELE, Neuenahr; Dr. OTT, Berlin; Professor Dr. PAGEL, Berlin; Professor Dr. PRAUSNITZ, Graz; Dr. PREUSS, Berlin; Professor Dr. RILLE, Leipzig; Dr. M. SACHS, Berlin; Professor Dr. SCHAER, Strassburg, i. E.; Sanitätsrath Dr. SCHEUBE, Greiz; Professor Dr. SCHRUTZ, Prag; Privatdocent Dr. RITTER VON TÖPLY, Wien; Professor Dr. VIERORDT, Tübingen. Herausgegeben von Dr. Med. MAX NEUBURGER, Docent an der Universität in Wien, und Dr. Med. JULIUS PAGEL, Professor an der Universität in Berlin. Zehnte Lieferung. II Band, Bog. 52-60 (Schluss), und III Band, Bog. 1-2. Jena: Gustav Fischer, 1903. Pp. 992.

The tenth instalment of this huge work concludes Fossel's contribution to the history of epidemic diseases and contains Ott's paper on the history of tuberculosis. Helfreich's history of surgery is begun, and there is an index of names of authors and side references. The work is too voluminous to be readily subjected to a short review; but, as we have said of previous instalments, it is too important and scholarly a contribution to medical literature not to be in the possession of every man who is interested in his profession beyond mere diagnosis and treatment.

Manual of Clinical Microscopy and Chemistry. Prepared for the Use of Students and Practitioners of Medicine. By Dr. HERMANN LENHARTZ, Professor of Medicine and Director of Hospital at Hamburg, etc. Authorized Translation from the Fourth and Last German Edition, with Notes and Additions, by HENRY T. BROOKS, M. D., Professor of Histology and Pathology at the New York Postgraduate Medical School and Hospital, etc. With 148 Illustrations in the Text and 9 Colored Plates. Pp. xxxii-412. Philadelphia: F. A. Davis Company. Price, Cloth, $3.00.

It is a pleasure to see so excellent a translation as that which has been made of the well known manual of Lenhartz, so long a standard textbook of laboratory diagnosis in the German clinics. The English of the text is clear and idiomatic, and but few errors are noticeable, such as, for example, entitling the Coplin jar a "Copeland" jar (page 154) and a mistranslation of calcium hypochlorite as calcium chloride in the description of the indican tests. The editorial additions to the text are in all cases practical and enhance the value of the book; in fact, many more could have been made which would have still further increased its utility for the American student.

We regret to note that the Hiss stain for capsules of bacteria is not mentioned, as it has proved convenient and valuable for this purpose. The Jenner stain for blood has also been omitted except for mere mention in a cursory note, with the statement that it is not so good as other methods. While this is a matter of opinion, yet the widespread use which this stain now enjoys should warrant a description of the technics of its application and the method of its preparation. The editor might well have modified the original text on the subject of testing for indican and introduced some reference to the use of ferric chloride as an oxidizing agent, especially in the form of Obermeyer's reagent. The student could not obtain an indican reaction by the procedure given in the translation, while he would be led to expect from the directions that the indigo obtained came down in solid form as a precipitate rather than dissolved in the chloroform which is added.

The plates which have been added to the translation are in most cases excellent and are valuable in explaining the text, but some of them have suffered grievously in reproduction by the half-tone process and should have been omitted. The beautiful lithographs which accompany the German edition of Lenhartz have also been imperfectly reproduced, and the figures indicating the magnification of some of the plates are incorrect, though correctly given in the original. No doubt these and other points will be modified in a second edition, and the translation remains a valuable work for the beginner in clinical pathology.

BOOKS, PAMPHLETS, ETC., RECEIVED.

Significacion Patologica del Colico Hepatico. Patogenia, Terapeutica. Por el Doctor D. Nicolas Rodriguez y Abaytua, de la Real Academia de Medicina de Madrid. Madrid; Administracion de la Revista de Medicina y Cirugía Prácticas, Calle de Preciados, num. 33, bajo. 1904. [Precio: Una Peseta.]

A Manual of Hygiene and Sanitation. By Seneca Egbert, A. M., M. D., Professor of Hygiene and Dean of the Medicochirurgical College of Philadelphia; Member of the Academy of Natural Sciences of Philadelphia, etc., etc. Third Edition, enlarged and thoroughly revised. Illustrated with 86 engravings. Lea Brothers & Co., Philadelphia and New York.

Twenty-eighth Annual Report of the New York State Reformatory, at Elmira. Illustrated Year Book. For the fiscal year ending September 30, 1903. Reformatory: The Summary Press. 1904.

Physical Training for Women, by Japanese Methods. By H. Irving Hancock, Author of Japanese Physical Training, Life at West Point, etc. Illustrated from photographs by A. B. Phelan. G. P. Putnam's Sons, New York and London The Knickerbocker Press. 1904.

An Introduction to Vertebrate Embryology, based on the study of the Frog and the Chick By Albert Moore Reese, Ph. D. (Johns Hopkins), Associate Professor of Histology in Syracuse University, and Lecturer on Histology and Embryology in the College of Medicine. With 84 Illustrations. G. P. Putnam's Sons, New York and London. The Knickerbocker Press. 1904.

A Manual of Fever Nursing. By Reynold Webb Wilcox, M. A., M. D., LL. D., Professor of Medicine in the New York Postgraduate Medical School and Hospital; Consulting Physician to the Nassau Hospital, etc. Illustrated. Philadelphia: P. Blakiston's Son & Co. 1904.

A Text-Book of Physiology. By Isaac Ott, A. M., M. D., Professor of Physiology in the Medicochirurgical College of Philadelphia. With 137 Illustrations. Royal Octavo, 563 pages. Bound in extra cloth. F. A. Davis Company, Philadelphia, Pa. [Price $3.00 net.]

Air, Food, and Exercises. An Essay on the Predisposing Causes of Disease. By A. Rabagliati, M. A., M. D., F. R. C. S., Edin., Honorary Gynæcologist, and Late Senior Honorary Surgeon, Bradford Royal University, Consulting Surgeon to Bingley Hospital, etc. Third Edition. Greatly Enlarged and Almost Entirely Rewritten. New York: William Wood & Company. 1904. Pp. 559. [Price $3.00 net].

Kissingen für Herzkranke. von Dr. J. Leusser, prakt. Arzt. Dritte Auflage. Bad Kissingen: F. Weinberger, 1904.

Graves's Disease. With and Without Exophthalmic Goître. By William Hanna Thomson, M. D., LL. D., Physician to the Roosevelt Hospital, New York, etc. New York: William Wood & Company, 1904.

A Guide to the Clinical Examination of the Blood for Diagnostic Purposes. By Richard C. Cabot, M. D. With Colored Plates and Engravings. Fifth Revised Edition. New York: William Wood & Company, 1904.

Manual of Materia Medica and Pharmacy. Specially designed for the Use of Practitioners and Medical, Pharmaceutical, Dental, and Veterinary Students. By E. Stanton Muir, Ph. G., V. M. D., Instructor in Comparative Materia Medica and Pharmacy in the University of Pennsylvania. Third Edition, Revised and Enlarged. Crown Octavo. 192 Pages. Interleaved Throughout. Bound in Extra Cloth. Philadelphia: F. A. Davis Company, Publishers. [Price. $2.00.]

Burdett's Hospitals and Charities, 1904. Being the Year Book of Philanthropy and the Hospital Annual. Containing a Review of the Position and Requirements, and Chapters on the Management, Revenue, and Cost of the Charities. An Exhaustive Record of Hospital Work for the Year. By Sir Henry Burdett, K. C. B., Author of Hospitals and Asylums of the World, etc. London: The Scientific Press (Limited). [Price, Five Shillings net.]

Proceedings of the American Medicopsychological Association at the Fifty-ninth Annual Meeting, held in Washington, D. C., May 12-15, 1903. Published by Amercan Medicopsychological Association, 1903.

Letters to the Editor.

MEDICAL AND LEGAL EXPERTS.

Topeka, Kan., *April* 29, 1904.

To the Editor,

Sir: An old adage informs us that they who live in glass houses should not throw stones. It is very common for judges and lawyers to animadvert upon medical experts. The medical experts are held up to much ridicule because they do not always agree among themselves and because medical experts can be found who will take opposite sides in medicolegal questions. Much advice is offered in a style that implies that the legal profession and legal experts are free from the infirmities and failings attributed to doctors.

Is this attitude of the lawyer and the judge justified? Is not his own glass house liable to be broken? I take it that the judges of our courts, and especially the higher and more important courts, should be considered and are experts in law, legal experts. The highest court, the most important legal tribunal in this country, is the United States Supreme Court. The nine members of this court are selected from thousands and thousands of lawyers and judges because they are preeminently experts in the law. According to the legal critics of the doctors, these nine legal experts ought always to take the same view of questions on which they are called to give opinion. But, alas! how are the mighty fallen! In a very important case lately before this court (merger case) four justices guessed one way and five guessed the other. Even the much maligned medical experts could not more evenly arrange themselves on opposite sides of a question.

It seems to me the lawyers and judges ought to stop charging the doctors with incompetence and venality. B. D. Eastman.

THE LONDON RINGWORM HOSPITALS.

224 West Fifty-second Street,
New York, *April* 28, 1904.

To the Editor,

Sir: Your London correspondent, in the issue for April 2, 1904, says: "Other good people have other fads, but I bestow the palm on the Metropolitan Asylums Board of London for having erected (at a cost of one million dollars) a special hospital for the treatment of ringworm. To date there has been just one applicant for treatment—a little ragged boy from Mile End Road."

As I may be accused of having a fad for ringworm hospitals, I wrote at once to Dr. T. Colcott Fox, of London, who says in his reply:

:" The Metropolitan Asylums Board, about a couple of years ago, secured a building in which to draft cases of ringworm from the poor law institutions of London. These ringworm pauper children could not be educated with others, and were a great nuisance as a fertile source of contagion to others. The board about a year ago bought up some other disused schools to cope with the number of ringworm cases—i. e., those actually in poor law institutions. I was appointed visiting dermatologist, and I send you my first report on the Bridge School. A second report on the second year's working of the Bridge and Downs schools will be out shortly. The Bridge

School takes, I think, 160 children, and the Banstead Road, or Downs, School, 420 children, and we have both schools full. We are going to make an effort to stamp out this ringworm, and when I have cleaned a lot of these old chronics off I hope the board will draft in cases from the elementary schools."

As to results of treatment, I find from the Metropolitan Asylums Board—Fifth Annual Report of the Children's Committee, 1902—that "from the date of the first admission of patients suffering from ringworm of the scalp into the Bridge School at Witham, on February 12, 1901, until December 31, 1902, 316 cases were received—viz., 187 during the year 1901 and 129 during 1902. Of these, 6 were readmissions. Of the 316 children admitted, 150 were discharged, leaving 166 in the school on December 31, 1902. Of the 150 discharged, 38 left in the year 1901, 31 of them cured and 7 for various reasons and uncured; 112 left in the year 1902, 108 as cured and 4 for various reasons and uncured."

From the 1903 report, I find that "during the year 1903 56 new cases of ringworm of the scalp have been admitted, making a total of 222 cases under treatment during the year 1903." "Of the 222 cases, 64 were discharged as cured and 12 others were taken out of the institution still uncured."

There is no mention of the original cost of the Bridge School, but surely a total cost per capita of 2s. 2d. a day is not extravagant. The Downs Hospital School, which was formerly the Banstead Road School, was purchased from the Smith Metropolitan School District Board at a cost of £2,000, and consists of six self-contained blocks, including kitchen and small hand laundry, each containing accommodation for seventy ringworm children. There is also a central administrative block, a junior and senior school, a recreation hall, and a combined infirmary and gate porter's lodge. This was put into a thorough modern sanitary condition at a cost of £5,000.

In this school, "from the first reception of patients on February 26, 1903, to the close of the year 1903, there were 619 children admitted. Of these, 228 were discharged—43 at the request of guardians, 172 cured, and 13 transferred to the Bridge School, thus leaving 391 in the school." At the present time both hospitals are full, as shown by the letter of Dr. T. Colcott Fox, and all are submitted to a careful microscopical and bacteriological examination.

In considering the average length of time spent in the schools (nine months) allowance must be made for initial difficulties attending the opening of schools, the necessity for keeping the children under observation for some time after apparent cure, and the long time it takes for new hair to grow on damaged portions of the scalp. The importance of this subject of the careful exclusion or segregation of school children affected by ringworm of the scalp was recently demonstrated by an epidemic in a New York orphan asylum, reported by Dr. W. S. Gottheil (*Medical News*, October 17, 1903), in which 450 out of 900 inmates were affected, and where an enormous amount of painstaking labor and an expense mounting up into a sum represented by five figures was necessary to eradicate this disease, the treatment of which your correspondent looks upon as a "fad." A. D. Mewborn.

Proceedings of Societies.

WILLS HOSPITAL (PHILADELPHIA) OPHTHALMIC SOCIETY.

Meeting of March 14, 1904.

Dr. William Zentmayer in the chair.

Glaucoma.—The chairman announced that there would be an informal discussion upon this subject.

Dr. Frank Fisher, in order to open the subject, cited the histories of two diametrically opposed types of cases which had recently come under his observation. He desired to know under what conditions an iridectomy should be performed, when enucleation of a glaucomatous blind eye should be done, and, if enucleation was done, what effect the procedure would have upon the fellow eye. He was uncertain as to the character of the visual fields serving as a guide to the value of an iridectomy, they being so unstable and uncertain. His experiences had led him to ignore the usefulness of the degree or the grade of visual acuity as a therapeutic guide. In some eyes which had become blinded from glaucoma processes, he had found that eserine failed to produce pupillary contraction. He had been interested in studying a series of cases of glaucoma in which there had not been any consanguineous marriages. He gave the detailed history of one such family, and had more or less knowledge of some others. He inquired what had been the experience of members of the society in regard to the ophthalmoscopic appearances of the fundus and media after the performance of posterior sclerotomy. He asked this question as he had seen two cases in which he could locate the position of the internal traumatism by a localized rupture of the chorioid. He would like to know the most tenable theory for the more or less reduction of intraocular tension in cases in which posterior sclerotomy had been done. He asked whether the vitreous elements were reformed or not. He would like to know if any members of the society had, like himself, seen recession of optic nerve head cupping after successful iridectomy.

The Chairman stated that he enucleated the offending eye in absolute glaucoma, with a possible previous attempt at iridectomy. He performed an iridectomy if possible in acute inflammatory glaucoma. His studies with the visual fields in chronic glaucoma had taught him that the character of decreases and the peculiarities of lessened areas were not in any way characteristic or typical.

Dr. Conrad Berens believed that enucleation tended toward the conservation of the energies of the other eye, his experience being that vision and intraocular tension of the remaining eye were preserved for much longer periods of time. His experience had taught him that the earlier an enucleation was done—particularly in a painful eye—the safer it was for the other one. If possible, he preferred an early iridectomy in all appropriate cases. In some cases of systemic type he eschewed all forms of operative procedure and preferred to wait for some acute condition requiring radical measures, watching over the general system and directing his main therapy toward the general dyscrasia at hand. He had found good results from the ingestion of large doses of iodide of potassium in association with the salicylates. He had found that the more he had to deal with the condition, the more he depended upon remedial measures, reserving, as a rule, operative interference for cases of the fulminating type. He had observed the effects of climate upon such cases, and spoke of the effects of psychological processes upon the condition of the patient. He mentioned the results that he had obtained in some of his chronic cases by the employment of varying strengths of sinusoidal currents.

Dr. McCluney Radcliffe showed a patient under his care in the hospital in whom by enucleation of the blind eye, in combination with appropriate local and general treatment, the progressive and disastrous symptoms ordinarily seen, he felt sure, were rapidly and painlessly disappearing in the fellow eye.

Dr. Charles A. Oliver said that no hard and fast law could be laid down in any particular case, each one, and even the same case at different times, demanding what might be aptly termed "symptomatic treatment." After a large experience with various operative measures, in association with carefully graded local and general therapy and, above all, hygiene with well regulated, cheerful surroundings, and early treatment directed toward the removal of any possible offending dyscrasia, he had in many cases ceased to be disturbed as to the probability of ultimate failure; in other words, he made it an unalterable rule to exercise constant vigilance against the general and special inroads of any causative factor, with the prompt removal of the disturbing local conditions in the easiest and the most conformable way possible in each case. Wherever possible, he enucleated an eye which had become blind from glaucoma, as he had learned from experience that it was the safest and the most certain of all of the radical procedures in certain types of cases for the good of the fellow eye; in fact, he was certain that it undoubtedly seemed to have a beneficial influence upon the fellow organ, whether it was injured or not. The question of the performance of an iridectomy he reserved to cases in all stages, more particularly the incipient and practically unadvanced ones in which he felt that there was either a present necessity or an advantage in the future to be gained by opening as much as possible of an imperfectly acting filtration angle. In some cases of coarse severity he repeated the iridectomy and even had successfully and usefully removed the crystalline lens. He uniformly reserved his operative procedures to the individual organ in question. He spoke of having seen some cases in the hands of some of his colleagues apparently do well by the employment of cyclotomy, and believed that the measure, if not too disturbing in its immediate traumatism, possibly did good by destruction of some of the lymph-making glands. He asserted his disbelief in a proper regeneration of the vitreal elements, believing the vitreous to be like the crystalline lens, an organized body which, once removed or destroyed, was replaced with ordinary lymph; in consequence, he doubted the efficacy of all procedures in which loss of the vitreous body constituted a part. He denounced the term "liquid, or fluid, vitreous," and said that the replacement of the vitreous humor by ordinary lymph in which there were loose vitreal elements with uveal débris merely tended to provoke glandular action with consequent increase of the intraocular fluids. He spoke of the classical experiments of Uribe Troncoso upon the effects of altitude upon the density of the intraocular fluids, as well as the morphological conditions of the fluids themselves. As one of the results of a return of intraocular pressure to normal, he had more than once seen temporary lessening and even disappearance of shallow pathological cuppings in the optic nerve head, particularly in the temporarily placed finer fibres.

Dr. S. Lewis Ziegler spoke of the advantages and the good results he had personally obtained in certain varieties of cases by the performance of posterior sclerotomy. He made the procedure by a quick plunge with a von Graefe knife with its back directed toward the ciliary body some six or eight millimetres back of the ciliary region, between the muscular attachments, and parallel with the radiating vessels. He rotated the knife at right angles to the first incision, allowed a few beads of vitreous to escape, and withdrew the instrument, thus making a T incision. He had found that there was immediate reduction of tension, and there was never any reaction. His experiences had coincided closely with those given by Dr. Oliver. In the blind eyes of some such types he had had useful recourse to opticociliary neurotomy, having, he remembered, in more than one instance kept a functionless eyeball intact and free from pain and harmful influences for a period of nine years. He mentioned several interesting examples of the various conditions, showing the multiplicity and variability of the symptom complex in cases which had come under his immediate observation, distinctly proving the efficacy of certain procedures in some cases and in others the inefficiencies of many authoritative measures that had been strictly applied. The more extended his experience had become in such an enormous mass of material as was almost daily given him in such a large service as in the outpatient department of the hospital, the broader and the more conservative had become his views in regard to therapeutic measures. He would do an iridectomy at the time of the appearance of the earliest signs and symptoms of the disease, in appropriate cases. He had never had any intraocular complications of inflammatory type arise after the performance of posterior sclerotomy. In a number of painful cases in which immediate operative procedure could not be done, he had had most useful recourse to a formula containing hyoscine hydrobromide, morphine, strychnine, and pilocarpine—a combination which not only subdued pain, but both stimulated and controlled lymph circulation. In support of his allegation of the value of these therapeutic agents, he cited three most interesting confirmative cases which he had seen at the hospital several years previously. In the use of electricity he had had considerable experience, finding the most curious paradoxical result that pain and tension were reduced when the negative electrode was applied to the eyeball. In his hands, pneumomassage had given but moderate effects in some cases of chronic glaucoma.

Miscellany.

Nervous Symptoms in Three Patients with Azoturia.—At a meeting of the New York Neurological Society, held on March 1st, Dr. William H. Thomson read a paper on this subject in which he stated that it was his routine practice with all patients who consulted him for nervous ailments to have frequent examinations made of the urine for the purpose of determining the daily output of its normal ingredients. Repeatedly, in many cases of so called neurasthenia, the reports showed that the excretion of urea was only from one fourth to one half of what it ought to be, with sometimes a corresponding diminution of the other solids of the urine and sometimes not, but rather an excess of the other saline ingredients, with a marked diminution of urea. Occasionally, however, he had had patients narrate a series of symptoms resembling in many particulars those showing deficiency of elimination, but on examination they had proved to have a marked excess of both urea and solids, amounting in one case to ten times the quantity of urea of another patient who clinically might have been classed as a typical neurasthenic.

To illustrate this condition, Dr. Thomson briefly reported three such cases. In all three, pain in the eyes, especially from reading, had been a leading symptom. What connection there could be between the ocular troubles and the marked excess in the excretion of urea and of other solids he could not say, and he was inclined to look upon their occurrence as accidental. His own view about the nature of these cases was that they were related to diabetes mellitus, and he would term them urea diabetes in distinction from saccharine diabetes. He did not venture to guess what the underlying cause of this particular form of systemic waste could be, but following his hypothesis, he laid down for these patients the same line of treatment which he would for a diabetic. His notes showed that these patients could not digest starches, and for that reason he largely excluded farinaceous articles from their diet and then prescribed the antiseptics which he had treated of more fully in a recently published paper on the Medical Treatment of Diabetics.

In reply to a question, Dr. Thomson said that in none of his three cases were the patients large meat eaters. The first patient said she could not eat meat with any comfort, and rarely touched it. The second patient said she had given up beef and mutton some years before, because it usually gave her a headache. The third patient was almost an anchorite and was practically starving himself, as he believed that his stomach was the cause of all his troubles.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from April 29 to May 7, 1904:

Place.	Date.	Cases.	Deaths.
Smallpox—United States.			
California—Los Angeles	Apr. 8-23	23	6
Colorado—Denver	Feb. 27-Apr. 16	5	
Delaware—Wilmington	Apr. 23-30		1
Dist. Columbia—Washington	Apr. 23-30	3	
Illinois—Chicago	Apr. 23-30	5	
Kentucky—Covington	Apr. 23-30	4	
Kentucky—Louisville	Apr. 14-28	4	
Louisiana—New Orleans	Apr. 16-30	11 Imported.	4
Maryland—Baltimore	Apr. 23-30	1	
Michigan—Detroit	Apr. 23-30	8	
Michigan—At 97 localities	Apr. 16-23	Present.	
Nebraska—Omaha	Apr. 23-30	4 Imported	
Nebraska—South Omaha	Apr. 16-23	1 Imported	
New Hampshire—Manchester	Apr. 23-30	2	
New Jersey—Camden	Apr. 23-30	1	
New York—Niagara Falls	Mar. 5-12	3	
Ohio—Cincinnati	Apr. 15-29	14	
Ohio—Cleveland	Apr. 22-29	1	
Ohio—Dayton	Apr. 23-30	3	2
Ohio—Toledo	Apr. 23-30	1	
Pennsylvania—Johnstown	Apr. 23-30	4 Imported.	1
Pennsylvania—Philadelphia	Apr. 23-30	23	8
Pennsylvania—Pittsburgh	Apr. 23-30	4	
Pennsylvania—Titusville	Apr. 16-30	23	
South Carolina—Charleston	Apr. 16-30	6	1
Tennessee—Memphis	Apr. 23-30	27	
Tennessee—Nashville	Apr. 23-30	6	
Wisconsin—Milwaukee	Apr. 23-30	13	
Smallpox—Insular.			
Philippine Islands—Manila	Mar. 5-12	1	
Smallpox—Foreign.			
Austria—Prague	Apr. 8-16	13	
Belgium—Antwerp	Apr. 2-16	44	20
Belgium—Brussels	Apr. 9-16		1
Brazil—Bahia	Apr. 2-9	1	
Colombia—Barranquilla	Apr. 11-17		3
France—Paris	Apr. 8-16	22	1
Great Britain—Dundee	Mar. 26-Apr. 16	6	
Great Britain—Edinburgh	Apr. 8-16	5	
Great Britain—Glasgow	Apr. 15-22	43	3
Great Britain—Hull	Apr. 8-16	6	
Great Britain—Leeds	Apr. 8-23	6	
Great Britain—Leith	Apr. 8-16	3	
Great Britain—London	Apr. 2-16	62*	4
Great Britain—Manchester	Apr. 8-16	4	
Gt. Britain—Newcastle-on-Tyne	Apr. 8-16	11	
Great Britain—Nottingham	Apr. 8-16	6	
Great Britain—Sheffield	Apr. 8-16	6	
Great Britain—South Shields	Apr. 8-16	5	
India—Bombay	Mar. 30-Apr. 5		24
India—Karachi	Mar. 28-Apr. 3	12	2
Italy—Catania	Apr. 14-21		1
Japan—Nagasaki	Mar. 21-31	4	5
Java—Batavia	Feb. 7-Mar. 15	15	3
Java—Batavia	Mar. 12-19	20	1
Malta	Mar. 26-Apr. 2	1	
Mexico—Mexico	Apr. 10-17	3	2
Mexico—Tampico	Apr. 16-23		1
Mexico—Torreon	Apr. 17-23	14	14
Netherlands—Amsterdam	Apr. 8-23	2	
Russia—Moscow	Mar. 26-Apr. 9	13	3
Russia—St. Petersburg	Apr. 2-9	11	2
Turkey—Beirut	Apr. 2-16	Present.	
Yellow Fever.			
Colombia—Barranquilla	Apr. 11-17		1
Costa Rica—Alajuela	To April 24	11	6
Ecuador—Guayaquil	Mar. 26-Apr. 2		7
Mexico—Merida	Apr. 17-23	1	1
Cholera—Insular.			
Philippine Islands—Provinces	Mar. 5-12	22	9
Cholera—Foreign.			
India—Madras	Mar. 26-Apr. 1		2
Turkey—Bagdad	Mar. 5-12	16	7
Turkey—Bassora	Mar. 5-12	6	7
Plague—Insular.			
Philippine Islands—Manila	Mar. 6-12	3	3
Plague—Foreign.			
Australia—Cairns	To Mar. 22	9	2
Egypt	Mar. 26-Apr. 2	62	43
India—Bombay	Mar. 29-Apr. 5		1,135
India—Karachi	Mar. 27-Apr. 3	360	312

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* Week ended April 2, 1904, cases 42, deaths 3, erroneously

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending May 7, 1904:

Ebert, Rudolph G., Major and Surgeon. Reports for temporary duty in charge of the Chief Surgeon's Office, Department of the Columbia.

Ford, Clyde S., First Lieutenant and Assistant Surgeon. Leave of absence extended ten days.

Harvey, Philip F., Colonel and Assistant Surgeon-General. Returned to duty as Chief Surgeon, Department of the Lakes, Chicago, Ill., from leave.

Mason, Charles F., Major and Surgeon. Granted four months' leave of absence to take effect on or about June 1, 1904.

Maus, Louis M., Lieutenant-Colonel and Deputy Surgeon-General. Sick leave further extended thirty days on surgeon's certificate of disability.

Murray, Alexander, First Lieutenant and Assistant Surgeon. Granted leave of absence for twenty days from April 26, 1904.

Palmer, Fred W., First Lieutenant and Assistant Surgeon. Ordered to report for duty at the United States Rifle Range, Arcadia, Mo.

Siler, Joseph F., First Lieutenant and Assistant Surgeon. Left Fort Logan, Col., *en route* to Target Range, for duty.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending May 7, 1904:

Brown, H. L., Assistant Surgeon. Detached from the Naval Museum of Hygiene and Medical School, Washington, D. C., and ordered to the *Lancaster*.

Hull, H. F., Assistant Surgeon. Ordered to the Naval Hospital, Naval Training Station, Newport, R. I.

Langhorne, C. D., Passed Assistant Surgeon. Ordered to continue on duty on the *Monongahela* at the Naval Station, Guantanamo, Cuba.

Wickes, G. L., Assistant Surgeon. Ordered to the Naval Hospital, Philadelphia, Pa.

The following named medical officers have been appointed assistant surgeons, with the rank of lieutenant, junior grade, from April 22, 1904: J. L. Belknap, J. Flint, H. A. May, and L. H. Wheeler.

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending May 5, 1904:

Bierman, C. H., Pharmacist. Granted leave of absence for eight days from May 26th.

Boggess, J. S., Assistant Surgeon. To proceed to Newport News, Va., for special temporary duty. April 2, 1904.

Burkhalter, J. T., Assistant Surgeon. Granted leave of absence for four days from May 4th.

Carmichael, D. A., Surgeon. Granted leave of absence for fifteen days from May 12th.

Carter, H. W., Surgeon. To report at Washington, D. C. April 29, 1904.

McMullen, John, Passed Assistant Surgeon. Granted leave of absence, on account of sickness, for seven days from April 21, 1904, under paragraph 191 of the regulations. Granted extension of leave of absence, on account of sickness, for ten days from April 28th.

Pettus, W. J., Assistant Surgeon-General. Leave of absence for seven days granted by Bureau letter of April 25, 1904, amended so as to be for three days from April 26th.

Sawtelle, H. W., Surgeon. Granted leave of absence for five days from May 6th.

Salmon, T. W., Assistant Surgeon. Relieved from duty at Stapleton, N. Y., and directed to proceed to Philadelphia, Pa., and report to medical officer in command for duty. May 3, 1904.

Stiles, C. W., Zoologist. To proceed to Missoula, Montana, for special temporary duty. May 2, 1904.

Stoner, G. W., Surgeon. Five days' leave of absence from April 29, 1904, under paragraph 189 of the regulations.

Young, G. B., Passed Assistant Surgeon. Two days' leave of absence from April 29, 1904, under paragraph 189 of the regulations.

Births, Marriages, and Deaths.

Married.

Converse—Clot.—In San Francisco, California, on Thursday, April 28th, Dr. George Marquis Converse and Miss Adele Clot.

McKenney—Emery.—In Kansas City, Missouri, on Thursday, April 28th, Dr. William Felix McKenney and Miss Florence Chester Emery.

Pearce—Hall.—In Kankakee, Illinois, on Thursday, March 3rd, Dr. C. T. Pearce, of Cincinnati, and Miss Mary Hall.

Wright—Maier.—In Baltimore, Maryland, on Tuesday, February 9th, Dr. Harper Ansil Wright and Miss Bertye Josephine Maier.

Died.

Caster.—In Clayton, Kansas, on Saturday, April 30th, Dr. Melvin W. Caster, in the seventy-fourth year of his age.

Chew.—In Washington, D. C., on Monday, May 2nd, Dr. Thomas John Chew, in the fifty-eighth year of his age.

Clarke.—In Pensacola, Florida, on Sunday, May 1st, Dr. Almon Clarke, in the sixty-fourth year of his age.

Cox.—In New York, on Sunday, April 24th, Dr. Henry M. Cox, in the fifty-ninth year of his age.

Crawford.—In Chicago, Illinois, on Thursday, April 28th, Dr. Charles Harrison Crawford.

Gerisch.—In Omaha, Nebraska, on Friday, April 29th, Dr. William T. Gerisch, in the sixty-fifth year of his age.

Gould.—In New York, on Tuesday, May 3rd, Dr. Orissa W. Gould, in the forty-fourth year of her age.

Holmes.—In West Newton, Massachusetts, on Sunday, May 1st, Dr. John Parker Holmes, in the forty-fourth year of his age.

Hopkins.—In Philadelphia, Pennsylvania, on Wednesday, May 4th, Dr. William Barton Hopkins.

Mitchell.—In Cincinnati, Ohio, on Thursday, May 5th, Dr. Giles S. Mitchell.

Pope.—In Atlanta, Georgia, on Wednesday, April 27th, Dr. M. Q. Pope, in the forty-sixth year of his age.

Reimer.—In College Point, N. Y., on Friday, April 29th, Dr. Augustus F. W. Reimer, in the sixty-seventh year of his age.

Sauls.—In Saulsbury, Tennessee, on Thursday, April 21st, Dr. Joseph D. Sauls, in the seventy-first year of his age.

Saulsbury.—In Baltimore, Maryland, on Sunday, May 1st, Dr. Thomas B. Saulsbury, of Towson, in the fifty-fourth year of his age.

Swarts.—In Kansas City, Kansas, on Thursday, April 28th, Dr. Eli Swarts, in the sixty-ninth year of his age.

Terry.—In Seattle, Washington, on Friday, April 22nd, Dr. M. F. Terry, in the sixty-fifth year of his age.

Trudeau.—In New York, on Tuesday, May 3rd, Dr. Edward Livingston Trudeau, Jr., in the thirty-second year of his age.

Wheeler.—In Spencer, Massachusetts, on Saturday, April 30th, Dr. Edward Reed Wheeler, in the sixty-fifth year of his age.

Winslow.—In New York, on Saturday, April 30th, Dr. Charles H. Winslow, in the seventy-third year of his age.

Younkin.—In Florence, Kansas, on Monday, April 25th, Dr. R. M. Younkin, in the eightieth year of his age.

New York Medical Journal
AND
Philadelphia Medical Journal.
CONSOLIDATED.

A Weekly Review of Medicine

VOL. LXXIX, NO. 21. SATURDAY, MAY 21, 1904 WHOLE NO. 1329.

Original Communications.

THE SURGERY OF NEPHRITIS.*

BY GEORGE M. EDEBOHLS, M. D.,
NEW YORK.

The proposition to treat chronic Bright's disease surgically by decapsulation of the kidneys, advanced by the author in 1901, came in the nature of a surprise, it might almost be said of a shock, to the medical profession in general. The general practitioner, in spite of the rapid and almost bewildering advances made and being made in the surgery of the various viscera, was scarcely prepared for a surgical invasion of the large field of so called medical nephritis. The traditions of surgery, on the other hand, had ever insisted upon the fact that no surgical operation of any kind must be undertaken in any part of the body, except on a vital indication of immediately pressing urgency, upon a patient suffering from chronic nephritis. To advocate an operation upon the diseased kidneys themselves under these conditions might well be regarded as the extreme limit of rashness. Such, indeed, it would have been in reality, had not various chance observations, made by the writer and other surgeons, of the disappearance of symptoms of chronic nephritis following an operation upon the kidney or kidneys preceded the new departure. These chance observations led the writer, as long ago as 1898, to advocate and perform operations upon the kidney, under certain conditions, with the avowed purpose of bringing about a cure of chronic Bright's disease. Further favorable experience prompted him, in 1901, to advance the broad proposition to treat all cases of chronic Bright's disease, or rather to treat chronic Bright's disease *as such*, by decapsulation of the kidneys. This action was not taken without a full and realizing sense of the tremendous and far-reaching responsibilities involved. Fortunately, the outcome, in the writer's hands and opinion at least, has fully justified the correctness of the position assumed at the time with not a few misgivings.

RENAL DECAPSULATION AND THE SURGICAL TREATMENT OF CHRONIC BRIGHT'S DISEASE PRACTICALLY SYNONYMOUS.

The early history, all of recent date, of the development of the surgical treatment of chronic nephritis, has been elsewhere fully elucidated by the writer, as well as by others, and need not be here repeated. Since the publication of the writer's proposition to treat chronic Bright's disease by decapsulating the kidneys, decapsulation being supplemented when indicated by nephropexy, the terms "renal decapsulation" and "surgical treatment of chronic nephritis" have come to be regarded as synonymous. Indeed, there is no record of any other form of operation having been or being at present performed for the express purpose of curing chronic Bright's disease, if we except nephrotomy, performed in two or three instances by Pousson, and possibly the nephrolysis of Rovsing. Of nephrotomy, Rovsing voices the accepted opinion when he says that he considers it at present dangerous and not even permissible to treat aseptic nephritis by nephrotomy; while Pousson himself appears to have become a convert to renal decapsulation.

RENAL DECAPSULATION OR NEPHROCAPSECTOMY, AND NEPHROLYSIS.

A word in regard to nephrolysis, an operation which in some quarters has been confounded, and even considered identical, with renal decapsulation, may here be not out of place. The idea underlying Rovsing's nephrolysis is the liberation of a kidney from compression exercised or supposed to be exercised upon it by perinephritic thickenings and adhesions. The kidney is dissected from its surroundings, leaving the capsule proper in undisturbed relation and contact with the kidney. Renal decapsulation, on the other hand, has for its avowed purpose the removal of the capsule proper, with a view to the creation of a new and increased blood supply to the diseased kidney. Nephrolysis, indeed, is a necessary adjunct or accompaniment of each and every decapsulation, it being manifestly impossible to remove the capsule proper without first detaching it, and with it the kidney, from the surrounding tissues. Nephrolysis as an operation by itself has never been performed, not even by Rovsing himself. In several of the nine cases of nephrolysis reported by that writer, nephrotomy was performed in addition; and in no less than seven of the nine, partial or complete unintentional decapsulation was also performed. Rovsing's operations of nephrolysis, moreover, were all performed upon but one kidney, whereas the surgical treatment of chronic Bright's disease implies, in the vast majority of cases, operation upon both kidneys. Nearly all of Rovsing's cases were examples of so called surgical nephritis; in a number of instances in which an uncomplicated simple nephritis was thought to have been encountered, the diagnosis, as I have elsewhere (25) attempted to show, lies open to grave doubt.

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* Read by title before the Medical Society of the State of New York, February 4, 1904.

The procedure of Rovsing has found no imitators, so far as the literature, or rather the absence of any literature, on the subject enables us to judge. Renal decapsulation, on the contrary, has been taken up in America by a number of surgeons, so that Guiteras was able to collect from the literature and by means of correspondence, eighty-eight cases operated upon by forty-two different American colleagues. In Europe renal decapsulations for chronic nephritis have been reported by Jaboulay, Sorel, as reported by Le Nouëne, Kümmell, and Witzel. Adding to the above my own seventy-two cases, and about fifty unpublished cases of other surgeons of which I have personal knowledge, we find that decapsulation of the kidney or kidneys for chronic Bright's disease appears to have been performed up to the present time in from two to three hundred cases.

RENAL DECAPSULATION FOR CONDITIONS OF THE KIDNEYS OTHER THAN CHRONIC BRIGHT'S DISEASE.

In addition to becoming established as the sole surgical procedure in the treatment of chronic nephritis as such, the operation of renal decapsulation has been extended to the treatment of diseased conditions of the kidney other than chronic Bright's disease. The writer has elsewhere (22) reported cases in which he has performed renal decapsulation for acute nephritis, acute pyelonephritis with miliary abscesses, hydronephrosis, pyonephrosis, polycystic degeneration of the kidneys, and (23) puerperal eclampsia of renal origin. Le Nouëne also reports a case in which Sorel performed renal decapsulation upon a patient suffering from pyelonephritis with miliary abscesses, while Whitacre has obtained an immediate and lasting cure of acute suppression of urine, of eight days' standing, by renal decapsulation. The advantages of a new and increased blood supply to *any* kidney struggling to throw off *any* diseased action are manifest, and I find on looking over the record of my kidney operations of the past two years and a half that whatsoever other operation I may during that time have performed upon a kidney, I have almost invariably in addition decapsulated the organ. More recently, so distinguished a surgeon as Roswell Park also advises decapsulation of every kidney operated upon for any reason.

THE MODUS OPERANDI OF RENAL DECAPSULATION.

How does renal decapsulation act in bringing about a cure of chronic Bright's disease? The working theory advanced by the author, and upon which be based his procedure of renal decapsulation for chronic Bright's disease, was that by removal of the impervious capsule proper, an opportunity was created for the formation of new vascular connections between the bloodvessels supplying the secreting structures of the kidney on the one hand, and the bloodvessels of the tissues surrounding the kidney on the other. How this increased circulation improves the working coefficient and gradually restores the health of the kidney has been abundantly set forth in a previous communication (19) and need not be reiterated. The views there expressed as to the possibility of the regeneration of the secreting structures of the kidney after their destruction by inflammation have recently received abundant confirmation from the very interesting and instructive experimental work of Thorel. As to the fact of the *invariable* establishment of an abundant new vascular supply to the kidney after decapsulation, the final word, as we shall see further on, remains yet to be spoken.

EXPLANATION OF THE IMMEDIATE GOOD EFFECTS OF RENAL DECAPSULATION.

While the creation of a new blood supply to the kidney readily explains the clinically established fact of continued and lasting improvement in the work of a diseased kidney after decapsulation, it fails to explain fully and satisfactorily the immediate beneficial effects so often witnessed. The theory uppermost in the minds of nearly all writers upon the subject, that the immediate good effects of decapsulation are due to the relief of renal tension, is shattered by the stubborn fact that, in practically all cases of *chronic* nephritis operated upon, no such renal tension can be demonstrated to exist. I have never in any of my operations for *chronic* Bright's disease found the capsule proper tightly stretched over and compressing the kidney. Generally it fits the kidney in a normal manner, and sometimes the kidney appears to be even somewhat shriveled or contracted within a loosely fitting capsule. Even in far advanced chronic interstitial nephritis, with greatly thickened capsule, the reduction in size of the kidney appears to be due rather to contraction of the new fibrous interstitial tissue of the kidney itself than to compression of the capsule.

Jaboulay is inclined to attribute the immediate good effects of decapsulation to improved nutrition of the kidney, owing to vasomotor influences initiated by stretching and irritation, during operation, of the sympathetic nerve fibres entering the kidney with the bloodvessels of the renal pedicle or root. While Jaboulay's explanation is possibly hypothetical, far fetched, and insusceptible of either absolute contradiction or confirmation, yet I am inclined to think that if we condense or translate his explanation into the simple word *massage*, we shall happen very near the truth. In other words, I believe that the immediate good effects of decapsulation can be reasonably explained by the necessary manipulation, amounting in reality to a massage of the kidney, during operation. The immediate stimulation of the existing natural blood supply of the kidney thus effected, supplemented by the relief to congestion afforded by the direct abstraction of more or less blood from the organ during operation, suffices for the immediate wants of the kidney and carries it along until its supplementary new circulation becomes established.

Our knowledge of both the physiology and the pathology of the kidney is still very meagre. Much, very much, remains yet to be investigated and learned before we can afford to discard successful methods of treatment, more or less empirical though they be, in the management of cases of chronic Bright's disease. The future may, and probably will, bring us such demonstrations of the *modus operandi* of renal decapsulation as may make the foregoing attempted explanations appear exceedingly crude and even ridiculous. The advanced experimental work of Flexner, which appears to indicate that the most virulent of the nephrotoxines are formed in the comparatively blood-free cortical portion of the kidney, is at least extremely suggestive in relation to one possible explanation of the good effects of renal decapsulation.

THE FORMATION OF A NEW CAPSULE AFTER RENAL DECAPSULATION.

One invariable effect of renal decapsulation, as observed in all experiments upon animals, is the formation of a new capsule proper replacing the one removed at operation. The only two autopsies upon the human subject which I find recorded—one by Jewett and one by Cutler—note the same formation of a new capsule. In two cases of my own, in which the patients died four months and fifteen months, respectively, after renal decapsulation, and in each of which both kidneys were carefully studied after death by Dr. John H. Larkin, of the Pathological Laboratory of Columbia University, a well-formed new capsule proper was found enveloping each of the four kidneys. The new capsule becomes distinctly organized in from three weeks to three months after operation; it is sometimes thicker, sometimes thinner, but always more succulent than the original capsule, and always vascular.

The observations of Johnson, of San Francisco, showing the presence of two layers, an outer and an inner, of the capsule proper in dogs, are interesting. I have on one occasion encountered exactly the same condition in both kidneys in a renal decapsulation performed upon a man twenty-seven years of age. As experimenters upon dogs in France and Italy do not mention this characteristic, the interesting question arises as to whether possible racial differences in animals of the same species used for experimentation may not explain some at least of the varying results obtained.

VASCULAR CHANGES FOLLOWING RENAL DECAPSULATION.

The vascular changes produced in the kidney and its surroundings by decapsulation have been studied by Balthazard and by Johnson in dogs; by Albarran and Bernard, by Gayet and Bassan, by Fabris, and by Ferrarini in rabbits; by Claude and by Anzilotti in both species of animals. The majority of these experiments were made upon the kidneys of healthy animals. Where nephritis entered at all as a factor in the experiments, it was always the *acute* form; yet it is precisely the effects of decapsulation in *chronic* nephritis that we desire to learn. In normal kidneys, as well as in acute nephritis, there is no need for an increased circulation, and for that reason, perhaps, none is supplied by nature. It is somewhat strange that whereas most French and American observers speak of the difficulty of producing nephritis in dogs, our Italian confrères, Fabris, Ferrarini, and Anzilotti, seem to have no difficulty in producing *acute* nephritis in both dogs and rabbits by the injection of either cantharides or the toxines of diphtheria. The chronic forms of nephritis seem to be the difficult ones to produce.

While Johnson states that "in no case was there any considerable anastomosis between the renal and perirenal bloodvessels," the other observers named, with the exception of Fabris, and perhaps of Albarran and Bernard, who are not very clear upon the subject, have all found exactly the contrary. Dr. Larkin informs me that he has experimented with renal decapsulation on various species of animals with varying results even in the same species, sometimes finding new blood-vessels formed on a most extensive and elaborate scale, and at other times noting little or no new vascularization. The preponderance of evidence thus far is clearly in favor of the formation of new vascular connections between the kidney and surrounding tissues, in the majority of animals of various species, after decapsulation of normal or of acutely inflamed kidneys. Nevertheless, it is difficult to understand why some experimenters nearly always fail to find the new vessels, while Ferrarini, for instance, invariably finds an abundant new vascularization, and is able to furnish us with a very fine illustration (Fig. 1) showing most beautifully the direct connection of the vessels of the new capsule with the vessels of the kidney on the one hand, and with those of the surrounding structures on the other. The effects of renal decapsulation in animals suffering from *chronic* nephritis, *the* thing we should like to know about, have not been studied, owing to the difficulty of producing chronic nephritis in animals.

In addition to the observations already detailed, made with a view to establishing the existence or otherwise of a new circulation after decapsulation of the kidney, one or two series of experiments of a more practical nature have been made in connection with the subject. Gayet and Bassan decapsulated one kidney of a rabbit, and some time afterward killed the animal. On tying both renal arteries and injecting the aorta it was found that the decapsulated kidney received a supply of the injected fluid from the newly formed vessels of the periphery, while its fellow remained uninjected.

Anzilotti, however, has tested the potentialities of decapsulation in a still more practical manner. He finds that renal decapsulation affects neither the urine nor the general health of healthy animals; that the capsule is reconstructed in about twenty days; that the new capsule is thicker and more succulent than the original capsule; that after thirty days the new capsule is always well vascularized, with the formation of new arteries and veins; that the blood channels in the tissues around the kidney are increased in number and size; and, finally, that after 150 days, the time limit of his experimentation, there is no tendency to sclerosis in the new capsule, the vessels of which connect directly and freely with both the renal vessels and those of the surrounding tissues. It would lead us too far to attempt even to outline Anzilotti's farther interesting and exceedingly practical investigations as to the controlling influence exercised by renal decapsulation over the destructive processes initiated in the kidney by ligation of the renal artery and of the renal vein.

AUTOPSIES AFTER RENAL DECAPSULATION IN MAN.

Reports of autopsies performed some time after renal decapsulation in the human subject are rather rare; in fact, I have been able to find but two such reports in the literature. Both of these reports, as already stated, mention the formation of a new capsule, but are not satisfactory upon the subject of the establishment of a new circulation. Jewett's report of an autopsy on a case of chronic nephritis operated on by Wasdin is not precise about dates, and does not bear evidences of careful microscopical examination. His statement that "to neither kidney was there any newly formed blood supply through adhesions" must be taken with the allowances stated. In Cutler's report of an autopsy performed after decapsulation by Elliott, no examination with reference to a new or collateral circulation was made. The only careful and complete examination of two kidneys of the same subject, removed at autopsy four months after decapsulation, appears to have been made by Dr. John H. Larkin in a case of my own. Dr. Larkin made a very minute and painstaking study of a large number of serial sections of both kidneys and the surrounding tissues. As a result, he was able to establish clearly the existence of an abundant vascularization of the new capsules, of direct connection between the vessels of the new capsules and those of the perinephric fat, and of direct penetration of the newly formed vessels of the new capsule along connective tissue paths into the substance of the kidney; thus affording, in the only two human kidneys thus far carefully studied some time after decapsulation, as clear corroboration as could be desired of the probable correctness of the writer's working theory of the formation of a new and increased blood supply to the kidney after decapsulation. Larkin will publish the result of his investigations in the above case as soon as his studies upon two additional kidneys obtained from a patient of mine, who died fifteen months after decapsulation, are concluded. Through the courtesy of Dr. Larkin, I am permitted to reproduce one of the illustrations (Fig. 2) of his forthcoming article.

THE QUESTION OF COMPRESSION OF THE KIDNEY BY THE NEW CAPSULE.

The thought naturally arises, and has frequently and in many places been expressed, that

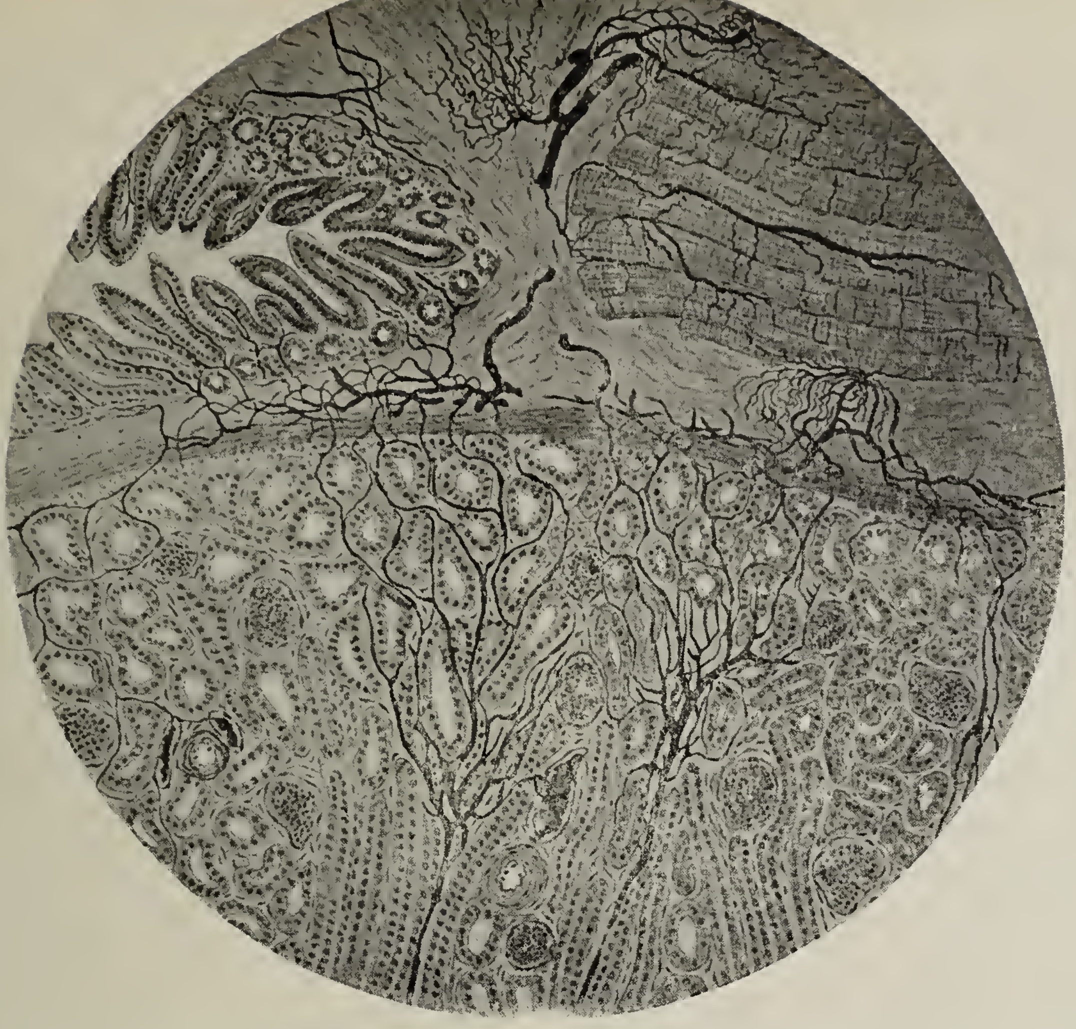

Fig. 1.—Ferrarini. Section through cortex of kidney, new capsule, and adjacent tissues after renal decapsulation performed upon a rabbit. The formation on a liberal scale of new bloodvessels in the new capsule is well shown. These bloodvessels connect on the one hand with the vessels of the adjacent tissues and on the other with the vascular system of the kidney.

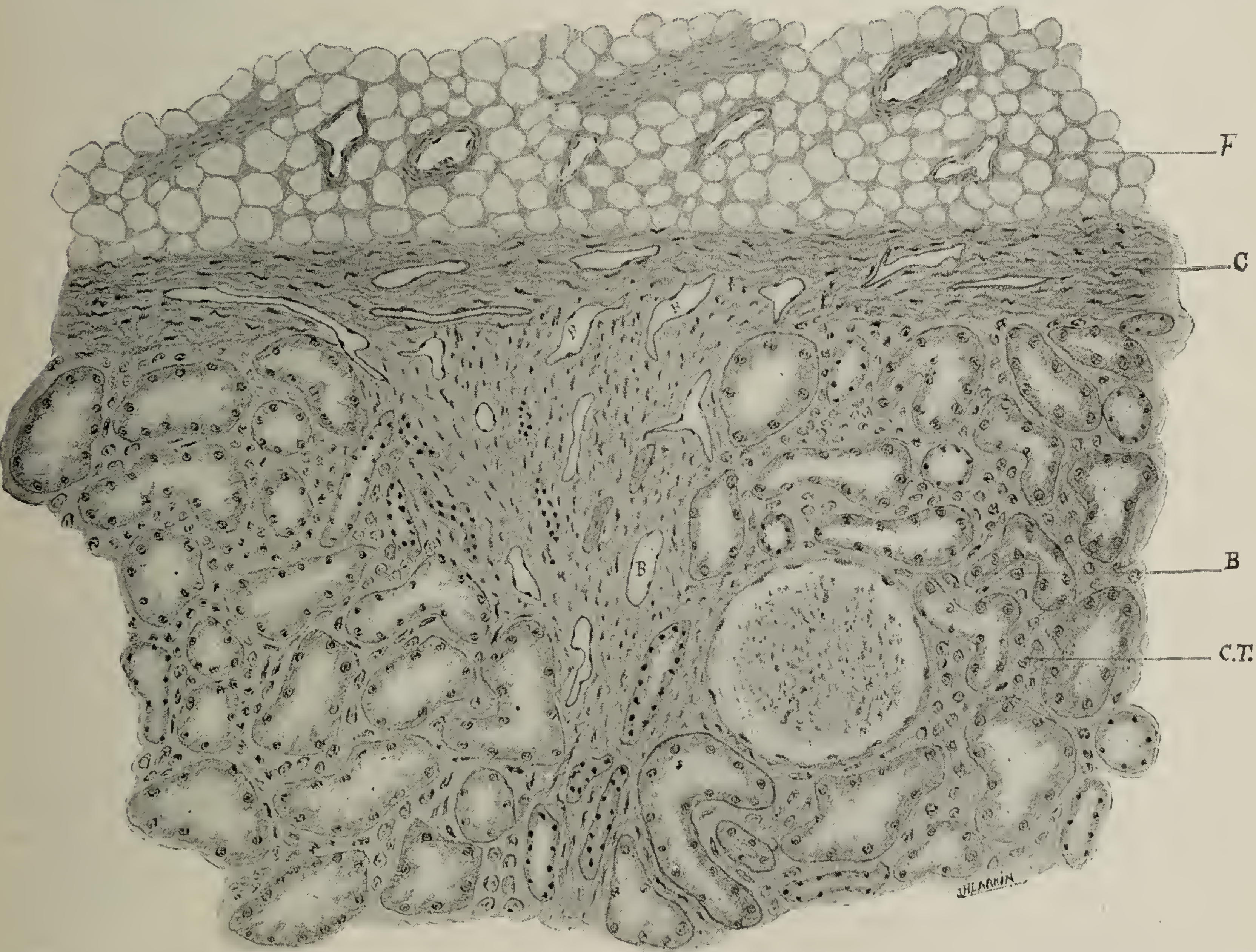

Fig. 2.—Larkin. Section through human kidney cortex, new capsule, and fatty capsule. From a woman who died of pneumonia four months after decapsulation of the kidneys for chronic Bright's disease. F, fatty capsule. C, well vascularized new capsule proper. From the inner aspect of the new capsule numerous new bloodvessels, a few of which are marked B, are seen penetrating the kidney along a wedge-shaped tract of connective tissue.

the new capsule formed after decapsulation must inevitably contract and lead to injurious compression of the kidney with return of symptoms. This *a priori* reasoning, however, is neither based upon actual observation nor in harmony with the results of animal experimentation or with the clinical facts. We have already seen that Anzilotti found no tendency to sclerosis of the new capsule in dogs 150 days after renal decapsulation. I have, on a number of occasions, during the course of years, while performing nephropexy, unintentionally removed the entire capsule proper. Three patients whose kidneys were thus denuded more than ten years ago are under my observation at the present writing. They are all in the enjoyment of most excellent health, and the urine of each of the three is perfectly normal—conditions scarcely compatible with damage to the kidneys from compression. In line with these observations are the experiences of Edmund Rose, as quoted by Wolff. Rose, as a routine measure, completely decapsulates every kidney upon which he performs fixation; yet in examining twenty of his patients operated on between three and fourteen years previously, he found the urine of each of the twenty absolutely normal—proof, surely, that the new capsule undoubtedly formed is not doing the least harm.

For my own part, in view of the above facts and of the permanency and the steadily improving character, in the majority of instances, of the good clinical results obtained in my decapsulations for chronic Bright's disease for many years past, I give the question of possible danger from contraction of the new capsule no further thought.

(*To be continued.*)

Cooper Medical College, San Francisco, Cal.—The members of the graduating class of this institution for 1904, are as follows:

William Henry Banks, Fred Chester Chadwick, John Vincent Craviotte, Ph. G.; Pauline Glaser, John Aloysius Haderle, Ph. G.; Howard Higgins Hopkins, Chester Clarence Moore, John Howard Mules, Leo Munter, Ph. G.; James William O'Brien, William Bennett Palamounmers, Harry Spiro, Ph. G.; Percy Sumner, Grace L. Thorne, Walter W. Tourtain, William J. S. Powers, Howard Sotillott, George B. Worthington, all of San Francisco; and Albert F. Adams, Ph. G., of Pullman, Wash.; Margaret A. Baldwin, of Alameda; John A. Bolsiger, of Heppner, Or.; Harry Dudley Bell, of Oakland; Urban C. Billingsley, of Sacramento; Nelson C. Bissell, of Albion, Wash.; Lambert B. Coblentz, of Santa Maria, Cal.; John C. Condit, A. B., of Cramptonville, Cal.; Harry J. Craycroft, of San Jose; W. Edgar Cunningham, of Madera, Cal.; John C. Decker, of Idaho; Luther P. Flemming, of Lake View, Or.; Mary L. Fraser, of Vallejo; Alfred R. Fritschi, of Alameda; Walter Gavey, of Tacoma, Wash.; William H. Irwin, Clinton Kerby, Jr., of Elk Grove, Cal.; Thomas F. Madden, of San Jose; Grace Mininger, of Alameda; Norman D. Morrison, of Santa Clara; Clarence W. Page, A. B., of Berkeley; Llewellyn G. Petch, of Eureka; Carl L. Powers, Ph. G.; Lillian D. Powers, of Sausalito; J. Audley Young, B. S., M. D., of Oakdale, Cal.

THE RELATION OF THE X RAY AND RADIOACTIVE SOLUTIONS TO EXAMINATION OF THE STOMACH.*

By SINCLAIR TOUSEY, A. M., M. D.,
NEW YORK,
ATTENDING SURGEON, ST. BARTHOLOMEW'S CLINIC.

The author has repeatedly determined the presence of cancer of the stomach by the use of the x ray alone. For this purpose, a large tube should be used; its vacuum should be moderately low, and the current ought to be a powerful one. To be more exact, the x ray tube should be of forty centimetre capacity or over; its vacuum such that with a powerful current turned on the internal resistance of the tube is found to be less than that of a three inch spark gap, and the current should be strong enough to produce a continuous stream of sparks, almost a flame, across a space of eight inches when the tube is disconnected.

At present I am inclined to rely more upon the fluoroscopic than upon the skiagraphic examination in stomach work with the x ray alone. With the fluoroscope we can see the spleen and liver just as clearly defined as if the abdomen were made of glass; these are both in constant motion, owing to respiration, and with no radiographic technique now at our command can we secure a picture that is anything like as clear as what we can see directly. Sometimes a tumefied anterior wall or pyloric extremity of the stomach can be quite postively made out with the fluoroscope, and be merely indicated with a reasonable degree of probability by a skiagraph. In other words, a tumor of the stomach is almost transparent to the x ray, and is in constant motion during respiration and is better studied directly.

Simple dilatation of the stomach and gastroptosis without the presence of a tumor would hardly be capable of demonstration by the x ray under ordinary conditions, and it was with a view to the diagnosis of these conditions that my experiments were undertaken.

All my work with radium and radioactive solutions, both in laboratory work and in the treatment of patients, has been with radium of twenty thousand radioacivity, and the amount used in each case has been one decigramme. The radioactive solution has been prepared by immersing such a quantity of radium, enclosed in a hermetically sealed glass tube, for four weeks in sixteen ounces of normal saline solution contained in a stoppered glass jar. The whole was kept in an iron safe at all times.

The fluorescent solutions employed were made according to suggestions from Dr. Robert Coleman Kemp. The quinine bisulphate solution contains ten grains of quinine bisulphate and five minims of dilute phosphoric acid to a pint of water. The fluorescent solution contains one eighth of a grain of fluorescein, twenty grains of sodium bicarbonate, and one drachm of glycerin to the pint of normal saline solution.

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* Read before the Medical Association of the Greater City of New York, March 14, 1904.

The source of the x ray in making these observations was a fifty centimetre tube with a heavy anode surrounded by a jacket of aluminum, actuated by a coil with electrolytic interrupter permitting a current of about five ampères with about ten thousand interruptions a minute, and producing in these observations a spark eight inches in length. The vacuum in the tube was medium, so that the tube produced a brilliant light, of sufficient penetration to show objects clearly through four thicknesses of lead foil in the author's radiometer and the internal resistance of the tube was equivalent to that of a spark gap of about two inches and three quarters.

My observations up to the present time are as follows:

1. One ounce of radioactive solution and one ounce of fluorescein solution, mixed and enclosed in the thinnest rubber tissue, placed over a twenty-five cent piece and a five cent piece, beneath which is a kodak film enclosed in light proof envelopes of black and orange paper; as for x ray photography, the whole being left in a dark room for eighteen hours, produces no picture when the film is developed.

2. Radioactive solution examined in the dark shows no luminosity.

3. Radioactive solution shows no fluorescence by gas light.

4. Radioactive solution shows no fluorescence when exposed to the author's Cooper Hewitt light, a four hundred candle power light, of which the spectrum is practically pure violet.

5. Radioactive solution shows no fluorescence with the x ray either, when exposed directly to the light from the x ray tube, or when the visible light from the tube is cut off by enveloping the latter in heavy black felt, so that only the invisible x ray reaches the radioactive solution.

6. Radioactive solution does not fluoresce when exposed to the ultraviolet ray, as produced very abundantly by Piffard's modification of the Görl lamp.

The radioactive solution in all the above observations was in an uncovered vessel.

7. Radioactive solution poured over a piece of Willemite produces no fluorescence in the latter.

8. A piece of Willemite immersed in radioactive solution and exposed to the Cooper Hewitt light shows practically the same fluorescence (a faint green crystalline glow) as if the fluid had not been present.

9. A piece of Willemite immersed in radioactive solution and exposed to the x ray, either directly or after the ray has passed through a book or a human hand, shows practically the same white glow as if the fluid was not present.

10. A piece of Willemite immersed in radioactive solution and exposed to the ultraviolet ray from the vacuum electrodes used for the application of high frequency currents, shows the same fluorescence as if the fluid was not present. The Willemite becomes a brilliant green and the associated masses of calcite become pink.

11. A piece of Willemite immersed in radioactive solution and exposed to the ultraviolet ray from the Görl lamp shows practically the same fluorescence as if the fluid was not present, the difference being that the glow is a very little whiter. The Willemite itself is a very brilliant green and the contained calcite is a brilliant pink. This fluorescence persists for five minutes after the ultraviolet ray has been turned off, and during this time, if the piece of Willemite is held close to the eye in a dark room, one seems to see a brilliant large white light.

12. A solution of fluorescein, one grain to the ounce, gives a brilliant fluorescence when exposed to the x ray enveloped in heavy black felt, so that no visible light, but only the invisible x ray, can reach the solution.

13. A solution of fluorescein shows no fluorescence under the same conditions of excluding all visible rays with the Cooper Hewitt light, the ultraviolet ray from the Görl lamp, or from the vacuum electrodes.

14. A solution of fluorescein shows most beautiful fluorescence when exposed directly to sunlight, the Cooper Hewitt light, the x ray, or the ultraviolet ray, as produced by the Görl lamp or by the vacuum electrodes used for high frequency currents.

15. A solution of fluorescein mixed with equal parts of radioactive solution fluoresces with the x ray either direct or when protected from visible light by the hand or some other opaque substance, but the fluorescence is not brilliant. When exposed directly to the Cooper Hewitt light or to the ultraviolet ray from the Görl lamp or from the vacuum electrodes, this mixture of fluorescent and radioactive solutions has a brilliant golden fluorescence and an opacity which merit for it the name of "liquid sunshine."

16. Quinine solution in a test tube, in which is immersed a small tube containing radium wrapped in opaque black paper, fluoresces very

well in the dark. Fluorescein solution fluoresces much more brilliantly under the same conditions. The fluorescence in each case is confined to the fluid very close to the radium, and when the radium is lifted from the solution, the fluorescence in the fluid ceases and no radiance is visible from the radium through the black paper in which it is wrapped. No peculiar appearance is observed when a test tube full of quinine solution, in which is the small tube containing radium, is examined with the x ray fluoroscope. But when such a tube full of quinine solution, alone or mixed with radioactive solution, is enclosed in a dark box and exposed only to the invisible x ray and looked at with the naked eye, very good fluorescence is visible.

17. In my human patients, to whom radioactive solution has been given subcutaneously or by the mouth, no disturbance of any kind has been produced. The beneficial effect upon disease will be reported upon when our knowledge upon the subject is greater.

18. Four fifths of an ounce of radioactive solution were injected into the lumbar region of a cat weighing twenty-four hundred grammes, and the injection was repeated every two or three days for a week. There was at first slight looseness of the bowels, which was thought to indicate that the injection was too large, and the smaller amounts used subsequently produced no undesirable effect on the cat at all.

19. Half an ounce of the radioactive solution was injected into the lumbar region of a rabbit weighing nine hundred and ninety grammes, and this was repeated every day or two for a week. The only perceptible effect was that he was livelier than before the medicine was administered.

20. A dog weighing about twelve pounds was etherized and radioactive solution injected through the left femoral vein. The right common carotid artery had been opened and connected with a mercurial manometer registering the blood pressure upon a kymograph. At first thirty cubic centimetres were given very rapidly, and the same quantity was added after a five minute interval. The only effect noted was a slight rise in blood pressure when the infusion was begun. Now, after three days, the dog is well and happy and is exhibited here to-night.

Observations Nos. 18, 19, and 20 were made at the physiological laboratory of the College of Physicians and Surgeons, Dr. Kemp performing the necessary manipulations for me, and the facilities of the laboratory having been kindly placed at our disposal by Professor John G. Curtis.

21. A rabbit weighing five pounds was killed and the abdomen opened. A part of the vegetable matter found in the stomach was removed and the stomach filled up with a mixture of radioactive and fluorescent solutions. The pylorus and cardia were ligated and the abdomen sewed up. Dr. Graham Rogers made these preparations for me. The animal was examined by the x ray in the dark and all visible light from the x ray tube was excluded. No fluorescence was visible to the naked eye, but with the fluoroscope the stomach region seemed very transparent and could be mapped out exactly. An x ray picture was then taken with the animal prone upon the table. The picture is presented herewith, and shows the outline of stomach in a brilliant manner. The stomach was then emptied of all its contents and another picture was taken under the same conditions in every particular. This is also presented herewith, and may be compared with the other.

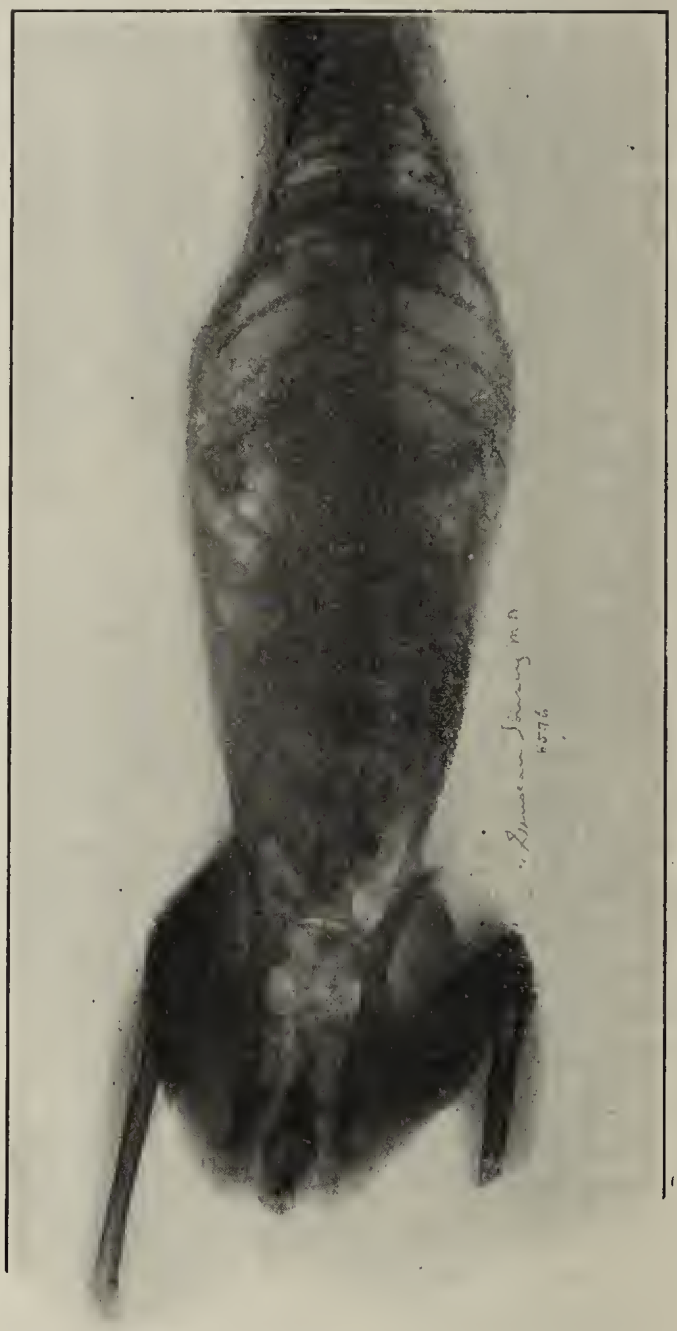

FIG. 1.—Skiagraph of a rabbit with the stomach full of radioactive solution, showing outline of stomach.

My conclusions based upon observations up to the present time are:

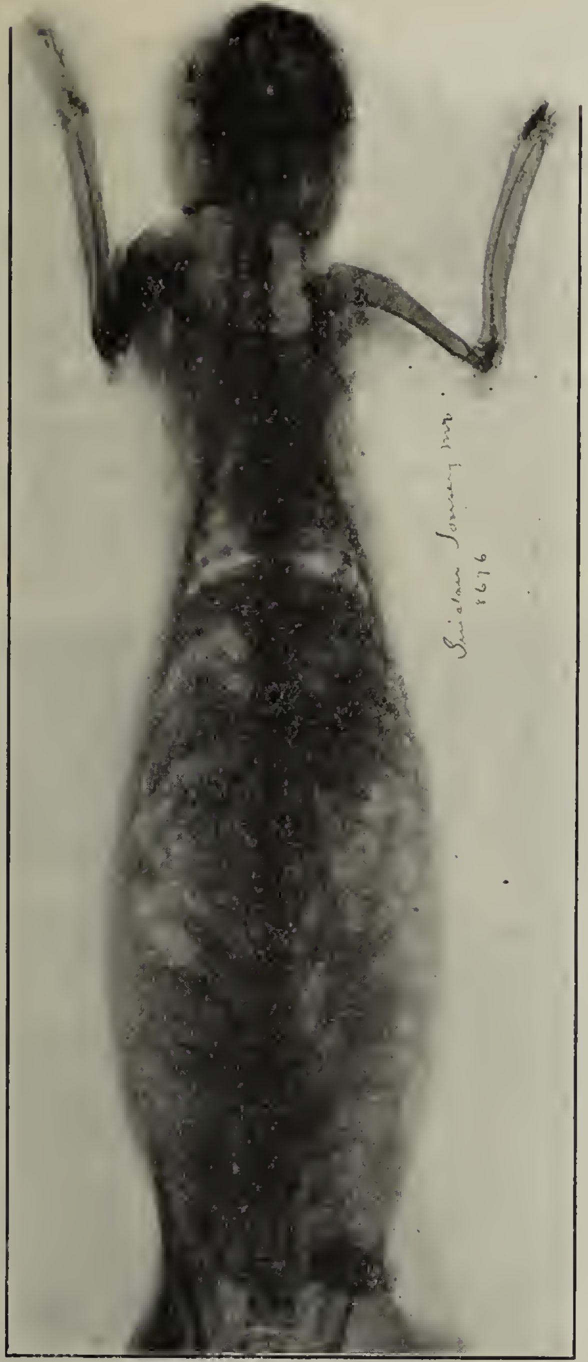

FIG. 2.—Skiagraph of same under same conditions but after the stomach had been emptied of radioactive solution.

1. Radioactive and fluorescent solutions, as prepared above, are innocuous when given by the mouth or subcutaneously.
2. They do not produce, either singly or in combination, sufficient fluorescence to be of value in the examination of the stomach, without the use of some additional light to excite their fluorescence.
3. They will in some cases be of the very greatest assistance in the x ray diagnosis of stomach lesions.
4. They will in some cases be of value in the x ray treatment of stomach lesions.

103 WEST SEVENTY-SIXTH STREET.

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University of North Carolina.—The second annual commencement exercises of the medical department of the university were held on May 5th in Gerrard Hall. Four young men received diplomas, as follows: M. C. Guthrie, J. H. Stanley, R. L. Sharp, and A. P. Willis.

THE TREATMENT FOLLOWING THE BLOODLESS REDUCTION OF CONGENITAL HIP DISLOCATION.

SECOND ARTICLE.

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CHICAGO, ILL.

We shall now give a more extended description of the different types suggested in our first paper,[1] and the proceedings necessary to meet the indications in each type. Transitional forms frequently occur, and, in fact, are more numerous than the strictly typical ones.

In order to test the stability of a joint, grasp the proximal end of the femur, the thumb upon the femoral head, the opposing fingers upon the great trochanter, while the other hand grasps the limb around the knee. We now attempt adduction, abduction, flexion, and rotation. Caution must be exercised that no undue force is used, especially in adduction and flexion, or any of these excursions carried too far, since an unstable joint would be easily dislocated.

We will first consider unilateral cases only. The bilateral cases will be discussed in concluding.

Group A. 1. Head rests securely within the acetabulum. Moderate resistance felt in attempting to correct to a better walking position.

This group represents the so called "normal cases," in which the after treatment does not meet with any special difficulty. Unfortunately, these cases are in the minority. This is explained by the fact that the stability of a joint depends upon its anatomical structure, and consequently only those joints whose constituent parts differ but slightly from the normal, will give results which can be subsumed under this group.

Of greatest importance is the configuration of the proximal end of the femur. The probability of a stable anatomical result diminishes in the same ratio with which the proximal end of the femur approaches the condition of coxa vara or coxa valga.

Other conditions of importance are the anterior twisting of the femoral neck, the depth of the acetabulum and its adaptability to the head, and the degree of shrinkage of the capsule. The two factors last mentioned will quite often counteract the unfavorable formation of the femur.

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[1] *New York Medical Journal and Philadelphia Medical Journal*, April 23, 1904, p. 770.

In case the stability has been found to be sufficient, the application of the second cast may be dispensed with. Sufficient stability, as a rule, permits immediate correction down to 45° abduction. The plan for the after treatment in these cases may be expressed in the following way: Correction of the primary position during the day, restitution of the primary position during the night.

The correction of the forced abduction is accomplished partly through gymnastics, which always follow the massage of the musculature, and partly through the attempts of the child to secure the parallelism of the legs which is necessary for walking. The following system of massage and gymnastics has proved itself valuable by many years of experience.

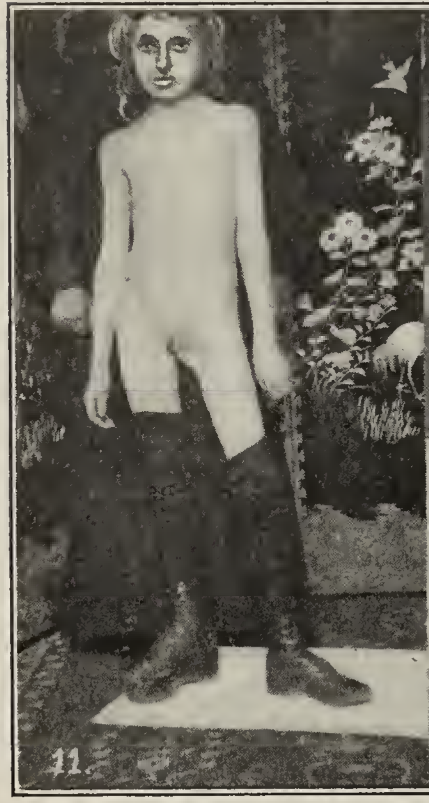

FIG. 11.—Apparent lengthening immediately after second plaster is removed, with compensating high shoe.

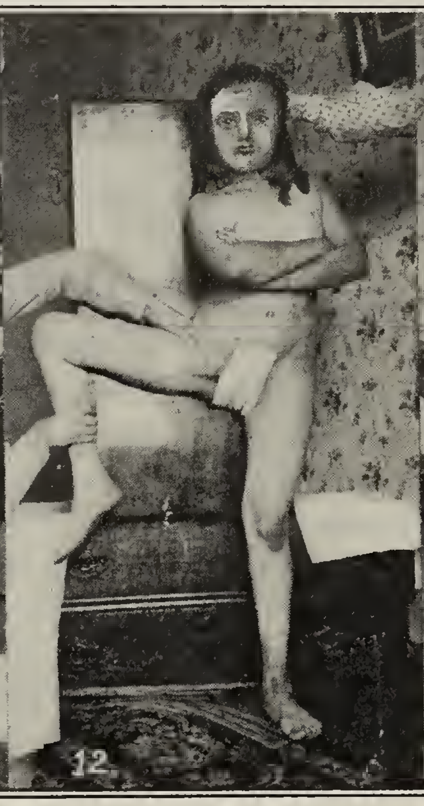

FIG. 12.—Limb brought to primary position, showing position of operator's hands.

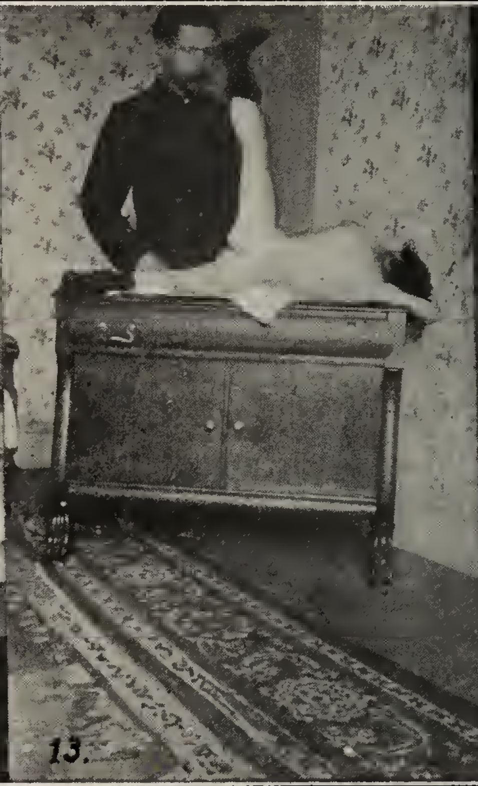

FIG. 13.—Active reduction to perpendicular, while resting on normal side.

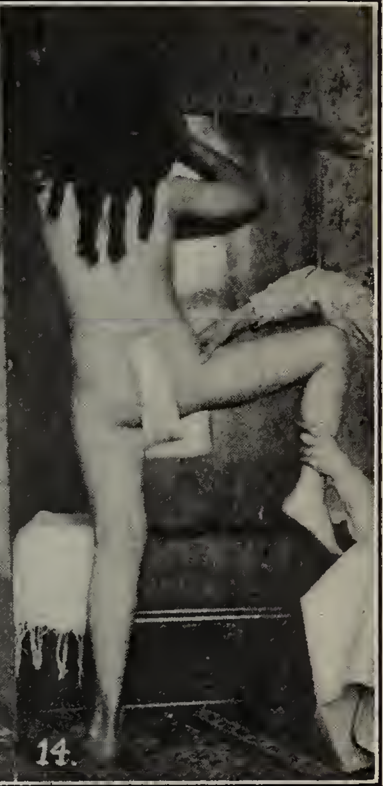

FIG. 14.—Prone position. Anterior superior spines touching table, leg actively and passively abducted.

The child is placed on his back, the side which is to be treated being next the operator. First, deep massage is administered without using any lubricant upon the skin. The muscles are kneaded between the finger tips and the opposing thumb and thenar muscles, the finger tips not changing their place upon the skin. This is important, as painful rubbing and chafing are thus avoided. Successive parts of the musculature are thus massaged, until the entire limb has been treated. Five minutes each will suffice for both thigh and leg.

Following the massage, we proceed with those exercises which must be practised in this posture. They must be executed in the frontal plane. They consist in active, passive, and resisted abductions, adductions, and return to the primary position. These movements are performed with flexed, as well as extended knee joint (Fig. 12). The excursion at the beginning is sometimes a very limited one, but after a few days a decided increase will be noticed.

When some freedom of action has been obtained, exercises in overextension may be begun. The patient lies near the edge of the table, allowing the abducted leg to hang down over the edge. If there is a tendency for the knee to assume a position anterior to the frontal plane, the operator slightly depresses the thigh in superextension and straightens the limb. The limb is then actively elevated and adducted upon the table. Repeat several times.

Following these exercises in the supine position, the patient lies upon his normal side. Deep massage is administered in the same manner as before to the muscles exposed by this position, the pelvitrochanteric muscles now being accessible to treatment. As these muscles could not all be reached while held in the cast, they should receive special attention. The massage is followed by exercises in this lateral position, consisting of active, passive, and resisted abductions of the limb to the right angle position, and active and resisted adductions (Fig. 13). In these exercises the limb should always maintain a position within or behind the frontal plane. The possibility of assuming this latter position is characteristic of a good and secure result, and should be maintained throughout the after-treatment.

The patient next assumes the prone position, and deep massage is administered, as before, to the thigh, leg, and gluteal musculature. Exercises in this position consist in active, passive, and resisted abductions and active and resisted adductions of the thigh in superextension (Fig. 14).

Other exercises may be added, slightly modifying the foregoing. The child lying either in the prone or supine position may kick at an object, bringing the limb into extreme abduction. If in the prone position, the operator holds the pelvis firmly upon the table by pressure upon the sacrum, making both anterior superior spines touch the table. If supine, the patient is held firmly, with the pelvis flat, by pressure upon the sound thigh and anterior superior spine. The limb operated on, always touching the table, will make excursions in the frontal plane.

Very effective, and agreeable to the children, are the abduction exercises performed in the standing position. The child stands upon the sound limb, with the knee and hip joints slightly flexed. The limb operated on, with the knee extended, is abducted and superextended, then adducted, the foot gliding over the floor. This exercise has the advantage that it may be frequently practised, and may be repeated two or three hundred times in succession (Fig. 15). In a somewhat similar exercise, the child stands upon the limb operated on, the knee joint extended, and elevates the sound limb and the pelvis as high as possible, as in Trendelenburg's posture. With slight assistance the child may hop around in this position (Fig. 16). This exercise may be repeated, the child standing upon the sound limb, being careful to stand straight, elevating the limb and not the pelvis with the limb, by lateral bending (Figs. 17 and 18).

In cases where the femoral head is in proper relation, but where, on account of long immobilization, a shortening of the quadriceps and iliopsoas muscles has resulted, this contracture may be overcome in the following manner:

The patient lies prone on a soft, but non-elastic support, his knees elevated by a sand bag or firmly stuffed pillow, about 45 to 50 cm. in length and 15 cm. in height; or, better, a padded wooden wedge may be used, cut out to receive the lower third of the thighs (Fig. 19). The breech is weighted with a bag filled with shot or sand, and the pelvis forced downward, the thighs being forcibly superextended. According to the age and weight of the patient, we begin with from four to ten pounds. In the beginning the patient maintains the position for about ten minutes, and the duration may be gradually increased to a limit of thirty minutes.

When the cast is first removed, the patient misses its support, and experiences some difficulty in walking on this account. After a few days he regains considerable activity, and is able to reduce the rectangular abduction down to about 45°, which will necessitate an appropriate change in the shoes. In order to approximate a parallelism of the limbs, a cork elevation of from 2 to 4 cm. in height is added to the shoe for the sound side, a plain shoe being worn upon the reduced side. A slight degree of abduction is thus maintained (Fig. 11). This abduction is only very gradually reduced by diminishing the thickness of the sole, so that after from six to nine months the sole is about 1 to 1½ cm. high. This should be retained for an additional nine months. A part or all of this elevation may be placed inside the shoe. While it is true that a more

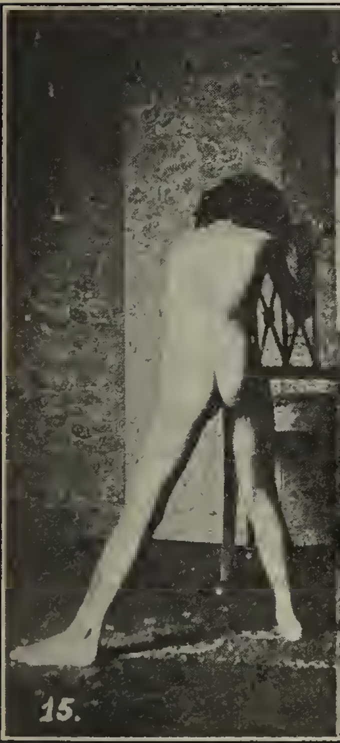
15.

FIG. 15.—Active abduction while standing on sound side.

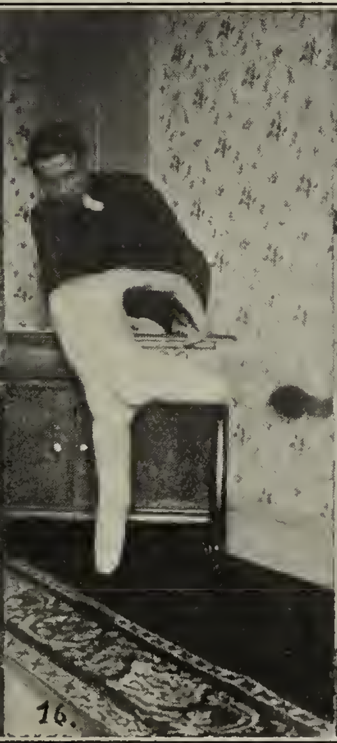
16.

FIG. 16.—Standing on limb operated on, actively abducting sound side.

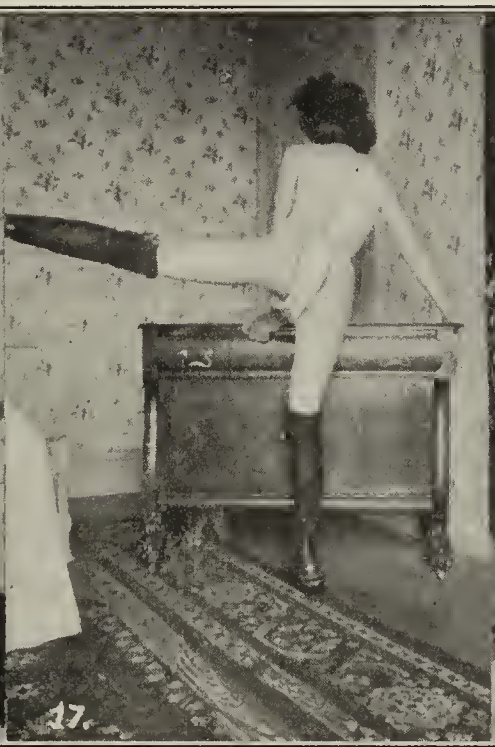
17.

FIG. 17.—Standing on sound side, kicking in abduction the reduced limb.

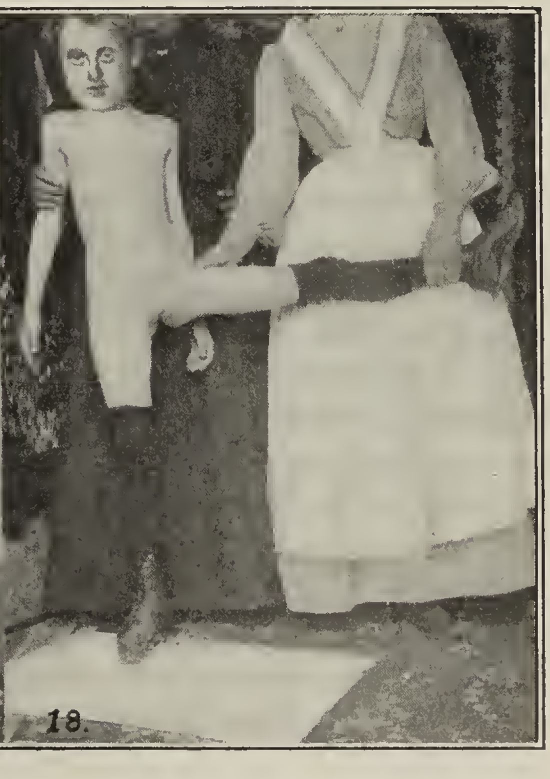
18.

FIG. 18.—The dance. Standing on sound side, assistant holding limb in 90° abduction in the frontal plane.

rapid correction may not always be followed by disastrous sequelæ, the careful procedure is to be commended. After this time, the insole, or elevation, may be dispensed with.

In these stable cases, there is no occasion for anxiety that the child will injure himself in the ordinary exercises of daily life. The shrinkage of the pelvitrochanteric muscles, which always exists at this stage, will securely hold the leg in abduction, more or less approaching the primary position. Lorenz lays great stress upon this condition, and values it very highly.

In order to maintain this abduction, as said before, the primary position is reinstated during the night. A sheath of leather or celluloid approximating the form of the primary cast may be used, or a rectangular pillow or mattress about 10 cm. thick, of a length corresponding to the distance between the inside of the flexed knee and inside of the opposite thigh, and a width approximating the length of the tibia. This cushion is secured in position by means of five straps (Fig. 20). If discomfort is experienced, as after removal of the cast, in the secondary position, the device may, for the first few nights, be employed for a few hours only, but it is a mistake to be lax in this regard, and parents should be made to understand the importance of maintaining this position, which should be continued for from one to two years. Massage and gymnastics are also continued during all this time.

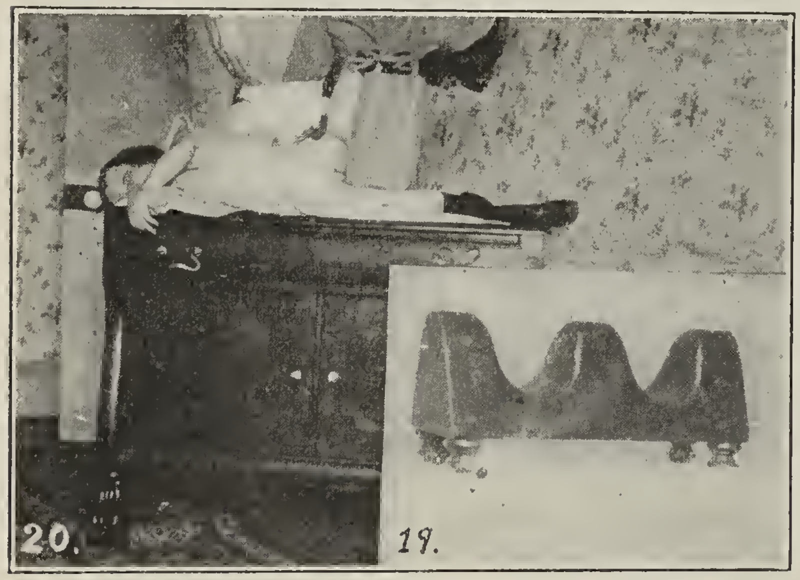

FIG. 20.—Child in sleeping box or mattress, resting on sound side to show adjustment.

FIG. 19.—The wedge, cut out to receive the limbs.

Group A. 2. Head in proper location but easily dislocated.

Evidently the reaction which the femoral head is expected to excite by its movements within the imperfect acetabulum has not reached the desired degree. The same is true as to the shrinkage of the capsule and the pelvitrochanteric muscles. These conditions are apt to occur following an easy operation, where the acetabulum was found to be roomy and the capsule lax, even though an extreme primary position was adopted. On removing the cast, there will be found very slight limitation of motion, the relatively small head may be moved from one side to the other of a definite cavity, and moderate excursions of the limb in adduction or extension will cause a reluxation.

It is evident that these conditions render the pronouncing of a certain prognosis difficult. The indications are for the renewal of the cast in a very slightly modified primary position, extending the time of the treatment in this position. Abduction to 45° is precarious, since in this position the rotary movements of the limb cannot be controlled without additional appliances, and even rotary movements solely jeapordize the result in the same ratio as we approach the normal position. As a further contraindication to this position, abduction to 45° only, predisposes to subspinal luxation. To prevent rotation in this position it is well in some cases to follow the advice of E. Mueller, of Stuttgart, who recommends that the cast be extended to the ankle.

When sufficient stability has been secured, we proceed with the after treatment, as in division 1, but always avoid manipulations of flexion in adduction.

Group A. 3. The head is in the right location, but considerable rigidity is encountered.

While in Group A, 2, Nature did too little, in this case the opposite is true—that is, the contractions of the capsule and the pelvitrochanteric muscles hold the limb rigidly about in the primary position. While this condition is preferable to the lax conditions in the foregoing division, since it secures us against a possible relaxation, yet it has certain drawbacks for the patient and physician. Special measures must be taken to correct the position, before the usual after treatment can be commenced. We should like to caution against any rashness in diagnosticating such cases. Quite often a rigidity that at first sight might be considered insurmountable without operative measures, will partially subside after a few days of faithful application of the after treatment.

This observed rigidity may be explained, either by the shrinkage of the muscles, or by the retraction of the capsule, if a third eventuality be not considered—that is, that the femoral head becomes walled round by osteophytes of the acetabulum. If we consider the previous elongation of the capsule, and how far the anterior walls were stretched by the operation, and if we remember that the pelvitrochanteric muscles have been approximated to each other, it is easily understood that in a number of cases the muscles only are contracted, the capsule not having undergone any considerable shrinkage. Consequently, the contracture will be mainly a muscular one, and the after treatment described in

Group A, 1, will be apt to overcome these resistances.

There is another class of contractures, however, to which we wish to call attention, and which belong to this group, which are yet entirely different from the above mentioned ones, being true contractures. They are caused, in almost all cases, by a strong reaction, which may always be suspected in children who remain very sensitive for a long time after operation. These contractures are the expression of the traumatic inflammatory reaction which has been caused by the mechanical injuries produced by the operation. The clinical examination distinguishes these contractures from the purely myogenic by the fact that rotary movements are impossible, or, at least, if forced, very painful.

In order to be on the safe side, it is commendable always to attempt the after treatment, and to watch the result for some days. It will sometimes happen that the hip joint reacts very intensively against even slight attempts at correction, developing swelling, redness of the skin, and even rise of temperature. These symptoms indicate the necessity of correction with following fixation. In other cases, although no intensive reaction is encountered, if the attempt at after treatment does not show satisfactory progress, we also resort to correction under general anæsthesia. The main point is the correction of the abduction, and at the same time the limb will be rotated inwardly. This is not objectionable, considering the rigidity. Remembering that any correction will relax somewhat in the cast, the latter should be applied as exactly as possible. It may even be necessary to enforce a certain overcorrection, in order finally to secure the desired position. To prevent considerable relaxation of the correction, it is a good plan to include the knee in the cast, allowing it to remain for two or three days. This immobilization of the knee for a short time has no disadvantages, since the hip joint is painful for several days following the operation, and the patient refuses to walk.

If we succeed in correcting the abduction about 45° (in cases in which the anatomical conditions are very favorable, it is possible to correct almost completely) we secure equal length of the limbs by supplying the patient with an insole under the sound leg, its thickness varying with the abduction (Fig. 11). The limb must remain in this second cast for from two to four months. The after-treatment will then consist of massage, and active and passive adductions, while the regular exercises of division 1 are begun as soon, and in such degree, as the sensitiveness of the hip will permit.

In cases of very rigid contractions, the abduction cushion worn during the night is supplanted by an adduction apparatus. This consists of a well padded leather belt, which encircles the pelvis, and a padded leather cuff which embraces the knee. For example, we have a right abduction contracture. The anterior aspect of the knee cuff applied to the right knee is connected by an elastic band with the point of the belt which corresponds to the left anterior superior spine. The posterior aspect of the knee cuff is connected in the same way with the part of the belt corresponding to the posterior superior spine of the left side. The belt is prevented from gliding upward, by the use of a perineal band attached on the right side, in front, and behind.

This simple device is also of service in other cases of persistent contracture, especially if for one reason or another, correction under anæsthesia does not appear to be advisable. If necessary, this apparatus may also be worn during the day.

It is paramount to be very careful in applying treatment in adduction, and to watch the conditions closely, that the results may not be jeopardized by overdoing. It is safest not to attempt to correct at once down to the normal position in applying the adduction treatment, but to correct only down to a point where the patient still maintains a certain degree of abduction, which does not prevent walking.

In Article III the abnormal position of the head and bilateral cases will be discussed.

AN OPERATION TO REACH THE LOWER URETER BY AN EXTRAPERITONEAL ROUTE.

By T. C. WITHERSPOON, M. D.,

ST. LOUIS.

That portion of the ureter located in the true pelvis is usually considered the most difficult part of the urinary tract for the surgeon to reach extraperitoneally. I believe no procedure has been proposed which is not open to objection, either because of the necessary extent of the incision, or because of the difficulty of carrying it out.

About a month ago I was called upon to operate upon a man who had well defined symptoms of a calculus in the lower ureter. In the consultation held beforehand it was agreed that an intraperitoneal exploration should be first made. I conceived the plan of combining the intraperitoneal examination and extraperitoneal exposure of the ureter, so that both could be accomplished at the same time and through the same incision through the abdominal wall.

An incision four inches long was made over the lower end of the rectus, beginning at a point over its insertion into the pubic bone and extending upward in a direction parallel with its fibres. The rectus was then divided longitudinally by blunt dissection through the middle of its belly. The fascia below the semilunar fold of Douglas being divided, the peritonæum and its fatty layer came into view. This was incised, and the entire length of the ureter palpated, as was also the kidney. An inflammatory mass surrounding the last inch of the ureter behind the bladder was found. Dr. Bransford Lewis had introduced a ureteral catheter before the operation began, and palpation was rendered easy thereby. At the lower end of the ureter there is an accumulation of fat, especially marked in those who are in good flesh, and this served to obscure the diagnosis somewhat in the patient, and left a doubt as to the presence or absence of stone. The lower ureter was then exposed extraperitoneally in the following manner: The peritoneal opening was closed tightly, to shut off thereby its cavity from the outer route. The bladder and its fatty covering situated in the lower portion of the wound were pushed upward and inward and the peritonæum separated from the side of the abdominal wall as far as the iliopectinal line. The index finger then entered the pelvis at the side of the bladder, pushing upward and inward that fold of peritonæum known as the lateral false ligaments of the bladder. After passing the finger well down toward the base of the bladder, the separation of the peritonæum from the pelvic wall was carried posteriorly as far as the vas deferens. The union between the peritonæum and fascia is very loose in this space. Posterior to the vas it is much closer. The reason for this becomes apparent when the relationship of the bladder in various phases of distention is studied upon the cadaver. An empty bladder lies in the anterior portion of the pelvic cavity, but as it fills, it occupies more and more of the pelvis until in distention it presses the rectum against the posterior wall. As the bladder fills, the peritonæum carried upon its posterior surface is lifted from the sides of the pelvis. Careful measurement shows that the peritonæum touches only about half the pelvic wall when the bladder is filled to its capacity. The vas deferens is a good dividing line for the pelvis, as, passing down upon its outer wall, it lies midway between the symphysis and the centre of the sacrum. From the point of entrance of the vas into the abdominal cavity at the internal opening of the inguinal canal it descends perpendicularly with the horizontal when the individual is in the recumbent position, as during an operation. Crossing the iliac vessels it passes in the direction indicated, over the obturator vessels and nerve, just about one inch and a half posterior to the obturator foramen, and continues onward in the same direction about an inch or slightly more to the point of junction of the obturator and rectovesical fascia. From this point it passes inward over the last named fascia to the posterior wall of the bladder, passing above the ureter. This relationship explains the loose connection of the peritonæum with the fascia at the side of the bladder as far back as the vas deferens.

Where a ureteral catheter has been introduced or a stone is lodged in the lower ureter there will be no difficulty experienced in locating the ureter, but where these conditions do not exist it becomes necessary to have some guide. If the vas deferens is followed about two inches onward from the point of crossing the obturator vessels, the ureter will be found just behind it. This point is from three quarters of an inch to an inch from the point where the vas turns inward to the bladder. The vas deferens and ureter are both raised with the peritonæum when the dissection is made. The ureter, being located, is freed from the delicate fibres which bind it to the peritonæum and is brought clearly into view. Some three or four inches may thus be readily seen. The index finger can follow the ureter to the brim of the pelvis, where it crosses the iliac vessels, but to see to this point would require a very extensive separation of the peritonæum from the pelvic brim. The space given by this operation is ample for any method of dealing with the ureter. The outer wall of the space is formed by the anterolateral wall of the pelvis, and only a shallow retractor is needed to hold the wound edge open. The inner wall and the upper consist of peritonæum and bladder and are held out of the field of operation by two deep retractors. One pulls inward and the other upward and inward.

There was no stone found in the patient operated on, but an inflammatory mass involving the lower end of the ureter and its surrounding tissue. Evidence pointed to this portion of the ureter being the previous seat of stone lodgment, but, as Dr. Lewis has used the cystoscope and found other interesting facts about the case, I leave the subject for a special report to be made later by him.

To demonstrate the incision and the exposure of the ureter I present here two photographs taken from a cadaver upon which I made the requisite dissection. Fig. 1 shows the incision to the peritonæum through the lower end of the rectus. Fig. 2 shows the ureter exposed in the wound with a string about it, to which is hung a hæmostat. The deep retraction is made by one instrument only, but clearly shows the amount of room to be had by two deep retractors.

In the former description of the anatomical relations found in the field of operation I did not mention the interesting relationship of the obliterated hypogastric artery to the operation. This structure passes beneath the vas deferens, just under the iliopectineal line, in conjunction with the superior vesical artery. The obliterated hypo-

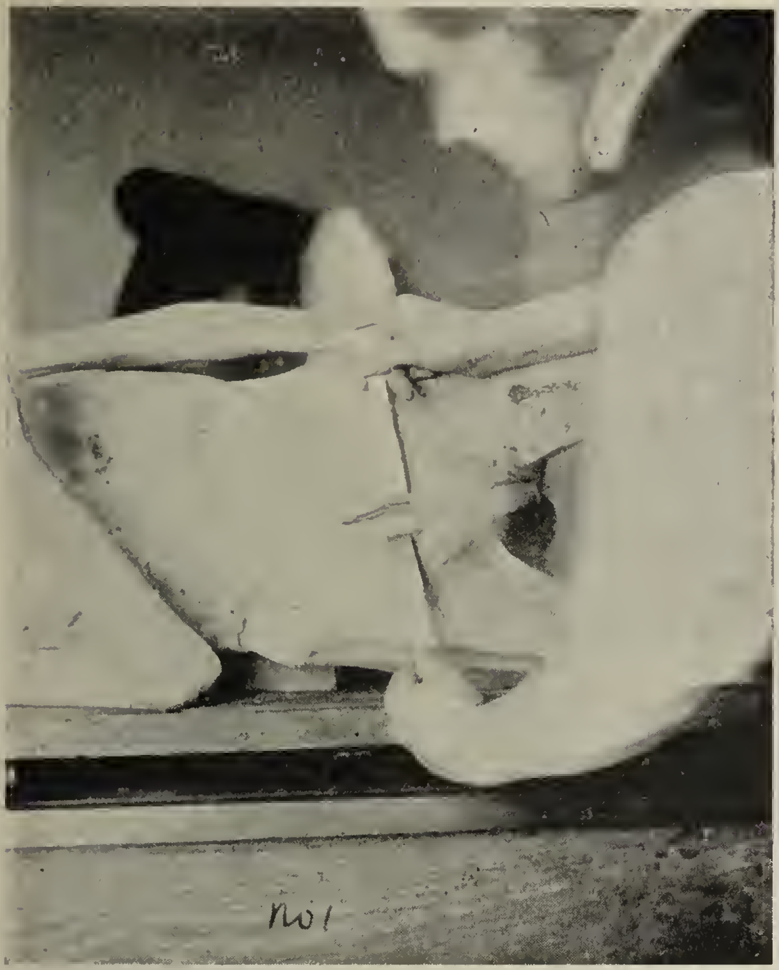

FIG. 1.—Incision to the peritonæum through the lower end of the rectus.

gastric then turns upward to the anterior abdominal wall and passes onward to the umbilicus; the superior vesical artery courses onward to the upper posterior surface of the bladder. If the hypogastric artery is lifted in the dissection, the vas passing internal to it may be overlooked. In Fig. 3 I show a forceps attached to the spermatic cord, and in the lower end of the wound another forceps holding the superior vesical artery. The obliterated hypogastric is held against the outer wall by the retractor. At times the hypogastric artery is short and makes its ascent to the abdominal wall more abruptly, starting from about the middle of the brim of the pelvis. In this condition the peritoneal fold covering it stands out as a falciform process making a decided pocket external to it. The outer wall of this pocket contains the structures which form the inguinal canal. Its floor contains the external iliac vessels and the psoas muscle. The vas passes out of the base of this pocket, dropping over the edge of the falciform process of peritonæum into the pelvis.

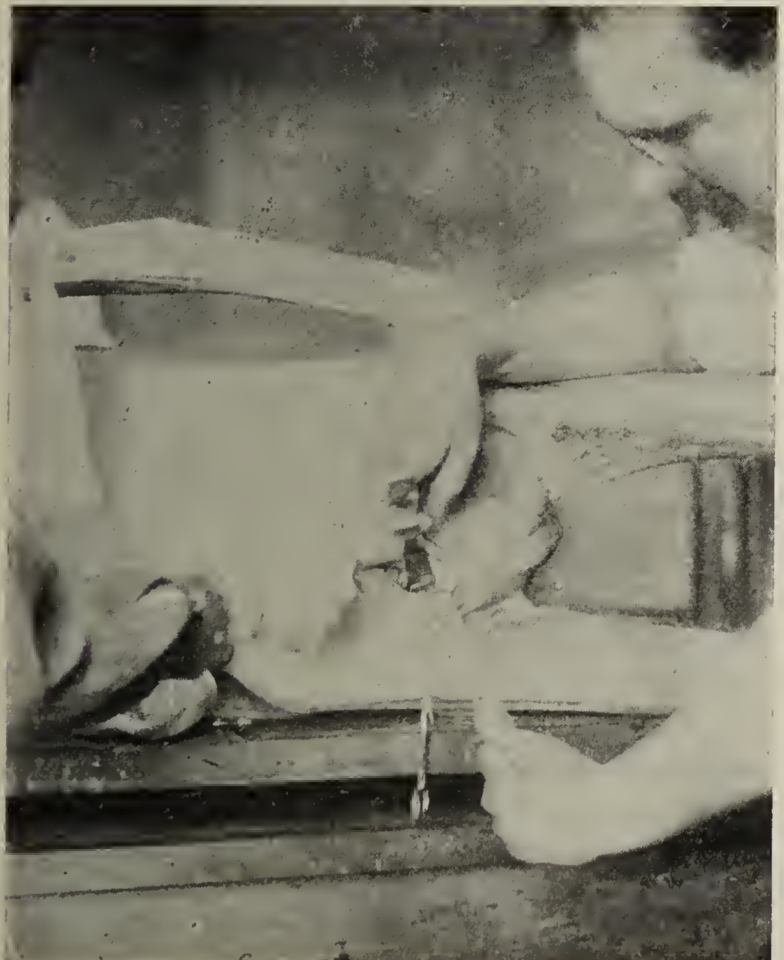

FIG. 2.—Ureter exposed in the wound, with a string about it, to which is hung a hæmostat.

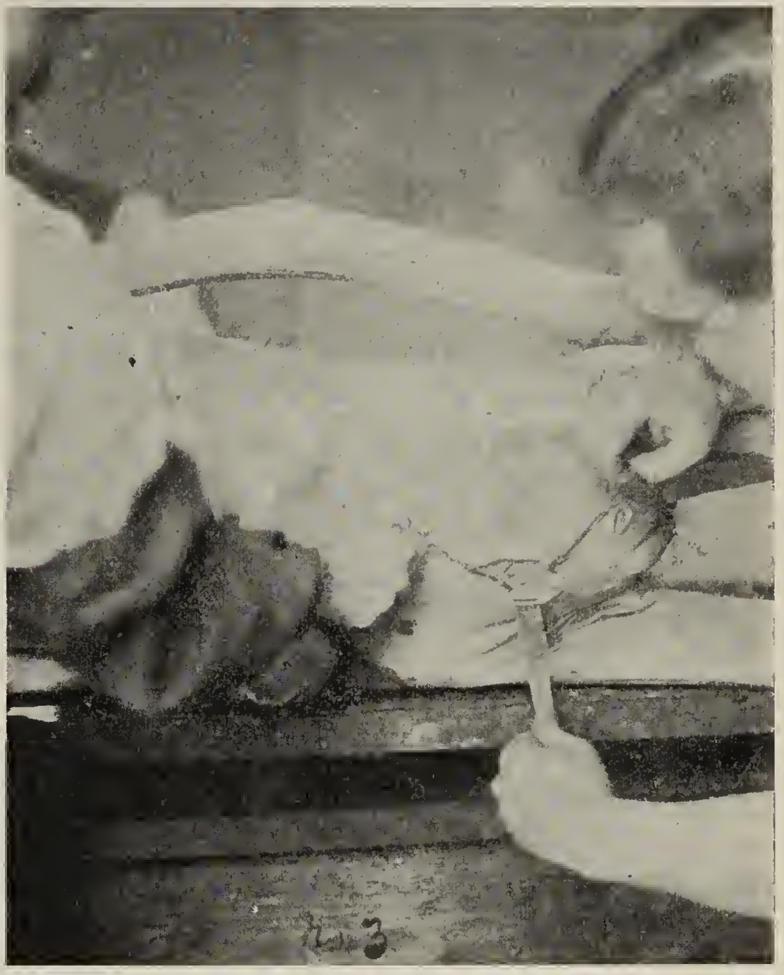

FIG. 3.—Shows a forceps attached to the spermatic cord, and in the lower end of the wound another forceps holding the superior vesical artery.

The advantages of this route may be stated as follows:

First.—It is extraperitoneal and avoids the danger of peritoneal infection.

Second.—The opening is directly over the route of the ureter and allows a good view of that structure through a very small cut in the abdominal wall.

Third.—It allows of a thorough palpation, through the peritonæum, of both kidneys and ureters, and at the same time of an exposure of the ureter on the side of the incision for extraperitoneal operation upon its lower end. Many times a decided doubt exists as to the full extent of the trouble, and in these cases a thorough palpation of the entire urinary tract may be of value.

Fourth.—The field of operation is bloodless and no forceps are in the way.

Fifth.—Drainage is usually necessary after opening the ureter, which may be carried through the lower end of the rectus and does not leave the bright prospect of hernia which a para-Poupart incision does.

Sixth.—The dissection is not difficult and can be carried out by any reasonably prepared surgeon, as it does not require the skill of a specialist.

The routes which have been proposed to the present time for operation upon the lower ureter are:

First.—The intravesical (suprapubic, perineal, and transurethral).

Second.—Intrarectal, or transrectal, used by Cesi in 1887. Patient died thirty-six hours later.

Third.—Iliac, or para-Poupart, incision.

Fourth.—Sacral route, proposed by Cabot in 1892, and worked out on cadaver.

Fifth.—Pararectal route, used by Morris in two cases. Incision from a point opposite the third sacral spinous process to a point one inch and a half beyond the tip of coccyx.

Sixth.—Perineal route, proposed by Fenwick in 1898. Used where the stone could be felt through the rectum.

Seventh.—Transperitoneal route. This is too dangerous a route to be attempted.

4318 OLIVE STREET.

THE VASOMOTOR CENTRE IN INHIBITION OF THE HEART.

By CHARLES E. DE M. SAJOUS, M. D.,

PHILADELPHIA.

(*Concluded from page 919.*)

THE CORONARY ARTERIES AND CARDIAC NUTRITION.

The inhibitory process as herein described seems to me to throw some light upon the relations between the nervous system and cardiac dynamism. Recent researches have emphasized the inherent contractile power of heart muscle in appropriate nutrient media, saline solutions of various kinds, oxygen, etc. It is even believed by some investigators that the higher nerve centres do not control cardiac action, embryonic hearts still devoid of nerves (Fano), fragments of heart-muscle (Haller), etc., having been found to contract rhythmically. Von Leyden (76), in a critical study of this theory, remarked a few years ago, that in order to prove its correctness it would be necessary to demonstrate that vasomotor nerves did not exist in the heart. Thanks to the labors of Porter, Newell Martin, Maass, and other physiologists, and to those of Heymans and Demoor, among histologists, it has been shown that such nerves do exist. Though endowed with inherent contractility, the heart is no more independent of the nervous system, therefore, than is any other organ in the body. Yet the myogenic theory of cardiac contraction has done much to emphasize the dynamic supremacy of the blood. It now becomes a question, therefore, as to how the vasomotor supply is related to the blood in cardiac function.

Hjelmar Oehrwall (77, 7, 95) found that the small quantity of blood that a frog's ventricle could contain sufficed to keep up its contractions for hours, provided the heart was immersed in oxygen. Removal of this gas is followed by arrest of the heart's beats; fresh gas promptly causes recurrence of the contractions, even after a prolonged period of inactivity. But how was the gas absorbed by the blood in Oehrwall's experiment? It is difficult to believe that the red corpuscles came to the surface for this purpose; the plasma must have taken up the gas and the cardiac muscle have absorbed it from the serum. Jaquet (78) found in 1892 that blood serum "absolutely deprived of corpuscles" took up oxygen from the air and yielded it to substances such as salicylic aldehyde, benzilic alcohol, etc., having affinity for this gas. His experiments were confirmed by Abelous and Biarnés (79). Again, Haldane (80) discovered "that the *corpuscles* of the blood are *not essential* to the contractions of the warm-blooded heart, provided the oxygen which the heart needs is supplied by increasing the tension of the gas in the plasma." He kept his animals "alive in oxygen at a pressure of two atmospheres after the oxygen-carrying functions of the *red corpuscles* had been *destroyed* with carbon monoxide."[1] (7) This shows that even in the living animal the plasma can absorb oxygen. Yet why is the increase of tension necessary when the blood is deprived of its corpuscles? Evidently to compensate for the only blood constituent invalidated, the blood corpuscles, and to increase forcibly the proportion of oxygen taken up by the plasma. This involves the conclusion that the red corpuscles must themselves fulfil this rôle as storage cells, and thus increase the oxygen taken up by the blood in the lungs in a given time. That such is the case appears to me beyond question.

Last year, I submitted (81) a new interpretation of the functions of the ductless glands and of the rôle of the internal secretions in functions in general. Although my views were only given in outline—as food for thought—in the volume referred to (the first), the evidence adduced, based on a study of each organ in turn, was sufficient to indicate that *the functions of all organs are carried*

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[1] All italics are my own.—S.

on, as far as the blood is concerned, by the plasma. Considerable work done since has only served to sustain this conclusion.

Even the narrowest confines of the nervous system afford an example of this principle. "What the nerve impulse actually consists in we do not know," says Stewart in the last edition of his textbook on physiology (82). On the other hand, Sir William Broadbent (83) wrote, but two years ago: "It can only be a transformation of forms of energy with which we are more familiar, and everything points to a chemical change of the nature of oxidation as its source." Ehrlich found, as stated by Barker (84), that "the conditions in the nerve structures essential to methylene blue reaction were (1) oxygen *saturation,* (2) alkalinity." Every one knows that axis cylinders and dendrites take the methylene blue stain. And yet red corpuscles are not found in these structures. Oxygen and alkalinity being the salient features of plasma, it seems logical to conclude that axis cylinders are plasma channels, and, furthermore, that they take methylene blue because of the high percentage of oxygen they contain. Schäfer holds, in fact, that the fibrils of which the axis cylinder is composed are extremely fine tubes filled with fluid. Again, the myelin, or white substance of Schwann (also the white matter of the cerebrospinal system), the function of which is "quite unknown" forms a semifluid sheath around the axis cylinder. Lecithin, a prominent component of myelin and of "gray matter," is likewise, according to Halliburton (85), "a constant constituent of protoplasm and is found both in the animal and vegetable world." As stated by Foster (17), "it is of remarkable nature since, though a fat, it contains both nitrogen and *phosphorus.*" Now, histologists have shown that the myelin sheath contains minute clefts or tubuli "all converging," says Wynn (86), from this sheath "to the axis cylinder." That the *oxygen*-saturated plasma, brought into contact with a *phosphorus*-containing semifluid such as myelin, should provoke a reaction during which energy is liberated seems obvious. We have here, doubtless, but a part of the process terminating in the liberation of nervous energy—but enough to show that we must be dealing with a "chemical change of the nature of oxidation," *without* red corpuscles. When we consider that this process prevails in the entire nervous system, including the brain and spinal cord—for I have traced it down to Apáthy's fibrils and the neuroglia—its application (if my interpretation is fundamentally sound) may prove far reaching, for it gives us a new field of work, i. e., the minute circulation of the nervous system and the many functions and morbid processes connected therewith.

Still, why is the oxygen in the plasma not absorbed promptly by the tissues if, as Halliburton says, "lecithin is a constant constituent of protoplasm?"

The marked affinity of adrenal extractives for oxygen is well known. I have traced (81) the secretion of the adrenals to the pulmonary air cells, and have found beyond these, both in the plasma and the red corpuscles, a compound rich in oxygen which I ventured to term "adrenoxin" owing to its constituents: adrenal secretion and oxygen. It corresponds with the substance which Salkowski (87), Schmiedeberg (88), and subsequently Jaquet (78), and Abelous and Biarnés (79) found in the blood and which they specifically characterized an "oxidizing ferment." As we have seen, it yields its oxygen to sufficiently potent reducing agents. Adrenoxin thus presents the attributes required for the circulation of microscopical capillaries. Its hold on the oxygen is sufficient to prevent its dispersion and not too great to resist the normal affinity of protoplasm, myelin, etc.[2]

In the heart, adrenoxin is as active as it is elsewhere in the body. Jaquet and Abelous and Biarnés found, as stated, that serum "absolutely deprived of corpuscles" could act as an oxidizant, but only when air was blown through it in order to renew its supply of oxygen. Porter (89), Locke (90), and Rusch (91) were able to keep up the contractions of the extirpated mammalian heart with blood serum containing no corpuscles but immersed in oxygen at a high tension. Under these conditions even saline solution will do, the gas being practically forced into the serum. But how account for the fact that a frog whose blood has been replaced by normal saline solution will continue to live in pure oxygen, and produce almost the usual amount of carbon dioxide, *without* a high oxygen tension? Something must evidently replace the corpuscles and absorb the oxygen from the air cells. Frogs also have adrenal-like structures which supply adrenal secretion—even to salt solution. But life does not last long under these conditions. On the other hand, as shown by Haldane, oxygen at a high pressure will *keep* animals alive. It is plain, therefore, that while the plasma contains adrenoxin this does not suffice for the body's need and that a substance capable of storing a large reserve is required. We have in hæmoglobin this substance and in the red corpuscles the storage cells for hæmoglobin. By transporting the corpuscles in all directions, excepting the ultimate capillaries forming networks in the secretory, contractile, elements, etc., the plasma can replenish its supply of adrenoxin at all times, and *satisfy adequately* the needs of the various functions.

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[2] The identity of adrenoxin in the blood and its many functions therein will be treated in another article. For a general survey of its rôle in the various organs, including the nervous system, the reader is referred to Vol. I. of my work, *The Internal Secretions and the Principles of Medicine,* the space required being far beyond the limits of a paper. Most of the experimental evidence and the practical application of the newer views submitted are included in the second volume, as yet unpublished.

The coronaries, though terminal in the sense that their anastomoses are not such as to allow the formation of a collateral circulation when blocked, give off large branches to the connective tissue between the large muscular bundles. Here they divide into arterioles which, in turn, subdivide into minute capillaries. "The capillaries of the myocardium are very numerous," write Böhm, von Davidoff, and Huber (92), "and so closely placed around the muscle bundles that *each muscular fibre* comes in contact with one or more capillaries."[3] While blood entering by the coronaries can thus reach the capillaries, the plasma of this blood, in the light of the foregoing statements, can further reach the ultimate capillaries forming the networks around each muscular fibre.

What is the rôle of the adrenoxin-laden plasma in these muscular elements? Can we connect it with contraction? A negative answer imposes itself, it seems to me, in view of the fact that the coronary arteries are under the dependence of vasomotor nerves. When Claude Bernard (93), in 1858, stimulated the vasomotory nerves of the submaxillary glands, the outflow of blood "entirely ceased and the gland became pale in color." (15). The specific function of this organ is to secrete saliva: exacerbations of this function are brought about by stimulating a *cranial* nerve, the chorda tympani of the facial. We have seen that in the case of other organs, the stomach, the pancreas, etc., a cranial nerve also incites exacerbations of functional activity. The specific rôle of the heart is to contract; if its contractions are under the influence of any nerve, therefore, it must be under that of some cranial nerve—the spinal accelerator or augmentor nerves, perhaps. In other words, the vasomotor system is not concerned with local mechanisms; it merely insures the proper distribution of blood to *all* organs simultaneously. The heart is no exception to this rule: Chauveau, Rebatel, Newell Martin and Sedgwick, Porter, Ziemmsen, and others have shown, we have seen, that the coronaries contract *synchronously* with all other arteries.

Again, the great bulk of available evidence shows plainly that it is not the blood received by the myocardium through the coronaries that is the active agent in cardiac contraction. Haller observed that pricking with a needle, the application of salt, of a poison, etc., to the surface of a heart which had ceased its movements, would cause it to contract; but he also emphasized the fact that the interior of the organ responded far more actively to excitants, mere blowing into its cavities having sufficed to provoke contractions. In other words, the contractile power has been found to be inherent in the muscle cell—the essence of the "myogenic" theory—the excitant being the blood in transit through the cardiac cavities.

But how do the muscular cells preserve their excitability? Herein lies, it seems to me, the function of the coronaries, and, I may add, the only function compatible with all the facts reviewed. Governed by the vasomotor centre as are all other arteries, they supply the myocardium its nutrient blood, including the oxygen-laden adrenoxin. The life of the muscle cell is thus perpetuated; and upon this depends its *potentiality*, i. e., *its continuous power to contract* under the influence of physiological stimuli *whatever be their nature or source.* This is in accord with the prevailing view in that the coronaries are the vessels through which the heart is nourished.

A feature of considerable importance seems to me to assert itself in this connection. Langley, we have seen, was led to conclude that inhibitory-nerve impulses could diminish or arrest chemical change in the contractile tissue. "Chemical change" means metabolism in this connection and metabolism includes the nutritional process. "Inhibition" denotes, therefore, reduced or arrested nutrition; in other words, starvation or death of the cardiac muscular fibres. If this is true, inhibition no longer appears in the light of a physiological function. It differs only in the heart from the corresponding phenomenon in the submaxillary gland in that vasoconstrictor obstruction arrests the functions of an organ directly essential to life.

A preliminary study of the same question from the standpoint of physiological therapeutics (81) two years before any connection between the vasomotor centre and the mechanism of cardiac inhibition had suggested itself to me, also led to the conclusion that:

No cardiac inhibitory apparatus exists as a physiological entity.

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Wesley Memorial Hospital, of Atlanta, Ga.—Sunday, April 24th, having been set apart by the Georgia Methodist conference as a special day for taking collections for the proposed Wesley Memorial Hospital, which will be erected in Atlanta, subscriptions for that purpose were taken during the services Sunday in probably five hundred Methodist churches in the State, a conservative estimate placing the amount thus raised at over $50,000, notwithstanding the fact that a number of the churches for various reasons deferred the collection a Sunday or two and will take up the matter within the next few weeks.

A CASE OF DIABETES MELLITUS; GANGRENE OF THE FOOT; OPERATION; RECOVERY.

By E. P. STONE, M. D.,

SURGEON, U. S. NAVY.

E. W. S., aged sixty-five years, a retired army officer. The first symptoms were noticed during the spring of 1882, twenty-one years ago; he had frequency of micturition, passed about three quarts of urine in twenty-four hours, and sugar was found on analysis. In 1884 he had a carbuncle. For four years there is an indefinite history; urine contained sugar at times, but at others was free from it; during this period the general health seemed very little affected. In May, 1886, he was prostrated one evening after dinner with sudden weakness. This was the beginning of a long illness lasting over a year; general weakness, loss of weight, and urine containing sugar and albumin, characterized this illness. His general condition gradually improved and he returned to his duties as an army officer stationed on the plains. While he never was so strong nor had so much endurance as before this sickness, he continued in the discharge of his duties, in garrison and on the march, until the outbreak of the Spanish War, in 1898, when he was retired. During this time he had many slight sicknesses; a number of severe boils and some abscesses developed from time to time; the presence and the quantity of sugar in the urine fluctuated, but it was present most of the time. During these years he never lived on an absolutely rigid antidiabetic diet, although the diet was modified to some extent; he was more or less under treatment for diabetes most of the time, but it is not known just what the treatment was; at one time he took Martineau's prescription of sodium arsenate and at another time codeine.

The first definite datum in my possession is the report of an analysis made September 9, 1892, at Fort Thomas, Ky. It is as follows: Quantity in twelve hours and a half, nine ounces acid reaction, sp. gr. 1037; sugar, 6.4 per cent. From this date up to December 1, 1892, there was a weekly examination made; on September 29th, the worst report of this series was rendered, viz., sp. gr. 1032; sugar, 3.47 per cent; finally, on December 1st, the report reads sp. gr., 1022; sugar, 0.22 per cent. On October 7th it is stated that albumin is not present.

The next records are a series of fifteen examinations, from March 19, 1893, to June 19, 1893. The first analysis showed: Forty-eight ounces of urine; sp. gr., 1038; sugar, 7.5 per cent. There was an irregular, but on the whole progressive, improvement until the last report, which read: Twenty-nine ounces of urine; sp. gr., 1030; sugar, 0.92 per cent.; no albumin. For three weeks prior to this last report he had been taking codeine. From April 18th to May 20th he had been on arsenic bromide. Some of these analyses showed a trace of albumin, others did not; at no time were renal casts present.

There is no record from June, 1893, to January, 1899, but it is known that the condition was about the same. An analysis, January 7, 1899, gave sp. gr., 1033; albumin, a trace; sugar, 4.44 per cent.; urea, 2.46 per cent.; a few hyaline casts. The analyses during the year are fairly well represented by that of June 23d—sp. gr., 1026; albumin, a trace; sugar, 2.33 per cent.; urea, 1.69 per cent.; hyaline casts. The good effect of the fluid extract of jambul seeds, which was given from time to time, was noted with interest, and is illustrated by the following two analyses, the second one being made after jambul had been taken for three weeks: October 12, 1899, sp. gr., 1026; albumin, a trace; sugar, 3.35 per cent.; urea, 1.42 per cent.; a few hyaline casts. November 9, 1899, sp. gr., 1020; albumin, a trace; sugar, a trace; urea, 1.81 per cent.; no casts.

On January 4, 1900, the patient noticed considerable pain in right great toe, and a small spot of discoloration appeared there. He was placed in bed; the foot was elevated, surrounded with hot water bottles, and dusted with a powder of boric and salicylic acids. In spite of all efforts, gangrene spread until it involved the whole of the foot and extended a little above the ankle, where a line of demarcation developed. The process was a dry mummifying gangrene and was comparatively painless. On January 12, 1900, an analysis showed sp. gr., 1036; albumin, 0.5 per cent.; sugar, 5.50 per cent.; urea, 2.40 per cent.; no casts. On January 7th the temperature was 99.6° F., but came down to 98.4° on January 9th. From January 23d to January 30th there was a rise of temperature, the highest being 101.6° F. on January 24th. After this rise the temperature ran along for some weeks at about 98° F. in the morning, and 99° F. in the evening. The twenty-four hours' urine averaged about 45 ounces. The patient was put on a rigid diet, consisting almost entirely of milk; codeine and jambul were prescribed, quinine being given during the elevation of temperature. Hot water bottles to the foot were abandoned January 20th. After January 27th, he sat up in a chair part of each day with the foot elevated. Codeine was omitted on January 25th and jambul on February 25th. During this period, while the gangrene was extending and delimiting itself, the condition of the urine, which was examined at intervals of four or five days, was constantly improving, so that on February 20, 1900, the absence of sugar was reported. With the exception of two occasions, on April 25, 1900, and April 3, 1901, when very faint traces were reported, there has been no return of the diabetes, although the disease had existed for eighteen years. Albumin was reduced to "more than a trace," but hyaline and granular casts persisted.

From the beginning of the gangrene Major E. C. Carter, U. S. army, was associated in the care of the patient. Several consultations were held with Dr. Wallace Neff and Dr. J. Kerr, of Washington, D. C., and Surgeon P. M. Rixey, U. S. navy, as to the advisability of operating. At first it was considered that the condition of the kidneys did not justify operative interference. On April 12, 1900, the temperature began to rise, constitutional disturbances due to septic absorption were manifest; so that, as the urine had improved (analysis April 20th—sp. gr., 1021; albumin, 0.5 per cent.; no sugar; urea, 2.95 per cent.; granular and hyaline casts), as there was established a line of demarcation, and as life was threatened without an operation, it was decided to operate. Dr. Kerr, on April 23d, amputated the leg at the junction of the upper and middle thirds, under chloroform anæsthesia. The patient made a rapid and uneventful recovery from the operation, the wound healing almost throughout by first intention.

At the present time, three years after the operation, the patient is in the enjoyment of very comfortable health. He has gained in weight and has been freer from minor disturbances than for several years, although the albumin is present in larger quantity than before the operation, and hyaline, granular, and, occasionally epithelial, casts are present in the urine. Sugar, as noted above, has not returned. He still maintains an antidiabetic and, on account of the nephritis, a restricted diet. He wears an artificial leg, with which he walks about quite freely.

U. S. S. Mayflower,
Navy Yard, Washington, D. C.

Therapeutical Notes.

Diarrhœa.—A Russian physician, Dr. V. N. Vorontzov, is cited in *Semaine médicale*, for April 27, 1904, as having found the juice of unripe bitter oranges (*orangettes* or *petits grains* of the French codex) of great value in diarrhœa. He prepared a tincture by macerating the oranges for several days in brandy until the liquid resembled a strong infusion of tea. The maceration should not be prolonged beyond this stage. For adults the dose is a wineglassful, four times daily; for children, 10 to 15 drops suffice. The tincture gives an agreeable sensation of warmth, pain is soothed, and exaggerated peristalsis and borborygmi cease. Anorexia, meteorism, and abdominal tension cease completely in the course of a week.

Chilblains.—*Journal de médecine de Paris*, for January 17, 1904, gives:

℞ Salol } of each....................4 parts;
Ether }
Flexible collodion....................30 parts.
M. Apply as required.

Acute Pruritus.—Milk diet, followed by a lactovegetarian diet, is recommended by Gaucher, in *Journal de médecine de Paris*, for March 13, 1904. Lotions, acidulated with vinegar, soothe the itching and may be followed by menthol or guaiacol ointments:

℞ Pure guaiacol } of each............1 gramme
Crystallized menthol } (15 grains);
Petrolatum ....100 grammes ($3^1/_3$ ounces);
Zinc oxide....................enough to thicken.
M. Ointment for morning use.

This may be supplemented with:

℞ Powdered talcum........100 grammes ($3^1/_3$ ounces):
Camphor ....2 grammes (30 grains).
M. Dusting powder.

Gaucher uses hydrogen peroxide in very obstinate cases, with excellent results:

℞ Pure hydrogen dioxide (medicinal) } of each,
Anhydrous lanolin } 20 grammes
Petrolatum } ($^2/_3$ ounce).
Powdered talcum }
M. For an ointment.

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NEW YORK, SATURDAY, MAY 21, 1904.

THE FORTHCOMING ATLANTIC CITY MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

The fact that after the lapse of so short a time as four years the American Medical Association should hold a second meeting in Atlantic City constitutes ample proof of the liking that the profession have conceived for the place. This liking is not to be wondered at, for the facilities for holding sessions of the association at large, of the House of Delegates, and of the various sections are commensurate with the hotel accommodations, and the attractiveness of that particular spot on the New Jersey coast is unapproached by the charms of any other of our seaside resorts capable of housing such a throng as is sure to be present. If the weather does not prove quite exceptional, there will be the bright light, the coolness, and the pure air for which Atlantic City is famous. There are diversions, too, that will make the intervals of the sessions most agreeable.

All these features are familiar to the dwellers near the Atlantic seaboard, and to them perhaps the convenience with which the place of meeting may be reached will prove its chief recommendation, but our friends from the interior and from the far West, more accustomed than we of the older States are to long journeys, will, we are sure, undertake with alacrity the pilgrimage to the place of meeting. Atlantic City is not a perplexing place in which to find one's way about, but we feel confident that the map which we present in this issue, together with the varied information also given, will prove of decided use to those of our readers who find themselves in attendance. The place is so largely a city of hotels that, simply as it is laid out, the map in particular cannot fail to be of frequent service.

As to the meeting itself, apart from the surroundings, it gives abundant promise of exemplifying anew the progressive spirit that has animated the association of late years. The same may be said of the meetings of the various other organizations to be held in June this year, as usually, in conjunction with that of the larger body. All things considered, we look to see in Atlantic City a gathering of our professional brethren even more notable than any of those that have preceded it.

"THE LAND OF CAPTAIN KIDD."

An anonymous writer, whose article appears in the *British Medical Journal* for May 7th, is evidently of an analytical and statistical turn of mind, and he has applied this mental bent to a subject somewhat out of the beaten path. He has collected for the period of a year the advertisements and samples that came to him as manifestations of the desire of various trades people to win the approbation of the medical profession. His rare devotion to research is attested by his willingness to store such articles to the number of three hundred, weighing 57½ pounds, exclusive of "such bulky packages as a case of mineral water, etc." His analysis bears chiefly upon what the French call the *provenance* of the articles in question. He finds that the greater number of them reached him from English sources. He conceives, however, that the preponderance of Great Britain is not so great as it might seem, "as a large number of advertisements were sent out by the London branches or agencies of foreign manufacturers, but it is not possible to say how many these were."

It will be seen that the subject of this writer's inquiry is of an uncommon order of importance, but not, perhaps, more vital to "the gayety of nations" than some of his comments. Speaking of the pictorial adornment of a certain American advertisement, he says: "No acknowledgment is made to the proprietors of *Gray's Anatomy*, but perhaps this is hardly to be expected from a firm which hails from the land of Captain Kidd and of many other though more peaceful pirates." We fear the writer is not to be included among those Englishmen who of late have professed to set some value upon the friendship of the United States, though his choice of the phrase "the land of Captain Kidd" in derogation of our country seems hardly a happy one. It is his exalted privilege to live in the land of Sir Francis Drake and to constitute a unit of a people noted from time immemorial for their exquisite tact and delicate consideration. If he chose to lay aside these characteristics, he might at least have remembered that Kidd was born in Scotland, was sent out by the British government to suppress piracy, turned pirate himself, ravaged our waters, was apprehended in Boston, and was hanged in London. Moreover, we can bear the term "pirate" with equanimity, coming from an Englishman, when we reflect that to this day it is commonly applied in England to John Paul Jones.

INFECTION OF THE SKIN WITH INSECTS' LARVÆ.

From time to time there have appeared accounts of serpiginous linear lesions of the skin which have seemed to owe their origin to the larva of an insect embedded in the skin and travelling about in various directions, sometimes doubling upon itself and on certain occasions remaining stationary for a time, only to resume its aimless march. Its trail is marked by a line, varying in appearance in its different parts, being pinkish in that portion lying near the larva and there perhaps surmounted by vesicles, while in the older parts the skin is darker, as if pigmented, and may be the seat of incrustation. As we learn from an interesting article by Dr. Louis P. Hamburger, of Baltimore, published in the May number of the *Journal of Cutaneous Diseases*, this skin trouble was first described by Dr. R. J. Lee, of London, in 1874, under the name of "creeping eruption," and that title Dr. Hamburger retains for it. The first cases to be observed in this country were reported by Dr. Van Harlingen in the *American Journal of the Medical Sciences* for September, 1902. Shortly afterward Dr. Hamburger had the opportunity of observing a case, and it was that that led him to look somewhat thoroughly into the history of the various instances that have been recorded.

In all the cases thus far observed the presence of a burrowing larva has been suspected. In Russia the larva, resembling that of a fly, has actually been detected, but elsewhere its presence has been a matter of inference only, though the inference has been powerfully supported by the fact that excision of a bit of skin from the advancing end of the line of eruption, presumably containing the larva, has put a stop to the disease. It is supposed that the larva is generally that of a species of *Œstrus*, the bot fly, but it has also been thought that the larva of some species of the *Muscidæ* might be the offending parasite in some instances, and Gustav Joseph divided the disease into "myiasis dermatosa muscosa" and "myiasis dermatosa œstrosa." Kaposi designated it as "hyponomoderma" (from ὑπονομή, a tunnel, and δέρμα, the skin), to indicate its burrowing character.

It is not alone with the "creeping eruption" that Dr. Hamburger deals; he gives a very interesting summary of the part played by the larvæ of dipterous insects in giving rise to disease or aggravating preexisting disease in man and in the domestic animals. The article is well worth studying in its entirety.

IMPROVEMENTS UPON NATURE.

Probably no finer exemplification of applied mechanics can be found than a well developed and well nourished human body, but notwithstanding this fact many men of, to say the least, but mediocre mechanical knowledge or ability are constantly attempting to improve upon nature's construction in this same human organism. In our student days we were deeply impressed with the dictum of one of our professors, who characterized the two most essential attributes of a surgeon as "a thorough knowledge of anatomy and sound mechanical horse sense." Those who find it necessary to attempt improvements upon nature in human anatomy have the appearance of neglecting the former and lacking the latter.

Two "improvements" (?) which are at present so frequently employed and advocated as to menace the good name of pelvic and abdominal surgery, and which are certainly destined to afford valid grounds for adverse criticism, if not indeed for ridicule, to succeeding generations of gynæcologists, are the anchoring of the omentum in various positions to prevent adhesions and the securing of the uterine fundus to the anterior abdominal wall. This latter procedure is unanatomical, unphysiological, unscientific, and an admission of inability to restore by the normal anatomical material at command the conditions which nature formerly accomplished with the same material. Yet the normal ligamentary supports, except in cases of developmental arrest, in which case perverted or incomplete nature may often be completed or improved upon, are invariaably all-sufficient.

The two great reasons for the vogue which ventral fixation and, more recently, ventral suspension, have obtained are ease of performance and permanence of results. They are certainly child's play compared to the intelligent reposition of the uterus by restoration of its relaxed or stretched ligaments. Then, too, there is apparently a desire to exceed nature's original design by rendering the woman immune to future retrodisplacements. This is also unnatural. Many women start in life with absolutely normal pelves and notwithstanding acquire uterine displacements. It is then far more truly scientific to restore that pelvis to its normal condition, or the nearest possible mechanical approximation, and guard the woman against a recurrence by informing her fully as to the ætiological factors of such a recurrence, than to strive, because it is easier, to accomplish the same end by fastening the uterus where nature never intended it to be, certainly in the unimpregnated state, by stretching a false band across from one to three or more inches of the abdominal cavity, all the time realizing that the same operator would never knowingly close the abdomen without removing a similar band incidentally discovered during any other intraabdominal operation for fear that it should produce subsequent intestinal obstruction, and by substituting one uterine displacement for another. And for the number of women, steadily increasing, seen in public clinics it is quite evident that the one displacement is often quite as obnoxious as the other.

The idea very frequently finds expression that the multiplicity of operative procedures advocated for uterine retrodisplacements is quite sufficient evidence that no one operation has yet been devised which fulfills all the requirements, and that until this result has been achieved it is quite as well to resort to the very quick and easy ventral suspension as to attempt any other operation. No one operation will ever be devised which can adequately restore retrodisplacements in all cases until all such are due to one pathology—in other words, never. By all means let every gynæcologist study faithfully the factors operative in each case and promulgate methods for overcoming each new factor. It vastly increases the demand upon the gynæcologist, but is not the best possible work the honest due of our profession and of our patrons? The operator thoroughly familiar with the mechanics and advantages of the greatest number of operative methods for the utilization of the natural ligaments of the uterus will be best able to choose those indicated in the case in hand. He who attempts to cure all retrodisplacements by any one operation is as emphatically an empiric as any user of routine formulæ.

Regarding the omentum, it certainly seems paradoxical to deliberately form one peritoneal adhesion that another problematical adhesion may be prevented. This seems scarcely a shining example of preventive medicine. A stretched out portion of the omentum may be quite as dangerous in the abdominal cavity as any other form of false band. Moreover, the omentum certainly has functions. They are ill understood, but the recent studies of de Renzi and Boeri seem to indicate that the omentum left free to act physiologically can prevent vastly more adhesions than it can when secured in an abnormal manner by suture. This is, however, no more important than the fact that, as personally observed, the omental adhesion may be quite as painful as the original condition for which an operation was undertaken. Omental adhesions are capable of producing serious anatomical aberrations of important abdominal viscera which may invalid the postoperative patient who would otherwise be perfectly cured by the operation.

These attempts at improvements upon nature certainly approach very near to a justification of the title of "allopath" which Hahnemann gave us and which many have blindly accepted, never suspecting the keen sarcasm contained in its meaning of "one who substitutes one disease for another."

Daniel H. Craig.

INSOLENCE AS AN INJURY.

Dr. Elizabeth Safford Gillespie is to be commended for her public spirit in fighting the battles of the street car traveling public against the too frequent abusive and insulting language and behavior of the petty officials of the service; she is also to be congratulated on the result of her appeal, which sets aside the verdict of the court below that merely awarded her the twenty cents change which the conductor tried, according to the testimony, to defraud her of and refused to take cognizance of his insulting epithets made and reiterated in spite of the testimony of her neighbor passenger, who saw her give a quarter in payment. As judges are so fond of criticising physicians, we may, perhaps, be permitted to criticise the minority of dissenting judges who disagreed with the judgment of the court, and considered it "extending unduly the doctrine of a common carrier's liability in making it answerable in damages for the slanderous words spoken by one of its agents." This opinion, in our view, is as pure nonsense as any ever criticised by a judge when emanating from a physician on the witness stand. Children, servants, subordinates of every description, can be, and constantly are, controlled by those in proper authority over them, if the latter perform their duty. It needs such instances as this to compel them to perform that duty. When parents and employers are made the sufferers for the misdoings of their children and employees, they learn to exercise such wholesome discipline that offenses dwindle down to an insignificant minimum.

THE WORD NEURASTHENIA.

The *Lancet* for April 30th begins an editorial article as follows: "Invented by Beard, of America, in the 'sixties' to describe and to include a class of nervous affections more common in America than elsewhere, the term 'Neurasthenia' has been used with great elasticity," etc. It is true that we owe much of our knowledge of neurasthenia to the late Dr. Beard, but he did not invent the word. Old Ludwig August Kraus defined it in his *Kritisch-etymologisches medicinisches Lexikon,* the third edition of which was published in Göttingen in 1844, long before Beard dealt with the subject.

THE ILLINOIS STATE BOARD OF HEALTH'S SUMMARY OF STATE REQUIREMENTS.

We are indebted to the board's efficient secretary, Dr. James A. Egan, for advance copies of a most useful pamphlet giving a summary of the requirements for medical practice in force in the various States, brought down to March, 1904. For many years this board has been of great service in just this way to the medical profession of the entire country, and we are glad to see its good work kept up.

A UNIQUE DRUNKARD.

Dr. F. McK. Bell, in *Queen's Medical Quarterly* for April, 1904, is authority for the statement that there was not long since a drunkard on Blackwell's Island with an æsophageal stricture of six years' duration. Gastrotomy had been performed and a rubber tube passed through the anterior abdominal wall to allow nourishment to reach the stomach. The prisoner, however, notwithstanding his sad deprivation of the pleasures of the palate, continued to get whiskey into his system via his tube, and eventually landed in jail as a chronic alcoholic. Evidently this case demands a revision of some of the theories regarding drunkenness. The theory of conviviality can hardly stand, for the spectacle of this unfortunate joining in the general interchange of good wishes and subsequently pouring his libation into his rubber œsophagus must have exercised so depressing an influence on his friends as eventually to drive him to solitary drunkenness.

THE NEW SUPERINTENDENT OF BELLEVUE HOSPITAL.

Dr. Spratling's transfer from the superintendency of the Craig Colony for Epileptics to that of Bellevue Hospital is an act that reflects credit on the trustees of the city hospitals. They have been fortunate in getting a man of such administrative experience as Dr. Spratling's, one, too, who, in consequence of his former career in private practice, will doubtless prove more adaptable than one of purely official antecedents. Elsewhere in this issue we present a portrait of Dr. Spratling.

YOUNG JAPANESE TEA AS A CAUSE OF UTERINE SYMPTOMS.

A new set of symptoms seems to have been added to those of caffeine poisoning by Lortat-Jacob and Sabaréanu *(Bulletin médical,* xviii; *Fortschritte der Medizin,* April 10th). Three women who had been drinking tea together came under their observation. In the first, who was menstruating, pains like those of parturition occurred, besides vertigo and dyspnœa. In the second, whose menstrual flow had ceased twenty-four hours before, it came on again copiously. In the third, who was in the fifth month of pregnancy, severe uterine pains set in, with a discharge of liquor amnii and sacral pains. The pains lasted for a week. The tea had been grown in the landlord's own garden, in Tokyo. It was still young.

News Items.

Society Meetings for the Coming Week:

Monday, *May 23rd.*—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

Tuesday, *May 24th.*—Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynæcology); Richmond, Va., Academy of Medicine and Surgery; New York Medical Union (private).

Wednesday, *May 25th.*—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private); Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

Thursday, *May 26th.*—New York Academy of Medicine (Section in Obstetrics and Gynæcology); New York Orthopædic Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.; New York Celtic Medical Society.

Friday, *May 27th.*—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

Saturday, *May 28th.*—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

Change of Address.—Dr. William J. Delaney, to 276 Church Street, Naugatuck, Conn.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending May 14, 1904:

	Week end'g May 14.		Week end'g May 7.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	1,516	45	1,836	39
Diphtheria and croup	389	51	382	40
Scarlet fever	363	29	391	23
Smallpox	2	..	1	..
Chickenpox	113	..	78	..
Tuberculosis	426	172	411	197
Typhoid fever	28	10	18	8
Cerebrospinal meningitis	..	97	..	77
Totals	2,837	404	3,117	384

St. Joseph's Hospital.—Dr. Edward W. Perkins has been appointed visiting physician to this hospital.

The New York County Medicopharmaceutical League.—This organization will hold its last regular meeting before the summer intermission on Friday evening, May 27th, at the Tuxedo, Madison Avenue and Fifty-ninth Street. The following papers will be presented: Professional Bills—Contracting, Concocting, and Collecting—Ill Bills, by Adolph Rupp, M. D.; Pill Bills, by E. D. Lawall, Ph. G.; Fill Bills, by W. B. Ledered, D. D. S.

Hospital of the Daughters of Jacob.—Plans have been filed for the enlargement and remodeling of the two four story building at 302 and 304 East Broadway, occupied by the hospital and schools of the Daughters of Jacob. A four story rear extension, 36 feet deep, is to be erected and a new ornamental façade built to convert the building into one edifice. The cost of the improvements is estimated at $10,000.

St. John's Hospital, Brooklyn Training School.—The graduating exercises of the class of 1904, St. John's Hospital Training School for Nurses, were held May 5th at St. John's Hospital Chapel, on Albany Avenue, Brooklyn. The chapel was crowded with friends of the five young women graduates, and the chancel was decorated with flowers. In a room on the first floor there was a fine display of flowers sent to the graduates. The graduates were: Miss Bertha Wells Terry, Miss Harriette Warfield Kelly, Miss Elinor Constance Rowe, Miss Grace Applegate, Miss Mabel Louise McKinlay.

Bequests to Medical Charities.—The will of the late Solomon Loeb contains among many the following bequests: Montefiore Home, Mount Sinai Hospital, Hebrew Technical Institute and Educational Alliance, $10,000 each, and if Morris Loeb be a professor in New York University at testator's death that institution also is to receive $10,000; Home for Aged and Infirm Hebrews, Metropolitan Museum of Art, American Museum of Natural History, and Sanitarium for Hebrew Children, $5,000 each; Gerry Society, and General Memorial Hospital, $2,500 each; Trustees of Hebrew Charities Building, $12,000; Jewish Hospital of Cincinnati, and Jewish Hospital of Worms, Grand Duchy of Hesse, $5,000 each.

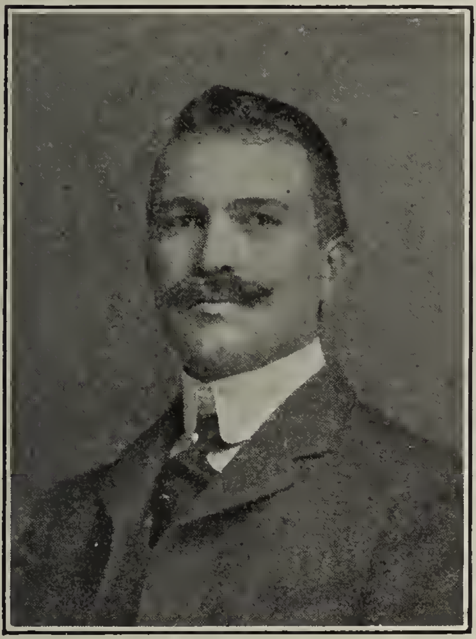
A Night Clinic by the Department of Health.—Dr. Thomas Darlington, president of the board of health, has decided to open a night class at the tuberculosis clinic of the department of health at 967 Sixth Avenue, the hours being from 8 to 9 p. m. on Monday, Wednesday, and Friday.

This evening clinic was to begin on Monday, May 16, 1904. Two doctors and two nurses will be in attendance, and all medicines will be furnished free of charge.

Since the opening of the clinic on March 1, 1904, from 250 to 300 patients a week have been in attendance from 9 a. m. to 4 p. m. This new clinic is for those patients who are unable to attend during the day. Special cards for the reference of patients to the clinic for diagnosis or treatment will be furnished on request. Physicians and others interested are cordially invited to visit the dispensary.

German Hospital Training School for Nurses, Brooklyn.—The commencement exercises of the graduating classes of the German Hospital Nurses' Training School were held on May 12th, at Schwaben Hall. The degree was conferred upon the following members of classes '03 and '04: Elise L. Vetter, of Long Island; Kathryn Hopes, of Long Island; Anna Rathjen, of Brooklyn; Marie Brobeck, of Chicago; Lena J. Abbe, of Connecticut; Della V. Knight, of Pennsylvania, and Kathrine A. King, of Brooklyn, '03, and Edith B. Baker, of Connecticut; Mary E. Phillips, of Pennsylvania; Mary D. Jenkins, of Pennsylvania; Louisa Wolf, of Brooklyn; Florence M. Hill, of Canada; Catharine Ahrens, of Brooklyn, '04. Mrs. Ella B. Kurtz is supervisor of the school. Miss Vetter will take charge of a large surgical sanitarium in Pennsylvania. Miss Hill intends to devote her time to missionary nursing in Africa. Miss Jenkins expects to take a postgraduate course to fit herself for superintendent's work, in order to take charge of a large institution in the West. Miss Brobeck will work in the Chicago slums, while Miss Knight will enter the Philippine service.

The New Superintendent of Bellevue Hospital.—Dr. William P. Spratling, for several years superintendent of the Craig colony for epileptics at Sonyea, N. Y., has been appointed superintendent of Bellevue Hospital, vice Dr. William Mabon, resigned.



WILLIAM P. SPRATLING, M. D.

Dr. Spratling was born in Alabama in 1863 and received his degree in medicine in 1886 from the College of Physicians and Surgeons of Baltimore. He engaged in private practice in this city in 1891, and was appointed superintendent of the Craig colony after a competitive examination in 1895. His career there resulted in making the colony the foremost of its kind.

The New York Academy of Medicine.—The section in Laryngology and Rhinology will hold a clinical meeting for the presentation of sinus cases alone, on Wednesday evening, May 25th, at 8.15 o'clock. Order: Exhibition of Specimens and New Instruments: Specula for Illuminating and Packing the Maxillary Antrum After Operation, by Dr. A. P. Voislawsky; Exhibition of Anatomical Specimens of the Frontal Sinus. Presentation of Sinus Cases. Discussion. Executive Session. Dr. Harmon Smith, 44 West Forty-ninth Street, secretary; Dr. Francis J. Quinlan, chairman. A meeting of the section in Obstetrics and Gynæcology will be held on Thursday evening, May 26th, at 8.15 o'clock. Order: Presentation of Specimens: (a) Uterine Fibromyomata; (b) Ovarian Cyst with Twisted Pedicle Complicating Pregnancy; (c) Pseudohermaphrodism, by Dr. L. J. Ladinski. Paper: Rectal Constipation in Women, by Dr. Grace Peckham Murray. Discussion by Dr. S. G. Gant, Dr. J. P. Tuttle, and others. Dr. A. Palmer Dudley, chairman; Dr. Charles F. Adams, 104 West Seventy-third Street, secretary.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g May 14.		Week end'g May 7.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	27	5	26	5
Diphtheria	53	9	71	9
Scarlet fever	100	7	102	3
Typhoid fever	295	25	277	38
Consumption	..	58	..	86
Cerebrospinal fever	..	1	..	..

Dr. E. A. Mallon, of Phiadelphia, has been operated upon for appendicitis in Vienna, where he went to take a postgraduate course.

The Fabiana Italian Hospital, to be erected at Tenth and Christian Streets, Philadelphia, has applied for a charter.

Professor Hoffa, the eminent orthopædic surgeon, will have the degree of LL. D. conferred upon him by the Jefferson Medical College at its commencement exercises.

Philadelphia Hospital.—Miss McDonald, of the Newton Hospital, Massachusetts, has been temporarily appointed as assistant chief nurse of the Philadelphia Hospital, to fill the vacancy caused by the resignation of Miss Lippincott.

St. Mary's Hospital.—The following gentlemen have been appointed resident physicians: Chester C. Sloan, Thomas J. McGurl, Alphonse J. Reiner, of the University of Pennsylvania, and Charles W. Schaubel and J. A. Topper, of the Jefferson Medical College.

Physical Test for Pupils.—The Board of Public Education of Philadelphia favors a proposed change in its by-laws, compelling all candidates for the normal school to undergo a medical examination before becoming eligible for admission.

Dr. William White Rhea Barton, professor of surgery in the University of Pennsylvania, has gone to San Francisco to meet Sir Frederick Treves, the eminent English surgeon, who is making a tour of the world, and who is expected in Philadelphia some time during June.

Dr. J. L. Faure, surgeon to l'Hôpital Hérold of Paris, who has been making a tour of the United States, will be in Philadelphia on May 23rd and 24th, as the guest of Dr. W. W. Keen and Dr. John G. Clark. Dr. Faure will give two clinics, one at the University Hospital May 23rd, and one at the Jefferson Hospital May 24th.

Faculty Reorganization of University of Pennsylvania.—A plan for the reorganization of the faculty has just been approved by the board of trustees whereby the faculty membership has been extended to the clinical, associated, and assistant professors, to the associates and lecturers and to limited representation from the subordinate staff. The scheme provides for an executive body or council, to be composed of the heads of the departments in the fundamental subjects and two representatives of the specialties. The plan will be put into effect September 1, 1904.

Bequests.—By the will of Hannah W. Garsden $11,400 has been awarded to charitable institutions. A codicil to her will, directed that all the residue of her estate, which should remain after a number of stated bequests were made, should be devoted to such charitable institutions as her executor should select. Among the institutions which benefited by this will are the following: Home Teaching Society for the Blind, $500.00; House of Mercy or Home for Poor Consumptives, $1,000.00; Children's Hospital, $500.00; Home for Diseases of the Lungs, $500.00; Women's Hospital, $500.00; Lying-in Charity Hospital, $1,000.00; Samaritan Hospital, $1,000.00.

GENERAL

Statement of Mortality in Chicago, Ill., for the Week Ending May 14, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on United States Census Bureau's estimated mid-year populations of 1,932,315 for 1904 and of 1,873,880 for 1903:

	May 14, 1904.	May 7, 1904.	May 16, 1903.
Total deaths, all causes	531	539	632
Annual death rate per 1,000	14.35	14.58	17.56
By sexes—			
Males	310	317	386
Females	221	222	246
By ages—			
Under 1 year	73	73	100
Between 1 and 5 years	35	37	84
Over 60 years	118	127	115
Important causes of death—			
Acute intestinal diseases	25	18	31
Apoplexy	21	20	13
Bright's disease	40	31	38
Bronchitis	10	19	25
Consumption	60	76	51
Cancer	20	19	16
Convulsions	10	7	14
Diphtheria	5	8	8
Heart diseases	37	43	43
Influenza	..	..	3
Measles	1	..	15
Nervous diseases	22	21	23
Pneumonia	122	120	172
Scarlet fever	4	4	7
Suicide	9	6	11
Typhoid fever	6	6	7
Violence (other than suicide)	31	32	35
Whooping cough	..	..	9

Wisconsin Medical Journal.—The editorial offices of this publication have removed from 121 to 141 Wisconsin Street, Milwaukee.

Physicians Licensed at the April (1904) Examination to Practise in Minnesota.—F. L. Adair, of Minneapolis; M. W. H. Böckman, of St. Paul; H. J. Forbes, of New Hampton, Ia.; A. W. Skelsey, of Fargo, N. D.; J. W. Thom, of Minneapolis; A. E. Voges, of St. Paul; R. V. Williams, of Rushford.

Alumni of Detroit College of Medicine.—Dr. Preston M. Hickey was elected president of the Detroit College of Medicine alumni on May 5th; Dr. H. M. Kerr, of Calumet, vice-president; Dr. G. C. Bassett, financial secretary; Dr. A. H. Hume, of Owosso, historian. Dr. Angus McLean and Dr. W. A. Repp were chosen as members of the executive committee.

The Third Annual Meeting of the American Confederation of Reciprocating, Examining, and Licensing Medical Boards will be held in the Great Northern Hotel, Chicago, on May 24th. An address of welcome on the part of the medical profession of Chicago will be delivered by Dr. George H. Simmons, which will be responded to by Dr. Joseph M. Mathews, president of the Kentucky State Board of Health. Other addresses to be delivered are as follows: How to Secure Uniform Medical Laws, by Dr. Nicholas Senn, and Tests of Qualification Requisite to Matriculation, by Dr. Frank Billings.

English Women to Study Japanese Nursing.—According to *Home Notes,* two English ladies have received a commission from Queen Alexandra to visit the far east and report upon the Japanese methods of nursing the wounded. One of them is Miss McCaull, who has had great experience in the south African campaign, and the other is one of her pupils, Miss Elaine St. Aubyn, daughter of the Rector of Babworth. They have already left England for the seat of war.

The American Medical Temperance Association.—The thirteenth annual meeting of this association will be held in the parlors of the Hotel Dennis at Atlantic City, June 8 and 9, 1904, at 9 a. m. A very interesting programme has been prepared, including an address On the Effects of Alcohol on the Structures of the Body, by the honorary president, Dr. N. S. Davis, of Chicago, and also A Review of Late Researches Concerning Alcohol as a Drug in Medicine, by Professor W. S. Hall, the president. Other papers on allied topics will be read by Dr. MacNichol, Dr. Crothers, Dr. Mason, Dr. Kellogg, Dr. Reynolds, Dr. Steward, Dr. Reese, Dr. Paulison, Dr. Madden, and others. All persons interested in this great topic are earnestly invited to attend the annual meeting. For particulars, address Dr. T. D. Crothers, secretary, Hartford, Conn.

New York State Civil Service Commission; examination for superintendent, Rome State Custodial Asylum.—An open competitive examination will be held at Albany, Buffalo, New York, and Syracuse, June 3, 1904, for the position of superintendent of the Rome State Custodial Asylum. The authorized maximum salary is $4,000, with maintenance for the superintendent and family. The statute requires that the superintendent "shall be a resident of this State, a well educated physician and graduate of a legally incorporated medical college," and must "have had a suitable experience and training of not less than three years in the care and treatment of the mentally defective classes, epileptic or insane."

Subjects of examination and relative weights: Laws relating to the institution and the commitment, care, and treatment of the dependent and defective classes; 1, institutional care, training, and treatment of the custodial class of feeble minded persons and idiots; 2, institution supervision, administration, and discipline; 3, education, experience, and personal qualifications. Persons desiring to enter the examination must execute applications on forms supplied by the commission and file them in its office before noon of June 1st. For application blank, address Chief Examiner, State Civil Service Commission, Albany, N. Y.

Mortality of Michigan During April, 1904.—The total number of deaths returned to the State department for the month of April was 3,212, or 194 less than the number registered for the preceding month. The death rate was 15.7, as compared with a rate of 16.0 for March. Deaths at important ages were as follows: under 1 year, 518; 1 to 4 years, 172; 65 years and over, 1,008. Deaths by causes: tuberculosis of lungs, 235; other forms of tuberculosis, 37; typhoid fever, 81; diphtheria and croup, 47; scarlet fever, 25; measles, 27; whooping cough, 15; pneumonia, 302; influenza, 104; cancer, 145; accidents and violence, 184. There was a marked rise in the number of deaths from typhoid fever, and a decrease in the number reported from pneumonia and influenza, as compared with the preceding month. No deaths from smallpox were reported for April.

Arkansas Medical Society.—The following resolution was adopted by the Arkansas State Medical Society at its annual meeting in Texarkana, May 3rd:

Whereas, The laity erroneously regards scarletina as a mild form of scarlet fever; and, whereas, this error, by generating indifferently to the danger of infection, is inimical to the public health; be it

Resolved, By the Arkansas Medical Society, That it is the duty of the medical profession, whenever opportunity occurs, to correct this error by teaching the public that they are one and the same disease, and have no regard to the degree of severity, and that the press of the State is hereby requested to assist by publishing this resolution. The meeting adjourned on May 5th. The following officers were elected to serve for the next year: President, Dr. J. P. Runyan, of Little Rock; first vice-president, Dr. J. H. Butler, of Sheridan; second vice-president, Dr. H. H. Canfield, of Siloam Springs; third vice-president, Dr. A. C. Clyne, of Bethel; treasurer, Dr. R. C. Thompson, of Pine Bluff; secretary, Dr. C. C. Stephenson, of Little Rock. The next place of meeting will be Little Rock.

Mohawk Division of New York Central Railroad.—The appointments of hospitals and surgeons for the coming year were announced on May 3rd by Division Superintendent Harrington of the New York Central Railroad Company, for the Mohawk division. St. Luke's and Faxton hospitals, under the order, are designated as railroad hospitals, where passengers or employees who are injured are to be taken care of. Dr. J. G. Kilbourn and Dr. Herbert G. Jones are appointed surgeons for the Utica district, with Dr. F. H. Smith, Dr. D. R. Kinloch, and Dr. F. H. Peck as substitute surgeons. The territory of the Utica surgeons is from Frankfort to Oriskany on the main line, and from Frankfort to Clark Mills on the West Shore Railroad. Other surgeons along the line, who are named, are as follows: Dr. F. E. Simmons, of Canajoharie; Dr. C. E. Vedder, of St. Johnsville; Dr. E. H. Douglas, of Little Falls; Dr. Thomas G. Nock, of Rome, and Dr. A. P. Dodge, of Canastota. The substitute surgeons include Dr. James H. Whaley, of Rome, and Dr. A. B. Santry, of Little Falls. The hospitals at Little Falls, Rome, and Oneida are also designated as railroad hospitals, and employees of the road are directed to notify a company surgeon whenever a passenger or employee of the road is injured. Many of the surgeons served in a like capacity last year.

Connecticut Medical Society.—The one hundred and twelfth annual meeting of the Connecticut Medical Society will be held in the building of the Young Men's Republican Club, New Haven, May 25th and 26th. The first general session will be held on Wednesday afternoon, when papers will be read by Dr. D. C. Brown, Dr. Max Mailhouse, Dr. E. A. Down, Dr. A. R. Diefendorf, Dr. E. J. McKnight, Dr. G. R. Harris, Dr. O. T. Osborne, Dr. Anthony Peck, Dr. A. P. Swasey, Dr. J. S. Ely, Dr. W. G. Daggett, and Dr. Kenneth E. Kellogg. On Wednesday evening, the members and visitors are invited to attend a reception at the residence of Dr. John Slade Ely. On Thursday morning various committee reports will be submitted, together with papers by Dr. C. J. Foote, Dr. E. W. Goodenough, and Dr. Rienzi Robinson. Dr. Samuel B. St. John will deliver his presidential address at noon on Thursday, his topic being Specialism in Medicine. At the Thursday afternoon session papers will be read by Dr. L. Duncan Bulkley, of New York; Dr. O. C. Smith, Dr. L. M. Allen, Dr. Dean Foster, Dr. E. A. Down, Dr. Frederick Schavoir, Dr. O. T. Osborne, Dr. A. R. Diefendorf, Dr. A. A. Crane, Dr. Howard O. Allen, Dr. P. H. Ingalls, Dr. F. T. Simpson, Dr. C. B. Newton, Dr. W. G. Murphy, Dr. C. E. Taft, Dr. John B. Boucher, Dr. E. R. Lampson, Dr. R. M. Clark, Dr. D. F. Sullivan, Dr. C. D. Bunce, Dr. W. B. Cogswell, Dr. W. J. Delaney, Dr. C. J. Bartlett, Dr. T. M. Bull, Dr. T. H. Russell, Dr. W. J. Sheehan, Dr. H. M. Lee, Dr. B. A. Cheney, Dr. O. G. Ramsay, Dr. W. F. Verdi, Dr. T. J. Kilmartin, and Dr. D. J. Maloney. The meeting will be concluded by a banquet at the New Haven House on Thursday evening.

American Pædiatric Society.—The sixteenth annual meeting of the American Pædiatric Society will be held in Detroit, May 30th and 31st, and June 1st. Papers will be read as follows: Some Observations on Epidemic Vulvovaginitis in Infants and Children, by Dr. A. C. Cotton, of Chicago; Intussusception in a Baby of Seven Months: Elimination of the Invaginated Bowel by Gangrene Cure, by Dr. Irving M. Snow, of Buffalo; The Influence of Laboratory Feeding on Infants with Diseases of the Gastroenteric Tract, by Dr. Maynard Ladd, of Boston; Disturbances from High Fat in Infant Feeding, by Dr. L. Emmett Holt, of New York; Metabolism of Atrophic Infants and Children, by Dr. Arthur H. Wentworth, of Boston; Organic Pyloric Stenosis in an Infant, by Dr. John Dorning, of New York; Gonorrhœal Pericarditis, by Dr. Francis Huber, of New York; Carbolic Acid Poisoning Simulating Acute Scarlatinal Nephritis, by Dr. Samuel S. Adams, of Washington; Chronic Nephritis Treated by Renal Decapsulation, by Dr. A. Caille, of New York; Gastrointestinal Toxæmia, by Dr. B. K. Rachford, of Cincinnati; Strumous Children, by Dr. Floyd M. Crandall; Clinical Manifestations of Acute Otitis, by Dr. Charles G. Kerley, of New York; Dyspnœa, by Dr. W. P. Northrup, of New York; Management of Convalescent Infants and Children after Leaving the Hospital, by Dr. Henry D. Chapin, of New York; Influence of American Pædiatric Societies in Promoting the Welfare of American Children, by Dr. A. Caille, of New York; Lobar Pneumonia in Children, by Dr. John Lovett Morse, of Boston; The Rachitic Hand, by

Dr. H. Koplik, of New York; Acute Myocardial Insufficiency in Some Infections of Children, by Dr. F. Forchheimer, of Cincinnati; Hypertrophic Osteoarthropathy in Children, by Dr. D. J. Milton Miller, of Philadelphia; Acute Leucæmia, by Dr. F. S. Churchill, of Chicago; Asthma in Infants and Children, by Dr. L. E. Lafetra, of New York; Clinical Features and Diagnosis of Tuberculous Meningitis, by Dr. H. Koplik, of New York; Observations on Cerebrospinal Meningitis, by Dr. Francis Huber, of New York; Nervous Exhaustion in Infants, by Dr. W. P. Northrup, of New York; Primary Sarcoma of the Liver, by Dr. L. Emmett Holt, of New York; Percussion of the Head in Infants and Children, by Dr. H. Koplik, of New York; Radiograph of a Thoracoabdominopagus (case of Dr. H. B. Sheffield), presented by Dr. Samuel S. Adams.

American Urological Association.—Preliminary programme of the annual meeting of the American Urological Association, at Atlantic City, June 8 and 9, 1904. President's Address, by Dr. Ramón Guiteras, of New York; followed by the papers here alphabetically arranged, according to the authors' names. In the final programme they will be grouped in their proper classifications. (Reading of papers is limited to twenty minutes each; discussions to five minutes).

Dr. Winfield Ayres, of New York: The Treatment of Catarrhal Pyelitis by Intrapelvic Injections; Dr. F. Bierhoff, of New York: Contribution to the Study of Gonorrhœal Involvement of the Prostate; Dr. Carl N. Brandt (by invitation), of Hot Springs, Va.: Acute Nephritis Due to Uric Acid; Dr. Follen Cabot, of New York: An Analysis of One Hundred Consecutive Cases Examined with my Simplified Cystoscope; Dr. Arthur L. Chute, of Boston: The Pain of Osteoarthritis of the Spine; Its Bearing on the Diagnosis of Urinary Diseases; Dr. Charles G. Cumston, of Boston: The Symptomatology and Diagnosis of the Polycystic Kidney; Dr. Daniel S. Gardner, of Massillon, Ohio: Title to be announced; Dr. Augustin H. Goelet, of New York: Nephroptosis; Its Gynæcological Importance; Dr. Francis Hagner, of Washington: Experience Gained from 15 Cases of Vesical Obstruction Operated on by Galvanocaustic Prostatotomy; Dr. John A. Hawkins, of Pittsburgh: Abscess of the Prostate; Dr. Louis Heitzmann, of New York: The Clinical Value of Microscopic Uranalysis; Dr. Ernest V. Hubbard, of New York: An Aid to the Examination of Urea and Urinary Solids for the General Practitioner; Dr. Howard Kelly, of Baltimore: Additional Cases of Diagnosis of Calculi in the Ureter or Renal Pelvis with the Wax Tip Catheter; Dr. Gustav Kolischer, of Chicago: Pericystitis in the Male and Female; Dr. F. Kreissl, of Chicago: Further Contributions to Lavage of the Renal Pelvis; Dr. W. E. Lower, of Cleveland: Title to be announced; Dr. Granville MacGowan, of Los Angeles: Title to be announced; Dr. E. G. Mark, of Kansas City, Mo.: Urethral Endoscopy; Presentation of a New Urethroscope; Dr. Willy Meyer, of New York: Nephrotomy and Urethrotomy for Impacted Ureteral Calculus; Dr. G. Morgan Muren, of Brooklyn: A Plea for More Conservative Genitourinary Instrumentation; Dr. R. F. O'Neil, of Boston: Hæmaturia Due to Bilharzia Hæmatobia, with Report of a Recent Case; Dr. T. M. Reade, of Springfield, Ohio: Title to be announced; Dr. G. A. de Santos Saxe, of New York: Aids to Rapid Clinical Examinations in Urology; Dr. Oliver C. Smith, of Hartford: The Indications for Perineal Bladder Drainage; Dr. Charles S. Stern, of New York: The Methods of Obtaining Separate Urine from Each Kidney; Dr. G. S. Whiteside, of Boston: Teaching of Cystoscopy; Dr. Abraham L. Wolbarst, of New York: The Rôle of the Prostate in Affections of the Urinary Tract: Dr. Ferdinand C. Valentine and Dr. Terry M. Townsend, of New York: The Irrigator versus the Syringe in Urinary Diseases.

Authors who may desire to correct the titles of their papers are requested to notify the secretary before May 20th. Members who have not sent in titles are urged to do so at once. The annual dinner will be held at the Windsor Hotel on Wednesday, June 8th, at 7.30 p. m. ($2.00 per plate). Members who desire to attend will please to inform the president, stating the number of seats wanted. The following matters will be brought before the annual meeting: 1. Consideration of the invitation to affiliate with the American Medical Association; 2. Election of officers for the ensuing term. Ramón Guiteras, M. D., president; Ferdinand C. Valentine, M. D., secretary, 31 West Sixty-first Street, New York.

The Medical and Chirurgical Faculty of Maryland.—At the annual meeting, held in McCoy Hall of the Johns Hopkins University, on April 27th, the ex-president, Dr. Eugene F. Cordell, delivered an address, of which the following is a synopsis: Ancient and modern historians compared; critical research; history approaching an exact science; value of historical experience; vicissitudes of human progress; Hippocrates laid down the true principles of it 2400 years ago; no royal road to knowledge; different estimation of general and medical history; attendance on general history courses; statistics showing its neglect in medical schools; only one "Professorship of History of Medicine" in the United States; in fourteen leading universities but three claim to give full courses of lectures on it; in none is it a subject of examination; the Medico-Historical Society; first systematic instruction in America; the above neglect contrasts with our boasted enlightenment; haste and rage for novelty predominant; physical science monopolizing the profession; its evils pointed out by DuBois Reymond; a constant infusion of the "spirit of antiquity" and of the inspiration of the great examples of the past needed; brief review of the most eminent men of the past; no deterioration shown in recent times; solidarity of medical art; close connection between different stages of progress; each essential to the whole; we should not underrate former ages; value of study of research; illustrated by work of Harvey; medical literature a mine of discoveries; rediscoveries; more learned from failures than from successes; errors unavoidable; summary of advantages of historical study; suggestions as to its teaching. The following conclusions were reached: Advantages of the study of medical history: 1. It teaches what and how to investigate; 2, it is the best antidote we know against egotism, error, and despondency; 3, it increases knowledge, broadens the view, and strengthens the judgment; 4, it is a rich mine from which may be brought to light neglected or overlooked discoveries of value; 5, it furnishes the stimulus of high ideals, which we poor weak mortals need to have ever before us; it teaches our students to venerate what is good, and to cherish our best traditions, and it strengthens the common bond of the profession; 6, it is the fulfilment of a duty—that of cherishing the memories, the virtues, the achievements of a class which has benefited the world as no other class has, and of which we may feel proud that we are members.

The address, which occupied about forty minutes in delivery, was very warmly received.

American Laryngological, Rhinological, and Otological Society.—The tenth annual meeting of this association will be held in the Auditorium Hotel, Chicago, on May 30th and 31st, and June 1st. The following papers will be read: The Ætiology of "Bone Cysts" in the Accessory Nasal Sinuses, by Dr. A. Logan Turner, of Edinburgh, Scotland; Epithelioma of Maxillary Sinus, by Dr. Cornelius G. Coakley, of New York; The Ear in Typhoid Fever, by Dr. Ewing W. Day and Dr. Chevalier Jackson, of Pittsburgh; Chronic Purulent Otitis, etc., by Dr. James F. McKernon, of New York; The Correction of Some of the Defects of Speech, by Dr. G. Hudson Makuen, of Philadelphia; Postscarlatinal Mastoiditis, by Dr. Thomas Hubbard, of Toledo; Multiple Chronic Sinusitis Operated Upon by the Maxillary Route, by Dr. T. Passmore Berens, of New York; Treatment of Tuberculous Laryngitis, by Dr. S. E. Solly, of Colorado Springs; Chronic Empyema of the Sphenoidal Sinus, by Dr. H. Holbrook Curtis, of New York; Mastoid Suppuration Complicated by Nephritis and Erysipelas, by Dr. J. A. White, of Richmond; Mastoid Disease Complicating Diabetes Mellitus, by Dr. S. Mac Cuen Smith, of Philadelphia; A Conservative Attitude in Mastoiditis, by Dr. Sargent F. Snow, of Syracuse; Infection and Suppuration of the Sigmoid Sinus, by Dr. Redmond W. Payne, of San Francisco; Treatment of Tinnitus Aurium, by Dr. William S. Bryant, of New York; Interesting Cases of Mastoiditis, by Dr. James F. McCaw, of Watertown, N. Y.; Symposium on Malignant Growths of the Upper Air Passages, by Dr. F. C. Cobb, of Boston; Dr. Max A. Goldstein, of St. Louis; Dr. Chevalier Jackson, of Pittsburgh; and Dr. D. Braden Kyle, of Philadelphia; Laryngeal Cancer, by Dr. Francis J. Quinlan, of New York; Adenosarcoma, by Dr. William H. Dudley, of Easton, Pa.; Methods for Excision of the Tonsils, by Dr. John O. Roe, of Rochester, N. Y.; Orbital Infection from the Ethmoid Cells, by Dr. Carl E. Munger, of Waterbury, Conn.; Diseases and Treatment of the Salivary Glands and Ducts, by Dr. Robert C. Myles, of New York; The Use of Soft Rubber Tubing in the Treatment of Antral Empyema, by Dr. Price Brown, of Toronto; Acute Suppurative Otitis Media Complicated by Double Pneumonia, by Dr. Edward B. Dench, of New York; Difficulties in Diagnosis of Mastoid Complications, by Dr. Arthur B. Duel, of New York; Fibrosarcoma of the Mastoid and Auditory Canal, and Asthenopia Dependent upon Nasal Disease, by Dr. Thomas R. Pooley, of New York; Operative Cases of Sinusitis in Children, by Dr. Lewis A. Coffin, of New York; Papilloma of the Larynx, by Dr. William L. Culbert, of New York; Nasal Therapy, by Dr. J. A. Thompson, of Cincinnati; Early Incision of the Membrana Tympani in the Treatment of Acute Suppuration in the Middle Ear, by Dr. Francis R. Packard, of Philadelphia; Radical Operation for the Removal of a Bullet Embedded in the Internal Wall of the Middle Ear, by Dr. M. D. Lederman, of New York; Mastoiditis with Paralysis of the Facial Nerve, by Dr. Seymour Oppenheimer, of New York; Affections of the Mouth, Nose, and Throat in Relation to Digestive Disturbances, by Dr. Robert Levy, of Denver.

National Association for the Study and Prevention of Tuberculosis.—It is proposed to organize this body in the public school building at Atlantic City on Monday, June 6th, at 8 p. m. The following are important items of the by-laws to be submitted by the committee:

Article I.—Membership. The membership of this association shall consist of three classes of members, to wit: (*a*) Members; (*b*) Life Members; (*c*) Honorary Members. (*a*) Members: those persons who have participated in the organization of the association at the meeting in Philadelphia on March 28, 1904, and such persons as shall from time to time be elected by the board of directors. The dues of members shall be five dollars ($5) a year; (*b*) Life Members: members may become life members upon the payment of two hundred dollars ($200); (*c*) Honorary Members: persons distinguished for original researches relating to tuberculosis, or eminent as sanitarians, or as philanthropists who have given material aid in the study and prevention of tuberculosis may be elected honorary members.

Article II.—Election of Board of Directors. The association shall at its first meeting elect a board of twenty-five directors, divided into five groups of five each, to serve one, two, three, four, and five years, the duration of office to be determined by lot; thereafter, retiring directors who have served a full term of five years not to be eligible for reelection the year of retirement, the secretary and treasurer to be exempted from this provision regarding eligibility to reelection. At succceeding annual meetings the directors shall be elected for terms of five years, or in case of vacancies in any of the groups for such terms as are unfulfilled.

Article III.—Election of Officers. The board of directors shall annually elect from its own number a president, two vice-presidents, a secretary and a treasurer, who shall be the officers of the association as well as of the board.

Article IV.—Committees. Section 1. The board of directors shall appoint an executive committee of seven members, of which the president and secretary are ex-officio members, to which shall be entrusted all the executive work of the association. Section 2. The board of directors is empowered to appoint representatives on the international committee on tuberculosis; it also shall from time to time appoint such committees as may be necessary for scientific and educational work, and for the holding of meetings and congresses. Section 3. The government of the association, the planning of work, the arrangement for meetings and congresses, in short, everything that appertains to legislation and direction shall be in the hands of the board of directors; committees shall have the power to execute only what is directed by the board.

Article V.—Quorum. Seven directors shall constitute a quorum of the board of directors.

Artcile VI.—Meetings. There shall be at least one stated annual meeting of the association. The board of directors shall fix the time and place for this as well as for other meetings and make its own rules. It shall call meetings of the association at such times as it shall deem proper; it shall fix the time of the regular meetings of the executive committee.

Article VII.—Moneys. The moneys received from membership dues and from other sources whatsoever shall be used for defraying expenses of the association, and for furthering its objects under the direction of the board of directors.

The committee consists of: Dr. Edward L. Trudeau, Dr. Herman M. Biggs, Dr. Lawrence F. Flick, Dr. George M. Sternberg, Dr. William Osler, Dr. William H. Welch, and Dr. Henry Barton Jacobs. Secretary, Dr. Henry Barton Jacobs, 11 Mount Vernon Place, West, Baltimore, Md.

Pith of Current Literature.

PRESSE MEDICALE.

March 30, 1904.

1. Hydronephrosis; Value of Conservative Treatment, By TUFFIER.
2. Causes of Error in the Clinical Study of the Coagulability of the Blood, By MILIAN.
3. Ætiology of Baldness; Jacquet's Theory, By EYRAUD.

1. **Hydronephrosis.**—Tuffier performs nephrorraphy for intermittent hydronephrosis, and nephrectomy where there is a real cyst; where there is a stricture of the ureter, an anastomosis below the points of stricture is in order. The latter operation is sometimes apparently successful where an atrophy of the kidney is what has really occurred; cystoscopy is required to estimate the success of the operation, but this must be performed with great care.

2. **Coagulability of the Blood.**—Milian points out the difference in coagulative power of the blood in the wound and *in vitro;* the latter not beginning to coagulate till the process is finished in the former. Coagulation *in vitro,* however, demonstrates, by its rapidity, the danger of hæmorrhage in the animal from which it was drawn, the ratio being direct. The methods of testing the blood of Hayem, Vierordt, and Wright are given in detail and their defects pointed out. Tuffier's method is to collect the blood, drop by drop, on glass slides, sterilized, and always under the same conditions of place, temperature, and ventilation; the exact instant of coagulation is thus easily determined, especially as the process is slow under the circumstances, occupying some 15 minutes. Evaporation, temperature, and the actual time of collection during hæmorrhage are important factors.

3. **Baldness.**—Eyraud recalls Jacquet's theory that baldness is of nervous origin, and is connected with skin diseases, dental troubles, and crises of gastrointestinal and other origin. He cites a case in which the cure of a fistula in ano, complicated with entire loss of hair, was succeeded by complete restoration of eyelids, eyebrows, and hair of the scalp.

April 2, 1904.

1. Acute Leucæmia; A Clinical and Hæmatological Study, By RIST, and RIBADEAU-DUMAS.
2. Milk from the Viewpoint of Its Chemical Composition, By DIFFLOTH.

1. **Leucæmia.**—Rist and Ribadeau-Dumas report a case of acute leucæmia in which anæmia was most pronounced and adenitis marked; the child died. The blood showed 862,000 red corpuscles to the cubic centimetre, and 312,000 white. In each 100, there were 96 lymphocytes, 0.4 neutrophile myelocytes, 0.6 eosinophile myelocytes, 2 multinuclears, and 1 nucleated corpuscle. Inoculation in the lower animals of the blood of this patient proved quite negative. The authors hint at a parasitic origin of the disease.

2. **Milk.**—Diffloth objects to recent methods of securing milk for Parisians, resembling our own in New York, because the fluid lacks nitrogenous material, calcium phosphate, and digestibility, owing to the time elapsed since its collection. Bacteriological considerations remain to be studied.

LYON MEDICAL.

March 27, 1904.

1. Clinical Diagnosis of Human Actinomycosis, By PONCET, and BÉRARD.
2. Osteomalacic, Rhachitic Pelvis; Conservative Cæsarean Operation, By PLAUCHU.
3. Diagnosis of Tuberculous Poisoning in Man, by the Hypodermic Injection of Different Liquids of the Organism Into Guinea Pigs, By MÉRIEUX.

1. **Actinomycosis.**—Poncet and Bérard urge upon the profession the necessity of learning how to diagnosticate this disease particularly from tuberculosis, syphilis, and cancer. Diagnosis of the last is given in full, and cases are cited where serious errors have been made. The diseases may coexist, cancer finally destroying the traces of actinomycosis by supervention. Many actinomycosic tumors have been removed surgically under the impression that they were due to cancer, and a cure of the latter hailed in consequence of their non-recurrence. Mercury and the iodides will cure actinomycosis, which is thus often mistaken for syphilis to the moral detriment of the patient; the iodide treatment, however, is counselled in all doubtful cases.

2. **Cæsarian Operation.**—Plauchu explains at length why he performed this operation in a case of rhachitic pelvis instead of inducing premature labor or making a symphyseotomy. An abscess of the abdominal parietes supervened on account of the use of a silk suture, which is valuable in the uterine wall, according to the writer, but should be replaced by catgut in the skin.

3. **Diagnosis of Tuberculosis.**—Mérieux reversed the process used in diagnosticating tuberculosis in cattle, by injecting human fluids of those suspected to be tuberculous into really tuberculous guinea pigs. He used blood serum, urine, and expectorated blood, with a result of ten undoubted hyperthermias, out of eighteen cases, two doubtful results, and six negative, the last apparently proving the non-existence of tuberculosis in the subjects from whom the fluids were obtained. In such cases, a second injection should be made with an increased dose. The writer advises that his idea be pursued in other diseases of undoubted microbic origin.

SEMAINE MEDICALE.

March 23, 1904.

Diagnosis and Treatment of Conditions Due to Peritoneal Adhesions, By F. LEJARS.

Peritoneal Adhesions.—Lejars speaks first of their beneficent encysting action, which is transitory, and goes on to discuss pain and functional disorders, strangulation, and other abdominal phenomena. Traumatism, benign and malignant tumors, occlusions, etc., take up the remainder of a scholarly and exhaustive paper.

March 30, 1904.

The Coexistence of Typhoid Fever and Scarlatina, By FARNARIER.

Coexistence of Fevers.—Farnarier says the time has come to contradict point blank the dictum of John Hunter that two fevers cannot coexist; as a matter of fact, a severe disease lowers vitality so that the onset of another is facilitated. He cites 39 well authenticated cases from scientific observers from 1833 down to date, in which only 2 had scarlatina first. If both diseases were contracted simultaneously, scarlatina would naturally develop first. Diagnosis might be obscured by the hiding of the typhoid rosy spots by the scarlet eruption.

ROUSSKY VRATCH.

March 13, 1904.

1. The Use of Rubber Gloves in Military Surgery, By V. G. Zege-von-Manteufel.
2. On the Question of Immunizing Inoculations Against Rabies, By N. N. Mari
3. A Rare Case of Foreign Body (Croquet Ball) Remaining for Many Years in the Vagina, By V. N. Orloff.
4. On the Compulsory Confinement of Alcoholics in Sanatoria, By F. E. Rybakoff.
5. On the Diuretic Action of Theocin, By A. U. Dvuzhilny.
6. The Rôle of Psychotherapy in Dermatology, By K. S. Agadzaniantz.
7. A Brief Review of the Surgical Work of the Gynæcological Department of the Kieff City Hospital, 1900-1901, By G. O. Sianozhensky.

1. **Rubber Gloves in Military Surgery.**—Von Manteufel advocates the use of rubber gloves in military surgery. These gloves are sterilized and each is placed in a linen bag, which is closed with a button flap, and bears a mark on one side showing where the thumb of the glove is placed. The surgical kit which is used in the field should be provided with half a dozen sterilized pairs of gloves packed in the manner described, and in addition each surgeon and orderly should carry with him linen bags with several pairs of gloves. In using these gloves the flap of the bag is opened and the hand, previously covered with a little talcum, is introduced into the glove without removing it from the bag, the opposite hand being used outside of the bag for putting on the glove. When both gloves are put on, the bags are taken off, and the result is two perfectly sterile hands. The wearing of gloves in military surgery has a great many advantages which are obvious.

2. **Inoculations Against Rabies.**—Mari criticises an article which recently appeared in St. Petersburg from the pen of Professor Zientz. The chief conclusion of this article is that Pasteur's entire theory regarding the treatment of rabies is wrong, and that this treatment not only does not prevent rabies, but inoculates the disease artificially. The present author explains the appearance of this article by the fact that we are still without the proper statistical data which demonstrate without question the beneficial results of the Pasteur treatment. The author calls attention to the fact that recently there has been a great diminution in the interests taken in the work of the Pasteur Institutes in the various parts of the world, and that the theoretical study of rabies has been neglected. Current literature contains but few articles on the subject during the past few years. A uniform method of investigation and a concerted action by workers in all countries are needed to solve the problems connected with the prevention and treatment of rabies.

3. **A Croquet Ball in the Vagina.**—Orloff reports a case in which a croquet ball was introduced into the vagina and remained for thirty years without producing any serious changes in the walls of the canal. In this last respect the case is unique. The ball did not suffer any changes; the wood remained fresh and had not lost its ordinary properties. The patient was a peasant woman, sixty years old, who entered complaining of pain in the vagina and in the lower part of the abdomen, and of a purulent discharge. Thirty years previously, after her second childbirth, the uterus became prolapsed and the patient introduced a croquet ball into her vagina. In order to do this she assumed the knee elbow position. She had felt no disturbances whatever until shortly before admission. The foreign body was not imbedded, and was freely movable in the canal by means of forceps. The entrance into the vagina was markedly constricted and the ball had to be cut into fragments before it could be removed. The vagina showed nothing but an acute inflammation and some small superficial ulcers.

4. **Compulsory Isolation of Alcoholics in Sanatoria.**—Rybakoff opposes the passage of the new law dealing with alcoholism in Russia, which provides for the compulsory isolation of alcoholics for a period not exceeding two years in special sanatoria, whenever a court finds that they are, or may become, dangerous to themselves or to the community. This law was drafted by the St. Petersburg Commission on Alcoholism appointed by the Society for the Protection of National Health. The author does not think that such a law is just, or that it can lead to any favorable therapeutic results. The compulsory isolation of alcoholics should be enforced only in exceptional cases, either when the alcoholic subject becomes mentally affected, or when the abuse of alcohol leads him to a grave state of moral depravity. From the legal viewpoint such patients should be considered as insane. Furthermore, in such cases, alcoholics should be placed, not in special sanatoria, but in insane asylums.

6. **Psychotherapy in Skin Diseases.**—Agadzaniantz has studied the relations of disturbances of local sensations of the skin and the development and course of skin diseases. He has found that these two factors are very closely connected, and in some cases, which occurred as the result of disturbances of sensation, he has succeeded in arresting the skin disease by hypnotic suggestions which restored this sensation to the normal. The patients who were subjected to this treatment included both hysterical individuals, and persons without any symptoms of hysteria. The cases selected were those in which definite causes, such as parasites, disturbances of digestion, etc., could be excluded, and no local or general treatment whatever was used in these cases, as in each instance every measure tried previously had failed. The author concludes that mental therapy is an important addition to the methods of treatment in skin diseases. Mental suggestion acting upon the circulation and increasing the appetite, strengthens the organism, and especially the skin, and thus aids in the treatment. When the sensibility of the skin is lowered locally, various skin eruptions are often seen, which run parallel to the degree of the disturbed sensibility. Mental suggestion, acting upon the latter, indirectly assists in the cure of the skin disease. It is important, however, to select properly the cases amenable to mental treatment, especially to exclude all possible reflex and external causes.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

May 14, 1904.

1. The Two Sciences, Humanity and Medicine, By I. A. McSwain.
2. Acute Ascending Paralysis and Landry's Paralysis, By L. Harrison Mettler.
3. Surgery of the Stomach, By William H. Wathen.
4. The Prevention of Tetanus, By Daniel N. Eisendrath.
5. Suprapubic Prostatectomy Under Nitrous Oxide Anæsthesia, By Joseph Wiener, Jr.
6. The Medical Profession in the Public and Private Life of America, By Charles A. L. Reed.
7. The Army Medical Department, II. An Historical Sketch (*Continued*).

2. **Landry's Paralysis.**—Mettler calls attention to the confusion that exists with regard to acute ascending paralysis and Landry's paralysis. He holds that Landry's paralysis should be looked upon as a symptom complex of a definite disease, and not as a disease in itself. To put it in the author's own words: "There is a form of nervous intoxication, whether specific or not is unknown, in which the lower motor neurone is selected to bear the brunt of the trouble. The character and distribution of the lesion in this lower motor neurone and its associated structures, together with the consequent clinical picture produced by that lesion, are dependent on many factors, chief of which are the virulence of the poison, the duration of the disease, and the individual susceptibility of the patient. One phase of this intoxication is covered by the definition of Landry; other phases are the symptom complexes that closely resemble multiple neuritis, acute anterior poliomyelitis, and acute ascending meningomyelitis."

3. **Surgery of the Stomach.**—Wathen reviews the different conditions of the stomach that call for operative intervention and discusses the operations best suited to meet the different lesions. The paper cannot profitably be abstracted.

4. **Tetanus.**—Eisendrath formulates the following rules for the treatment of wounds open to the suspicion of being infected with tetanus: "(1) Early and thorough exposure of every portion of the tract which has been infected by the blank cartridge or instrument which caused the punctured wound, retracting the edges, so that the disinfection and removal of the infected tissues can be done under the guidance of the eye. (2) Prophylactic injections of tetanus antitoxine to aid the organism in combating whatever toxines may have been absorbed prior to the time of operation. (3) This thorough disinfection can only be carried out under anæsthesia, either local or general, and when the parts are rendered bloodless by the application of a constrictor. (4) The blank cartridge itself does not contain tetanus bacilli, but undoubtedly carries them in while penetrating the skin. (5) The instruments which cause punctured wounds either are covered as described above with tetanus bacilli or the manure of horses, etc., and are thus carried into the wound. (6) Our only hope in reducing the high mortality of tetanus is in a thorough application of such radical measures as have just been described.

4. **Prostatectomy.**—Wiener reports six cases of suprapubic prostatectomy performed under nitrous oxide anæsthesia. The general subject of prostatic enlargement is touched upon and the paper concludes with the following assertions: "(1) Suprapubic prostatectomy can be rapidly and safely performed under laughing gas. (2) Any patient who can stand laughing gas for ten or twelve minutes can have the operation performed. (3) Old age, diabetes, and cystitis are no contraindications. (4) All the contraindications usually mentioned are contraindications, not for the operation, but for the administration of ether or chloroform. The value of laughing gas and of rapid work in these old prostatic cases cannot be overestimated. These two factors are, we believe, the keystone to success in suprapubic prostatectomy. Few, indeed, are the patients, even though eighty years of age, or suffering from diabetes or sepsis, that cannot be entirely cured. So we are now enabled to offer these poor old men an almost certain promise of a complete cure by an operation that can be done without ether or choloroform, that rarely takes more than twelve minutes to perform, and last, but not least, an operation that has a mortality of but four per cent."

BOSTON MEDICAL AND SURGICAL JOURNAL.

May 12, 1904.

1. Hysteroneuroses and Their Relation to the Physical Examination of All Women Patients, By Daniel H. Craig.
2. Tuberculous Meningitis in Adults, By Henry Jackson.
3. Claudius's Iodized Catgut, By Horace Binney.
4. Concerning Danger of Infection to Attendants of Tuberculous Patients, By Louis Faugeres Bishop.

1. **Hysteroneuroses.**—Craig insists that a diagnosis of hysteroneurosis should never be made unless a complete and painstaking examination of the patient fails to reveal any organic cause. Such examinations should always be made as a matter of routine. Several cases are reported from the author's practice, in order to illustrate the evils of "snap diagnoses."

2. **Tuberculous Meningitis in Adults.**—Jackson bases his paper on a study of nineteen cases of tuberculous meningitis in adults that have come under his observation; all but one in hospital practice. The paper is in the nature of a comparative analysis of these cases, and only a very long abstract could furnish an adequate summary of it.

3. **Claudius's Iodized Catgut.**—Binney's personal knowledge of catgut prepared by the Claudius method is restricted to nine cases. From these cases and a review of what has been published about this method of streilization he concludes that (1) It is invariably sterile. (2) It is readily absorbed in the tissues. (3) The ease and simplicity of its preparation enables the surgeon to prepare his own sutures with a minimum of trouble. (4) It is comparatively cheap.

4. **The Contagiousness of Tuberculosis.**—Bishop concludes his paper with these more or less reassuring statements: "The whole thing comes down to a matter of susceptibility; if we are susceptible to tuberculosis we can hardly escape, while if we are not susceptible we can scarcely get it if we try. As far as danger in taking care of tuberculous patients is concerned, this is practically nil. I think that if any one working among tuberculous patients who uses ordinary care gets the disease he would have acquired it under other conditions."

MEDICAL RECORD.

May 14, 1904.

1. Some Characteristics of *Stegomyia Fasciata* Which Affect Its Conveyance of Yellow Fever, By H. R. Carter.
2. The Unclassified Troubles of Women, By Eugene Coleman Savidge.
3. A Diagnostic Syndrome for Intracranial Syphilis, with Remarks Upon Prognosis and Treatment, By William Broaddus Pritchard.
4. Claudius's Catgut. A New and Effective Method for Its Sterilization, By Alexis V. Moschcowitz.
5. A Case of Hodgkin's Disease Treated by X Rays, By Edward B. Finch.
6. Local Applications in Pneumonia, By W. F. Church.

1. **Stegomyia Fasciata.**—Carter considers only those characteristics of the *Stegomyia fasciata* which seem especially to influence its rôle as a conveyer of yellow fever. We summarize the characteristics which are of chief interest to Americans. (1) The *Stegomyia fasciata* occurs generally along the coast and low plains of the Southern States, except Maryland. (2) It can be conveyed by vessels indefinite distances. (3) It lives a long time and if once contaminated with yellow fever retains its virulence as long as it lives. (4) It propagates preferably in artificial containers. (5) In America it has been reported only in the vicinity of human dwellings. (6) It hibernates in the United States; but if the infected adult hibernates, either a large proportion are destroyed or the infecting parasite is destroyed. (7) It is rarely conveyed aerially more than one hundred yards. (8) This mosquito does not bite, either in the bright sunlight, or in the dark.

3. **Intracranial Syphilis.**—Pritchard asserts that "given a patient between the ages of twenty-five and forty-five, affected with any form of intracranial paralysis, which was preceded by headaches, of nocturnal onset or exacerbation, associated with vertigo and with insomnia, the insomnia occurring during the first half of the night, the paralysis developing during sleep, both headache and insomnia disappearing upon the onset of the paralysis, the cause is syphilis." The author elaborates and somewhat qualifies this dogmatic statement. On the whole, however, it holds true. The prognosis of syphilitic disease of the central nervous system is somewhat uncertain; the outcome of any particular case cannot be well predicted in advance of at least some initial response, or lack of it, to specific treatment. Treatment, to be effective, must be instituted early, before gross degenerative changes have occurred. The only two drugs that are of the least specific service are mercury and potassium iodide. The iodide usually gives the best results. If, however, the interval between the initial lesion and the invasion of the central nervous system is short, mercury will be found of decided advantage. The secret of successfully giving the iodides consists in constantly increasing the daily dose. No limit can be placed on the size of the dose. The author has given 1,245 drops of the saturated solution in a day.

4. **Claudius's Catgut.**—Moschowitz has used catgut prepared by Claudius's method for the past seventeen months. It has given entire satisfaction. The preparation of this catgut is simplicity itself. Catgut, just as it is bought from the dealer, is wound, preferably in a single layer, on to the spool, and tied at both ends, in order to prevent unraveling. It is then immersed for eight days in a solution of iodine, 1 part; potassium iodide, 1 part; distilled water, 100 parts. (The solution is prepared by dissolving the potassium iodide in a small quantity of the water, to which the iodine, previously finely pulverized, is added, and the whole diluted up to 100 parts.)

6. **Pneumonia.**—Church concludes that the chief value of local applications in pneumonia is for the relief of pleuritic pain. When this pain is relieved, the value of the applications is ended. Possibly, in certain cases, cold applications may be of specific value for the pneumonia itself.

MEDICAL NEWS.

May 14, 1904.

1. Intraspinal Injection of Lysol Solution in the Treatment of Cerebrospinal Meningitis, with a Report of Three Cases, By Morris Manges.
2. A Case of Carcinoma of Retained Testis, By Sinclair Tousey.
3. The Modification of Mattoli in the Operation of Von Hacker for Gastroenterostomy, By Carlo Savini.
4. Asthenopia: A Clinical Study, By D. H. Wiesner.
5. Some Considerations in the Treatment of Tuberculosis of the Testicle, By Joseph A. Blake.
6. Some Remarks on Tuberculosis of the Urinary Bladder, By Alex. B. Johnson.
7. A Few Considerations Concerning the Mechanism of Developing Mental Disorder, By W. K. Walker.
8. The Ammonium Sulphate Method of Sterilizing Catgut, By Weller Van Hook.
9. A Severe Case of Major Hysteria (Traumatic Neurosis) Following an Accident; Recurrence of Symptoms After a Second Accident; Absence of Damage Claims in Both Instances, By Theodore Diller.

2. **Carcinoma of the Testicle.**—Tousey reports a case of carcinoma of a retained testicle, which formed a tumor that occupied a large part of the abdomen. The tumor was removed by laparotomy, but recurred in two months, and the patient died about four months later.

3. **Gastroenterostomy.**—Savini reports one case in which he performed gastroenterostomy according to the method proposed by Matoli, of Rome. This operation should be performed in three steps as follows: *First.*—The jejunum is anastomosed to the posterior wall of the stomach as in the von Hacker operation. *Second.*—The two branches of the jejunum are united and anastomosed together about three inches from the gastroenterostomy as in the Braun-Jaboulay operation. *Third.*—The afferent branch of the jejunum between the two anastomoses is held between the thumb and the middle finger of the left hand placing the fingers longitudinally. The pressure of the index finger forms a groove in the intestine and the two resulting ridges are sewn together with a number of stitches of an interrupted or continuous suture; as a consequence this section of intestinal tube is here changed into a solid cord.

5. **Tuberculosis of the Testicle.**—Blake as-

serts that it is generally conceded that tuberculosis of the testicles should be treated by extirpation of the tuberculous foci, unless there is extensive tuberculosis elsewhere. This being granted, the further questions to be determined may be classified as follows: (1) *Regarding the Nature of the Operation.—(a)* Castration or epididymectomy; *(b)* The amount of the vas deferens to be removed; *(c)* the removal of the seminal vesicle when involved. (2) *Regarding the Operative Technics.—(a)* In excision of vas deferens; *(b)* in excision of the seminal vesicle. The author considers each of these points very briefly.

6. **Tuberculosis of the Urinary Bladder.**—Johnson summarizes his advice concerning the treatment of tuberculosis of the bladder as follows: (1) If other tuberculous lesions of the genitourinary tract exist, their operative removal is sometimes followed by improvement, and even cure of the process in the bladder, provided the patients are placed under the most favorable hygienic surroundings. (2) Operative treatment of the bladder alone in the presence of tuberculous lesions of other portions of the urinary tract is usually harmful rather than beneficial. (3) The local treatment of the tuberculous bladder by means of injections or applications through the urethra is generally useless and often very deleterious. (4) The internal administration of the drugs known as urinary antiseptics is generally useless. (5) Palliative operations, such as suprapubic drainage, may be useful in advanced cases. (6) The general or hygienic treatment, suitable climate, out-of-door life, etc., offer these patients the best hope of recovery. (7) Such hygienic measures should be preceded by the operative removal of tuberculous foci in the kidney, the epididymis, the prostate and the seminal vesicles, if such exist and the patient is still in sufficiently good condition to bear the operative procedure. (8) In those rare cases where the bladder alone is affected over a moderate area only, the operative removal or destruction of the diseased tissue may be followed by improvement and even cure.

8. **Catgut Sterilization.**—Van Hook recommends the method of Elsberg for the sterilization of catgut. He describes it thus: "At the outset a catgut of unimpeachable quality must be chosen and the surgeon will do well to arrange for a continuous supply of uniformly reliable material. It should not have been weakened by bleaching or polishing. Select raw, rough, unbleached material. Soak for a week in pure ether or a mixture of chloroform one part and ether two parts. Wind on glass spools in single layers. Soak for three days in aqueous solution of chromic acid, 1 to 1,000. Boil for twenty minutes in water to which, while boiling, chemically pure ammonium sulphate has been added until the crystals cease to dissolve. Wash the catgut for half an hour in cold sterile water. Store as desired.

AMERICAN MEDICINE.

May 14, 1904.

1. Carcinoma of the Œsophagus, By W. M. L. Coplin.
2. Is the Epileptic Attack Explosive in Character? By J. W. Wherry.
3. A Contribution to the Physiologic Study of the Normoblasts. By Julio F. Arteaga.
4. The Puerpera: Her Care and Comfort During Convalescence, Particularly the Prevention of Visceral Prolapse, By A. Ernest Gallant.
5. Further Experiences with Intratracheal Medication, By P. S. Donnellan.
6. The Correct Technics for Packing the Urethra, in Gonorrhœa, Gleet, and Stricture; Two New Instruments, By S. T. Rucker.
7. The Society for Experimental Biology and Medicine, By William J. Gies.

1. **Carcinoma of the Œsophagus.**—Coplin reports one case of squamous celled carcinoma of the œsophagus, polypoid in type, and located near the median line posteriorly. The paper consists first, of a review of the literature of the subject with full consideration of the statistics of œsophageal carcinoma, and secondly, of the postmortem findings of the case reported. The clinical history of the case is not given.

2. **Epilepsy.**—Wherry holds that epilepsy presents two essential characteristics: unconsciousness and convulsions. He believes that the unconscious state precedes the convulsions. Both these conditions are probably due to a common cause; that is, to some toxine which has the power of reducing the oxygenating power of the blood. The various phenomena which constitute the so called epileptic attack present, as a whole, very much the same picture as is presented by CO poisoning. From these considerations the author concludes that more attention should be devoted to the study of the unconscious state which precedes the convulsions.

4. **The Puerpera.**—Gallant believes that many of the ills to which women are heirs have their origin in the puerperium. The anatomical foundations for these many troubles are: (1) General muscular weakness; (2) abdominal distention and visceral ptosis; (3) uterine displacements. The author recommends that the general management of the puerperal woman should be somewhat as follows: The patient should be instructed to lie on her side or on her face and not on her back. After the fundus has decended to the pelvic brim it is advisable in many cases to use tampons, in order to keep the cervix elevated. General massage should be begun about the second day after delivery, and massage of the abdomen should receive special attention as involution progresses. About the fourth day passive movements are begun. The woman should be got out of bed as soon as possible, about the ninth day, and should be instructed to wear a special corset for the support of the lower abdomen.

5. **Intratracheal Medication.**—Donnellan has had good results from intratracheal medication in tuberculosis, asthma, bronchitis, etc. He gives a description of his technics and illustrates the syringe he employs. As vehicles for the various drugs used, he employs any of the fluid petroleum oils or olive oil or pure glycerin. To these may be added creosote, menthol, guaiacol, camphor, iodoform, etc.

6. **Gonorrhœa.**—Rucker advocates treating gonorrhœa, either acute or chronic, by packing the urethra with medicated gauze. He claims surprisingly good results by this method.

LANCET.

April 30, 1904.

1. Recent Studies on the Tissue Lymph Circulation. (Oliver-Sharpey Lectures I), By G. Oliver.
2. Address on Medical Ethics, By D. L. Roberts.
3. Eyestrain as a Cause of Headaches and Other Neuroses, By S. Snell.
4. The Treatment of Mucomembranous Colitis, By Dr. De Langenhagen.
5. On the Removal of the Gallbladder in Operations for Gallstones, By B. G. A. Moynihan.
6. Note on the Causes of Cough in Children, By A. W. Fuller.
7. A Case of Attempted Division of the Eighth Nerve Within the Skull for the Relief of Tinnitus, By C. S. Wallace, and H. J. Marriage.
8. A New Method of Demonstrating the Laryngeal Image and Intralaryngeal Operations, By E. S. Yonge.

1. **Tissue Lymph.**—Oliver, in the first of the Oliver-Sharpey lectures, states that the essential aim of the digestive excitation of the circulatory system is to raise the capillary blood pressure, and this end is attained by the increased activity of the cardiac muscle. The food constituents themselves do not possess the power of starting the mechanism by which lymph is dispensed to the tissues throughout the body. Nature, however, associates with the food stuffs small quantities of certain very active substances which bring into play that mechanism, though these substances themselves are practically devoid of food value. This natural lymph stimulation is frequently increased by means of the use of salt and of various beverages. Such bodies as uric acid, creatin, creatinin, xanthin, glycogen, and sodium chloride act as distributers of lymph to all the tissues.

3. **Eyestrain.**—Snell sums up his views on the subject of eyestrain as follows: 1. Eyestrain is the cause of a large proportion of headaches, often of a very aggravated character. 2. Various other neuroses are met with in association with headache, and among these may be mentioned the following: mental depression, nausea, indigestion, vomiting, insomnia, giddiness, choreiform movements of the eyelids and face, etc. 3. Relief is afforded to these conditions by correcting the error of refraction which can be ascertained only after careful examination. 4. For such an examination a mydriatic is absolutely essential. 5. Frequently no complaint is made of defect of vision. 6. The ametropia is frequently of low degree, 61.2 per cent. of the author's cases needing 0.75 D. cyl. and weaker. 7. A cylinder of 0.25 D. is of great value. 8. Anisometropia is frequently present and requires proper adjustment. 9. In a certain number of cases the muscle balance is faulty and necessitates the prescribing of prisms.

4. **Mucomembranous Colitis.**—De Langenhagen tells us that mucomembranous colitis is a chronic catarrhal inflammation of the mucous membrane of the large bowel. It is a constitutional and diathetic disease, neither parasitic nor contagious. The soil is the neuroarthritic constitution that is so common to-day. It is characterized by pronounced intestinal atony, and by a more or less abundant secretion of a mucoid or membranous matter. If the mucus is expelled as formed, it appears as glairy threads; if retained within the intestine, it forms ribbon-like membranes. Constipation is obstinate. There is either habitual pain, or paroxysmal pain; the attacks of the latter are often taken for gallstones or intestinal obstruction. There are three therapeutic indications, and three corresponding modes of treatment. They are hygienic rather than medical. 1. Alimentary regimen. The patient must be so nourished that the excrement is neither abundant or irritating. On no account should any green vegetables be given. Lean meat, soups, custards, stewed fruits are to be allowed. Bread is strictly forbidden. 2. The washing out of the intestine. Large irrigations of hot water furnish the best means of combating the intestinal atony, and should be considered as a real internal dressing of the mucous membrane. 3. A hydromineral cure, judiciously chosen, such as Plombières and Châtelguyon. Drugs are almost always inefficacious and sometimes harmful. For the pain, belladonna internally, or belladonna ointment, or large hot laudanum poultices externally, often work very well. Where enteroptosis is marked an elastic belt should be worn.

6. **Cough in Children.**—Fuller calls attention to the frequency with which a persistent cough in childhood is due to a very slight degree of pharyngitis, of amygdalitis, or of adenoid growths in the nasopharynx. Adenoid cough, in particular, scarcely receives the attention it deserves.

BRITISH MEDICAL JOURNAL.

April 30, 1904.

1. Trauma in Relation to Disease of the Nervous System, By J. S. Bury.
2. The Examination of the Tissues in the Case of Sleeping Sickness in a European, By G. C. Low, and F. W. Mott.
3. Asylum Dysentery in Relation to *Bacillus Dysenteriæ*, By J. W. H. Eyre.
4. Differentiation of *Bacillus Typhosus* and *Bacillus Coli Communis* by Means of the Photographic Plate, By W. C. Stevenson.
5. Note Upon the Causation of Cancer, By H. J. Campbell.
6. Structural Links in Malignant Growths, By F. Bushnell, and F. Cavers.
7. The Treatment of Inebriety by Atropine, By C. A. McBride.
8. The So Called "Gold Cure" of Inebriety, By S. B. Fenn.
9. Adrenalin in Neurotic Heart, By A. S. Myrtle.
10. Dionine: A New Ocular Analgetic, By J. Hirishelwood.
11. Two Cases of Hydronephrosis Due to Abnormities in the Ureters, Successfully Treated by Plastic Operations, By B. G. A. Moynihan.
12. Decapsulation of the Kidney for the Treatment of Albuminuria, By D. Newman.
13. A Fatal Case of Secondary Parotitidis, By B. Dyball.

1. **Trauma and the Nervous System.**—Bury, in this article, considers to what extent trauma may be regarded as an exciting cause of serious nervous disease. Cerebral concussion, for instance, may be followed by the following conditions: 1. The early group of symptoms indicating the presence of meningeal hæmorrhage. 2. Symptoms which, although they may develop soon after the accident, are not usually conspicuous until some weeks later: among them are—*(a)* varieties of so called neurasthenia. *(b)* Some forms of insanity. *(c)* Symptoms of brain tumor. 3. Symptoms associated with the condition known as "late apoplexy." Concussion of the spinal cord is, in the same way, followed by pathological changes in the nervous system. Further, many cases of progressive muscular atrophy appear to have originated from a severe sprain or other injury to a limb.

2. **Trypanosomiasis and Sleeping Sickness.**—Low and Mott report the results of the examination of the tissues of a case of sleeping sickness in a European. Although no trypanosomes could be definitely identified, yet several bodies were found which strongly suggested degenerated forms. Further, all the tissues showed changes similar to those seen in Africans suffering from sleeping sickness. Diplococci were found in all the tissues, but it could not be determined that they played any part as a causative agent.

3. **Asylum Dysentery.**—Eyre has studied twenty-four cases of asylum dysentery with reference to the relation of *Bacillus dysenteriæ* to that disease, and has reached the following conclusions: 1. A bacillus, identical with the *Bacillus dysenteriæ* of Shiga, the cause of acute dysentery in Japan, can be isolated from the stools of many cases of asylum dysentery. 2. The serum of some of these cases has a specific agglutinative action against *Bacillus dysenteriæ* derived from various sources. 3. In order to detect the presence of the bacilli the stools must be examined fresh. 4. Post mortem material must be collected and examined as soon after death as possible, as *Bacillus coli* after a few hours, becomes the predominant organism in the intestine. 5. Under the above conditions (3 and 4) the isolation of the bacillus is comparatively easy when the stools are typically dysenteric. 6. In cases of chronic asylum dysentery, the specific bacillus is isolated with great difficulty, it being outnumbered by the usual intestinal saprophytes.

4. **Differentiation of Typhoid Bacillus.**—Stevenson finds that fluid cultures of different microorganisms have different effects upon gelatinobromide photographic plates, and he proposes to make use of this fact to differentiate between the typhoid and colon bacilli. The *Bacillus coli* culture produces a full and marked reduction of the silver salt—an action similar to the formation of a photogenic material in the film. The typhoid culture has no such effect: in some cases its action is even inhibitory of silver reduction. Boiling and sterilizing the cultures does not affect their action on the photographic film.

5. **Cancer.**—Campbell holds that cancerous growth is caused by the degenerative reversion of epithelial cells to a germinal type, in association with a local irritant and in the presence of an abundant blood supply. The post-heterotypic multiplication of the cells having once commenced, as a result of the degenerative reversion to an ancestral type, the local conditions serve to continue and fix the type, with the result that the growth becomes practically a colony of unicellular parasites.

7, 8. **Inebriety.**—McBride's treatment for inebriety is as follows: 1. Atropine sulphate, commencing at $^1/_{200}$ grain three times a day, and gradually increased until the pupils are affected, and the mouth becomes dry. Usually $^1/_{50}$ grain will be the maximum dose. 2. Strychnine nitrate, given in the same way, beginning at $^1/_{60}$ grain and rising to $^1/_{20}$ grain. 3. Fluid extract of red cinchona bark given every three hours in ordinary doses by the mouth. He reports in detail four cases of inebriety in its various phases, in which this line of treatment was carried out with marked benefit.

Fenn reports his method of carrying out the "gold cure" for alcoholism. The patient is put under the pleasantest surroundings, no restraint whatever is used, and he is allowed all the alcohol he wishes. Atropine (or daturine) and strychnine are given hypodermically, and a mixture of chloride of gold and sodium, ammonium chloride, aloin, viburnum, and cinchona is given every two hours during the day. By the fifth day the patient voluntarily abstains from alcohol, and at the end of four weeks the drink sodden victim of intemperance is transformed into a healthy and sober man. The treatment is necessarily institutional from its very nature. Of the author's patients he estimates that sixty per cent. remain total abstainers.

9. **Adrenalin.**—Myrtle reports two cases of neurotic heart in which the use of adrenalin in doses of twenty minims of the one to a thousand solution, was productive of marked benefit.

12. **Renal Decapsulation.**—Newman reports a case of sudden suppression of the urine with albuminuria, in which incision of the kidney was followed by marked relief. Renal incision is useful in cases of acute and subacute congestive disorders, such as acute nephritis, congestion associated with hæmaturia, in cases of anuria from toxic poisoning, or other instances of sudden arrest of the functions of the kidney.

13. **Fatal Mumps.**—Dyball reports a fatal case of secondary parotiditis occurring in a man aged thirty-seven years, following an attack of acute appendicular inflammation. This last condition was operated for, and the abdominal condition progressed most satisfactorily. But the enlarged parotid went from bad to worse, sloughing set in, and although the neck was opened and cleared out, death took place from sepsis eleven days after, the first appearance of the parotid bubo, and fifteen days after the appendix operation.

American Medical Association.

Fifty-fifth Annual Session, to be Held at Atlantic City on June 7, 8, 9, and 10, 1904.

A Beach Scene at Atlantic City, Showing the Board Walk, Piers, etc.

ATLANTIC CITY AS A MEETING PLACE.

Four years ago, viz., in 1900, the American Medical Association held its annual meeting in Atlantic City. At this meeting the number of members who registered was 2,019, a very large attendance, indeed. The selection of the same place of meeting for a second time within so short a period, when taken into consideration with the very large attendance before mentioned, indicates clearly the general opinion of the association as to the attractions of Atlantic City and its capability of adequately entertaining the members and their friends. Moreover, according to present arrangements, the city will entertain this year a succession of conventions, beginning with the National Association of Piano Dealers, on May 23rd, and comprising various masonic, press, trade, religious, and other organizations, up to the convention of the National Postmasters' Association, on August 25th. That so many organizations of such differing characters should have selected this place for their conventions establishes beyond cavil the singular aptness of Atlantic City for such gatherings; and we have no doubt that the coming meeting of the American Medical Association will be both scientifically profitable and socially delightful to the association and its members, and prove a fresh tribute to the already widely renowned attractiveness of this most deservedly popular watering place. This is, moreover, the jubilee year of Atlantic City, which was founded in 1854, and the jubilee celebration has been officially announced as follows: *Wednesday, June 15th.* Afternoon, dedication of founder's column, with public speeches, etc., in City Park. Evening, the semi-centennial banquet. *Thursday, June 16th.* Afternoon, marine parade. It is expected that the Philadelphia, the Corinthian, and the New York Yacht clubs will join in the marine parade, which bids fair to prove one of the most attractive features of the celebration. Evening, fireworks display. *Friday, June 17th.* Afternoon, floral chair parade on the Board Walk. Evening, fireworks display. *Saturday, June 18th.* Afternoon, military and civic parade. Evening, fireworks display. During the jubilee nine blocks of Atlantic City are to be covered by a perfect canopy of electric lights, and it is likely that this brilliant illumination will be continued throughout the summer season.

As many physicians make the meeting of the American Medical Association the starting point of their vacation, the fact of this celebration following immediately on the meeting may lend increased interest.

DESCRIPTION OF THE CITY.

Atlantic City is situated at the northeastern end of an island, about ten miles in length, which some fifty years ago was nothing more than a mass of sand dunes. The island lies off the coast of New Jersey, from which it is separated by reaches of sea known as Thoroughfares, and by salt marshes. The northeastern inlet is known as Absecon inlet, while that at the other end of the island is Great Egg Harbor inlet. In succession along the length of the island from Atlantic City follow the townships of Ventnor, South Atlantic City, and Longport. An electric railroad, beginning at the steamboat wharf on Absecon inlet, traverses almost the entire length of the island in a straight line, down Atlantic Avenue.

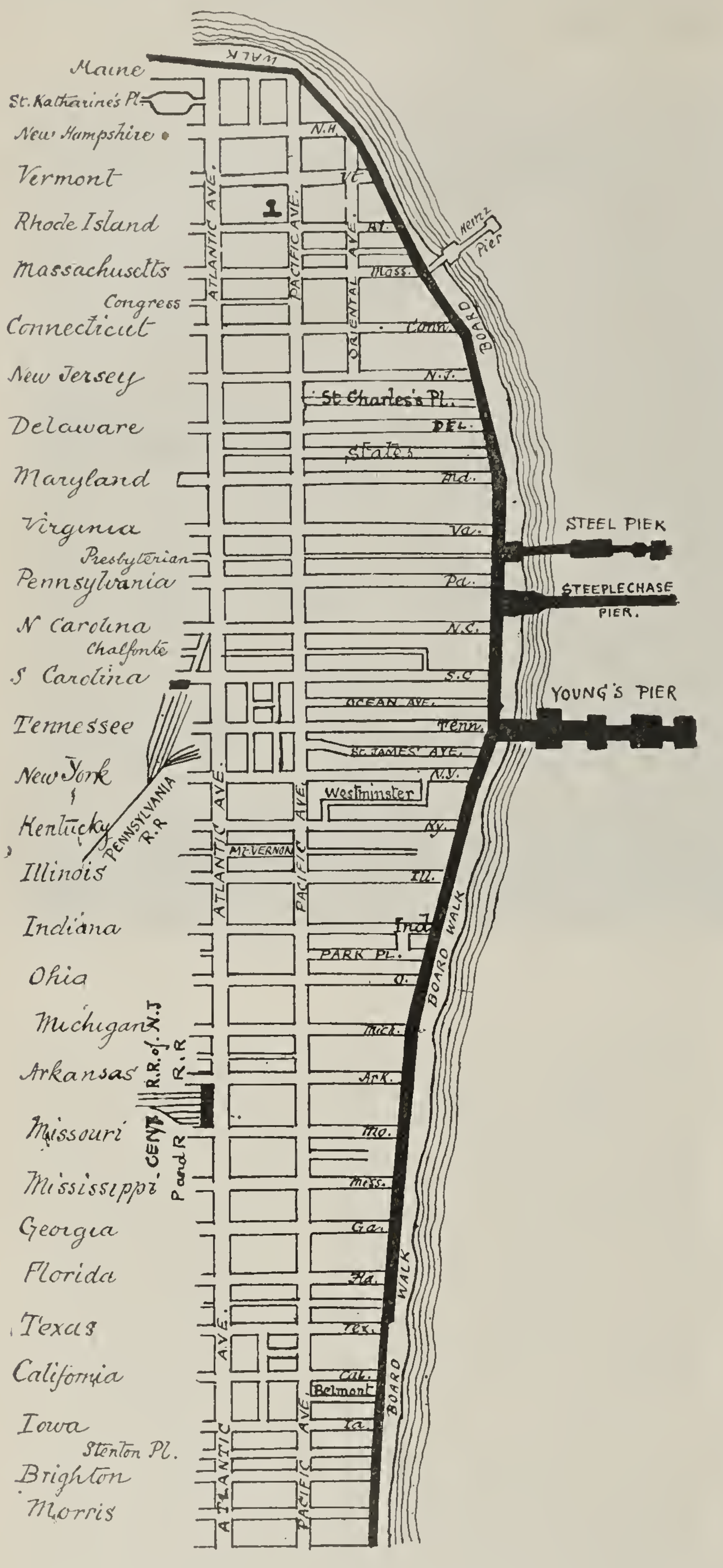

Maine
St. Katharine's Pl.
New Hampshire
Vermont
Rhode Island
Massachusetts
Congress
Connecticut
New Jersey
Delaware
Maryland
Virginia
Presbyterian
Pennsylvania
N Carolina
Chalfonte
S Carolina
Tennessee
New York
Kentucky
Illinois
Indiana
Ohio
Michigan
Arkansas
Missouri
Mississippi
Georgia
Florida
Texas
California
Iowa
Stenton Pl.
Brighton
Morris
WALK
N.H.
Vt.
ATLANTIC AVE.
PACIFIC AVE.
ORIENTAL AVE.
R.I.
Mass.
Conn.
Heinz Pier
BOARD
N.J.
St Charles's Pl.
Del.
States
Md.
Va.
STEEL PIER
Pa.
STEEPLECHASE PIER.
N.C.
S.C.
OCEAN AVE.
YOUNG'S PIER
Tenn.
St. JAMES' AVE.
N.Y.
Westminster
Ky.
Mt. VERNON
Ill.
Ind.
BOARD WALK
PARK PL.
O.
Mich.
Ark.
Mo.
Miss.
Ga.
Fla.
Tex.
Cal.
Belmont
Ia.
PENNSYLVANIA R.R.
R.R. of N.J.
CENT.
P and R R.R.

Diagram of portion of Atlantic City. Atlantic Avenue (upon which the traveler emerges from either depot) and Pacific Avenue run up and down. All places of special interest to those attending the meeting, lie in the area comprised between Atlantic Avenue and the sea, along the beach of which extends the Board Walk.

Atlantic City is divided by its avenues into squares or blocks. The avenues that follow the course of the length of the island are named after oceans and seas, while those that cross the island receive their names from States of the Union. The avenue near the ocean front is Pacific, the next Atlantic. Then follow in succession Arctic, Baltic, Mediterranean, Adriatic, Caspian, etc. A few others not traversing the entire island are interposed between the farther "ocean" avenues, and run parallel with them. Atlantic Avenue, the second from the ocean front, is the dividing line between the conventional "north" and "south" of the city, the sections toward the mainland being north and those between Atlantic and the sea, south. Both the Philadelphia and Reading, or New Jersey Central, and the Pennsylvania Railroad have their depôts on Atlantic Avenue, the former between Missouri and Arkansas Avenues, and the latter at South Carolina. On emerging from the depôt, in either case upon Atlantic Avenue, the traveler faces toward the ocean front, and any of the avenues leading straight down in front of him will take him directly to the sea. It is in this area, viz., that comprised between Atlantic Avenue and the sea front, that practically all that is of special interest to the visitor to the American Medical Association will be found—the stores, the hotels and boarding houses, the meeting places and exhibition halls, the places of amusement, and last and greatest of all, the famous Board Walk. We publish herewith a map of this section, with which the intending visitor who knows not Atlantic City should make himself familiar. Appended to the map is a directory of hotels and meeting places of the association, their situation being given so that a reference to this map will readily enable them to be located.

DIRECTORY OF HOTELS AND MEETING PLACES.

The following is a list of hotels and meeting places, giving their situation, so that they can readily be located by reference to the map. The rates, European or American plan, or both where both are used, are given. Also the number of accommodations booked up to May 15th, for attendants on the association meeting, and the vacancies available at that date, where such information has been given in response to our request.

Weekly rates can be obtained at nearly all hotels on application.

Abbey—Pacific and Mt. Vernon. American plan, $2.50 and and up; European plan, $1 and up.

Albermarle—Virginia, near Beach. Am., $2 to $3.50.

Altamont Craig Hall—Pennsylvania, near Beach. Am., $2 to $3

Archdale—Virginia, near Beach. Am., $2 and up. Booked, 20; vacancies, 20.

Arlington—Michigan and Beach. Am., $2 to $3.50.

Belmont—Virginia, near Beach. Am., $2 and up. Booked. 200.

Brighton Casino—Indiana and Beach.

Berkshire Inn—Virginia, near Beach. Am., $2 to $3. Booked, 20; vacancies, 50.

A Net Haul on Young's Pier.

Boscobel—Kentucky, below Pacific. Am., $2 to $6. Booked, 75; vacancies, 200.
Bouvier—Tennessee, near Beach. Am., $1.50 and up.
Brighton—Indiana, near Beach. Am., $4 to $10.
Champlaine—Kentucky, near Beach. Am., $2 to $4. Vacancies, 75.
Chester Inn—New York, near Beach. Am., $2 to $2.50.
Chelsea—Brighton and Beach Am., $4 and up.
Chatham—126 Park Place. Am., $2.50 to $3.
Dunlop—Ocean and Beach. Eur., single, $2 and up. Double, $3 and up. Baths, $1 extra per diem. Vacancies, 150.
Dennis—Michigan and Beach. Am., $3.50 to $6. Booked, 150; vacancies, 100.
Elberon—Tennessee and Pacific. Am., $1.50 up.
Glaslyn—Park Place, near Beach. Am., $2.50 to $3.
Grand Atlantic—Virginia and Beach. Am., $2.50 to $5. Also Eur.
Green's Hotel—Ocean and Beach.
Garden—Pacific and Illinois. Am., $3.50 to $6.
Gladstone—Brighton and Beach. Am., $3 to $5. Vacancies, 50.
Haddon Hall—North Carolina and Beach. Am., $3 to $7.
High School—Pacific and Ohio.
Holmhurst—Pennsylvania, near Beach. Am., $2 to $4. Vacancies, 100.
Kenilworth Inn—Kentucky, South. Am., $2 to $4. Booked, 100; vacancies, 50.
Imperial—Maryland and Beach. Am., $2.50 to $3.50. Booked, 200; vacancies, 50.
Islesworth—Virginia and Beach. Am., $3 to $8. Also Eur. Booked, 50; vacancies, 300.
Loraine—St. Charles's Place. Am., $2.50 to $3.50.
Majestic—Virginia and Beach. Am., $2 to $4.
Marlborough House—Park Place and Boardwalk Am., $4 to $10.
New Hygeia—New York and Pacific. Am., $2 and up. Weekly, $12 and up. Eur., $1 and up. Booked, 15; vacancies, 100.
New England—South Carolina and Beach. Am., $2.50 to $3.
Ponce de Leon—Virginia, near Beach. Am., $2.50. Booked, 75; vacancies, 150.
Roxborough—South Carolina, near Beach. Am., $1.50 to $2.50. Vacancies, 50.
Revere—Park Place, near Beach. Am., $2 to $2.50.
Rittenhouse—New Jersey and Beach. Am., $2.50 to $4.
Raleigh—St Charles's Place and Beach. Am., $3.
Rudolf—New Jersey and Beach. Am., $3.50 to $5; $6 for two in a room. Also Eur. Booked, 150; vacancies, 300.
Royal Palace—Pacific and Beach. Am., $3.50 to $6.50. Booked, 200; vacancies, 100.
Steel Pier—Virginia and Beach.
St. Charles—St. Charles's Place and Beach. Am., $4 and up. Vacancies, 150.
Savoy—Belmont and Beach. Am., $3 to $5. Booked, 150.
Strand—Pennsylvania and Beach. Am., $3 to $5.
Shelburne—Michigan and Beach. Am., $3 to $8.
Seaside—Pennsylvania and Beach. Am., $3.50 to $4.
Shoreham—Virginia, near Beach. Am., $2.50 to $3.50. Booked, 10; vacancies, 150.
Traymore—Illinois and Beach. Am., $4 to $8.
Wiltshire—Virginia, near Beach. Am., $2.50 and up. Also Eur. Booked, 89; vacancies, 100.
Windsor—Illinois and Beach. Am., $3.50 to $7. Booked, 80; vacancies, 100.
Young's Hotel—Tennessee and Beach. Eur., $2 to $3. Booked, 100; vacancies, 75.
Young's Pier—Tennessee and Beach.

The Golf Links.

ITS SANITARY CONDITION.

A few words may fitly be said as to the salubrity of Atlantic City. As a winter health resort and sanatorium, no less than as a summer pleasure resort, it is widely and justly esteemed; indeed, no winter resort in the north is so popular. The atmosphere is highly charged with ozone, the temperature is moderated in winter by the same breezes that temper the heat in summer. The sanitation is excellent; there are no stagnant pools or sloughs of fresh water containing decaying vegetable matter giving off emanations or affording breeding places for the anopheles. Experience has shown that the climate of Atlantic City is admirably suited to the residence of many consumptives and others troubled with affections of the respiratory organs; and it has a special reputation as a refuge for the unfortunate sufferers from hay fever and postnasal catarrh. The water supply is of the purest, being derived in large part from artesian wells.

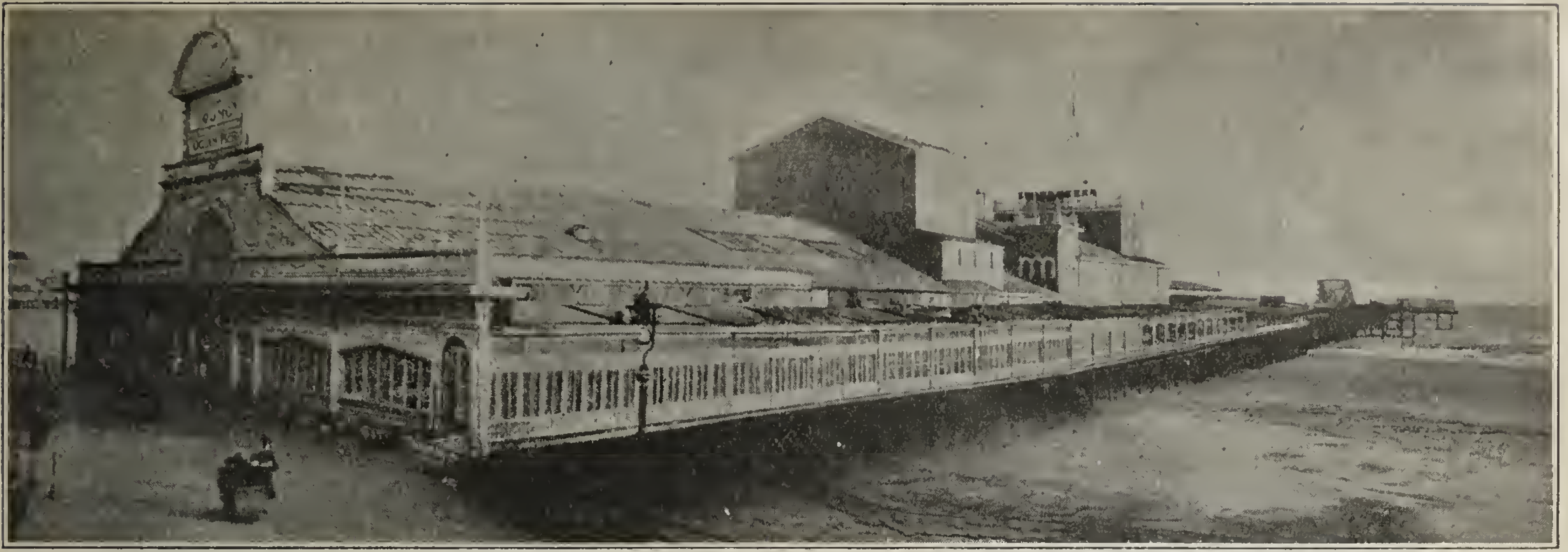
THE ATTRACTIONS.

The attractions of Atlantic City are as varied as numerous, and as excellent as varied. First must be mentioned the famous Board Walk, which extends a distance of nearly five miles along the ocean front, being forty feet wide, and raised by steel columns some twelve feet above the level of the beach. For a great part of its course the Board Walk is lined on its shore side with restaurants, cafés, art and curio stores, libraries, photographers' studios, drug stores with the inevitable soda fountain and candy counter, shows and theatres, shooting galleries, and all the myriad attractions of the seaside, of qualities and prices suited to all tastes and pockets, and gradually shading off in character from the most high-toned at the upper end of the Board Walk, to the most democratic at the lower end. This succession of shops, galleries, etc., is broken at intervals by open spaces in front of some of the principal hotels, which thus at the same time provide their patrons with a clear and unobstructed view of the ocean, and add greatly to the attractiveness of the ocean front itself.

One of the most noticeable features of Atlantic City is the evident sense of enjoyment and good humor which prevails on the faces of the crowds that throng all the thoroughfares. That look of carking care and prepossession that weighs upon the pleasure seeker in most of our cities, is here conspicuous by its absence; this in itself reacts favorably upon the spirits of the pleasure seeker and the nervous depression of the invalid.

From the Board Walk several piers extend into the sea. The Steel Pier, situated at the foot of Virginia Avenue, extends nearly three thousand feet from the shore. It has three large halls and a number of shelter pavilions. On this pier high-class concerts are given three times daily by Oreste Vesselle's band, the programmes of which comprise a

The Country Club.



Young's Pier.

most judicious combination of popular and high class music, the band itself being of the very first quality. It is on this pier that the sections on surgery and anatomy, ophthalmology, obstetrics and diseases of women, and laryngology will hold their sessions.

A little lower down, between Pennsylvania and North Carolina Avenues, is the Steeplechase Pier, also provided with various forms of popular amusements; while still farther down, at the foot of Tennessee Avenue, is Young's Pier, which extends nearly half a mile into the sea. This pier contains an excellent theatre, where high class traveling companies, many of them of metropolitan fame, present every variety of theatrical entertainment, from Shakespeare to melodrama and comic opera. Here, also, are band concerts, an aquarium, cake walks, kinematographs, bowling alleys, writing and reading rooms, vaudeville shows, net hauls, and last, but probably to the medical visitor not least, a human incubator colony. Young's Pier is also of importance to the members of the association as being the place where the general sessions will be held, as well as the registration bureau, the scientific and commercial exhibitions, and the sections on practice of medicine and diseases of children.

AMUSEMENTS: BOATING, BATHING, ETC.

The amusements of Atlantic City are, as may be gathered from the foregoing, manifold.

Sailing is within easy reach of all who care for it. At Absecon Inlet, sailboats may be hired at any time of the day, by the trip, the hour, or the day, or the visitor may take advantage of one of the parties frequently formed at a charge of from 25 cents to 50 cents a head. The Thoroughfares, which separate the island from the mainland, are calm and quiet; those persons who pre-

The Floral Parade in Rolling Chairs on the Board Walk. This will be held this year on June 17th.

fer a more vigorous experience can pass out on to the ocean itself.

Bathing is perhaps better at Atlantic City than at any other watering place in America. The smoothness of the beach, with its gentle slope into the sea, renders it both pleasant and safe. The safety of the bathers is still further guarded by an excellent life patrol. The sand is soft and pleasant to the feet, devoid of shingle. There is no sewage contamination of the surf, the disposal of refuse being by means of a crematory, while the actual sewage is collected by means of a pumping station and reservoir at the edge of the city farthest from the beach and hotels, and subjected to a filtration process. The proximity of the gulf stream equalizes the temperature of the water, so that bathing begins earlier and lasts longer at Atlantic City than at most other seaside places. In fine weather the beach is a perfect panorama of enjoyment, between bathers, strollers, and spectators. But besides the surf bathing, there are for those of a timid character many natatoriums and private baths, both hot and cold.

Additional life saving stations and boat patrols are being established this year, in view of the great increase in the number of visitors.

Fishing of excellent quality can be had at Atlantic City; flounders, bluefish, weak fish, sea bass, sheepshead, and other fish abound. The sport can either be followed from boats, or tackle and bait can be had on Young's Pier.

Shooting of the most varied description can be had in the season in the meadows surrounding Atlantic City. There are snipe, wild geese, plover, brant, marlin, black ducks, willets, broadbills, yellowlegs, redheads, marsh hens, teal, and other wild fowl. The laws for the protection of these fowl are, however, very properly and strictly enforced.

Drives are numerous and delightful. Among the most interesting may be mentioned the Speedway from Seaview to Longport, seven miles; Beach drive at low tide, ten miles; to Great Egg Harbor Inlet, eight miles; to South Atlantic City, five miles; Pacific Avenue drive to Ventnor, five miles, etc.

Clubs.—The principal clubs are Country Club and golf links on the main land, overlooking Lake's bay. Twenty minutes by motor car will take the visitor there. The Atlantis Club is situated on Illinois Avenue, between Atlantic and Pacific. At this point, also, should be mentioned the Casino on the Board Walk, near the foot of Indiana Avenue. This may be described as a sort of public club, admission to which is obtained by ticket on payment of 25 cents per diem, or $1 a week, instead of by introduction. The proprietor reserves the right of exclusion for just cause. It is a fine building, containing sun parlors, bowling alleys, reading and smoking rooms, a swimming pool, and also dressing rooms for surf bathers. Concerts and dances are also to take place here. The section on nervous and mental diseases will hold its sessions here.

Theatres.—In addition to that on Young's Pier, there are the Empire Theatre, on Atlantic, near Kentucky; the Academy of Music, on the Board Walk, near New York; and the Savoy, also on the Board Walk.

Churches.—The religious side of life is well provided for in Atlantic City, all the principal denominations having one or more places of worship.

Methods of locomotion on the island, besides trolleys, are by means of omnibuses, automobiles, locomobiles, etc. The legal fare for these vehicles is 10 cents for 10 blocks, 15 cents for 15 blocks, 20 cents for 20 blocks, and beyond that distance, 1 cent for each additional block. From Pacific Avenue to the Board Walk counts as two blocks. By time, $1 an hour for a one-horse, and $1.50 an hour for a two-horse, omnibus. Between midnight and 5 a. m., double fares are charged.

HOW TO GET TO ATLANTIC CITY.

The greatly reduced rates offered by the railroads for this meeting will materially aid in securing a large attendance.

The *Central Railroad Company of New Jersey* advises us that for the meeting of the American Academy of Medicine and Medical Association at Atlantic City during June next, excursion tickets from New York will be sold at $4.25 on June 2nd, 3rd, 5th, and 6th, good to return from June 4 until June 13, 1904, inclusive. These tickets will have the unusual advantage of affording the holders a choice of three routes to Atlantic City, in either or both directions, viz.:

First. By solid vestibule train service, passing through Lakewood, as follows: Leave New York, Liberty Street, 9.40 a. m. (South Ferry, 9.35 a. m.) and 3. 40 p. m. (South Ferry, 3.35 p. m.). Second. By Sandy Hook Route Steamers, leaving from foot of Rector Street, North River, passing through the Upper Bay, the Narrows, and Lower Bay. Passengers taking the boat leaving Rector Street at 1.00 p. m. on weekdays can make connection at Eatontown or Lakewood with Atlantic City trains. Northward passengers leaving Atlantic City at 2.15 p. m. will reach New York at 7.15 p. m. Third. By hourly trains to Philadelphia, in connection with express trains from Philadelphia to Atlantic City, change of cars being necessary at Philadelphia.

The *Pennsylvania Railroad* will sell, for the benefit of those desiring to attend the meeting of the American Medical Association at Atlantic City, June 7th to 10th, and the session of the American Academy of Medicine at the same place, June 4th and 6th, excursion tickets to Atlantic City from all stations on its lines west of Downingtown and Avondale, north of Parker Ford, south of Newark and Porter, Del., and north and east of Trenton, Windsor, and Toms River, N. J., exclusive, at rate of *single fare plus $1.00 for the round trip*. Tickets will be sold June 1st, 2nd, 3rd, 5th, and 6th, good returning leaving Atlantic City June 4th to 13, inclusive. Tickets will be good to stop over at Phliadelphia on going trip within limit of June 6th, and at Philadelphia, and Baltimore, on return trip within the final limit on deposit at stop-over point. *All tickets must be deposited immediately on arrival at Morris Guards' Armory, 12 South New York Avenue, Atlantic City.* Regular excursion tickets at usual rates will be sold from the points named above and from all intermediate points to Atlantic City.

The rate from New York will be $4.25 for the round trip, good going via Philadelphia or direct. Express trains leave New York, foot of West Twenty-third Street, at 2.55 p. m. and 9.55 a. m.

In the territory of the *Western Passenger Association*, tickets will be on sale only on June 1st, 2nd, 4th, and 5th, and will be good for return not later than June 13th, unless extended.

THE MEETING.

Registration.—Members may register daily at Young's Pier, from 8 a. m. to 5.30 p. m., from Monday to Thursday, June 6th to 9th, inclusive, and on Friday, June 10th, from 9 to 11 a. m.

The House of Delegates will convene at the High School on Monday, June 6th, at 10 a. m.

The First General Meeting will take place at Young's Pier on Tuesday, June 7th, at 10 a. m.

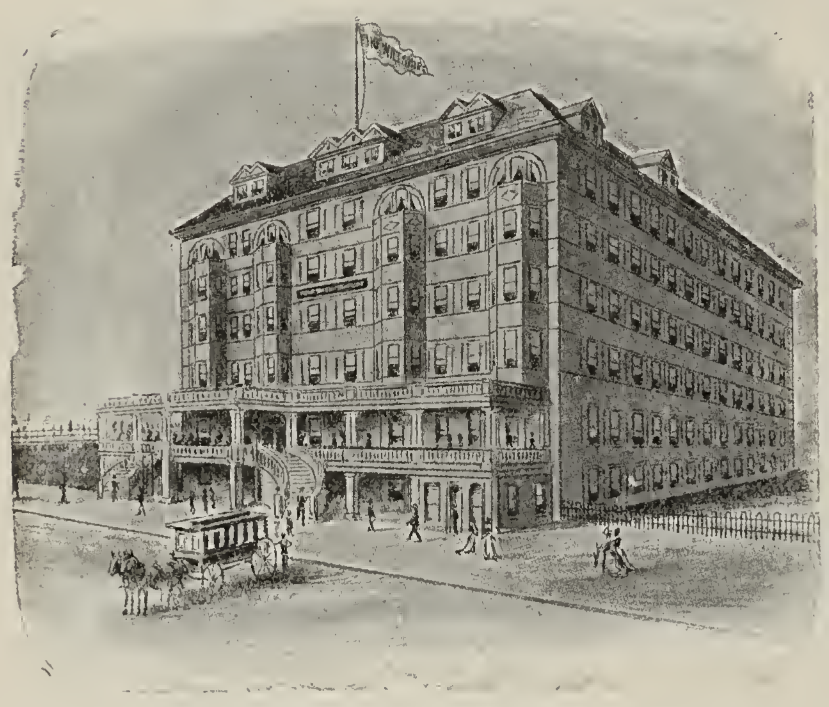
SOME OF THE MEETING PLACES.

Hotel Shelburne.
High School.
Brighton Casino.

Islesworth Hotel.
Garden Hotel.
Young's Hotel.

The Committee on Legislation, Dr. C. A. L. Reed, of Cincinnati, chairman, will convene on Wednesday, June 8th, at 2.30 p. m., in the High School.

Clinics and Demonstrations at Philadelphia for members of the association attending the Atlantic City meeting, have been arranged to take place at University Hospital, Thirty-sixth and Spruce Streets; Jefferson Medical College, Tenth and Walnut Streets; the Medico-Chirurgical Hospital, Cherry Street, between Seventeenth and Eighteenth Streets; the Polyclinic Hospital, Lombard Street, above Eighteenth Street; the Philadelphia Hospital, Thirty-fourth and Pine Streets; the German Hospital (Surgical), Girard and Corinthian Avenues, and the Pennsylvania Hospital (Surgical), Eighth and Spruce Streets, prior to the Atlantic City meeting, from May 31st to June 6th, and subsequently to it from June 10th to June 14th. A buffet lunch will be served daily in the dining hall of the University Hospital. Dr. John B. Roberts will also entertain the members, both of the association and of the Academy of Medicine, on Friday, June 3rd, at 2 p. m., at 313 South Seventeenth Street. The details of the Philadelphia clinics will be found according to date of occurrence, preceding and following the programme of the Association, on pages 1007 and 1014.



The Wiltshire Hotel.
Headquarters of the *New York Medical Journal and Philadelphia Medical Journal.*

THE MEETING PLACES

of the association are as follows:
(See Map and List, page 1000, for location.)

General Headquarters of the association, Marlborough House.
Registration Bureau
General Sessions } Young's Pier.
Scientific Exhibit
Drug and Instrument Exhibit
House of Delegates
Committee on Medical Legislation } High School.

SECTIONS.

Section, Meeting Place, and Headquarters.

Practice of Medicine—Chairman, Alexander Lambert, New York; Secretary, J. L. Miller, Chicago. Young's Pier. Traymore Hotel.

Diseases of Children—Chairman, Charles G. Kerley, New York; Secretary, C. F. Wahrer, Ft. Madison, Ia. Young's Pier. Hotel Dennis.

Surgery and Anatomy—Chairman, Charles A. Powers, Denver; Secretary, E. Wyllys Andrews, Chicago. Steel Pier. Haddon Hall and Islesworth.

Ophthalmology—Chairman, Robert L. Randolph, Baltimore; Secretary, Albert E. Bulson, Jr., Ft. Wayne, Ind. Steel Pier. Seaside Hotel.

Obstetrics and Diseases of Women—Chairman, L. H. Dunning, Indianapolis; Secretary, C. L. Bonifield, Cincinnati. Steel Pier. St. Charles Hotel.

Laryngology and Otology—Chairman, J. F. Barnhill, Indianapolis; Secretary, Otto T. Freer, Chicago. Steel Pier. Hotel Strand.

Hygiene and Sanitary Science—Chairman, G. T. Swarts, Providence, R. I.; Secretary, J. S. Fulton, Baltimore. Garden Hotel. Garden Hotel.

Stomatology—Chairman, G. F. Eames, Boston; Secretary, Eugene G. Talbot, Chicago. Islesworth Hotel. Islesworth Hotel.

Nervous and Mental Diseases—Chairman, F. Savary Pearce, Philadelphia; Secretary, David J. Wolstein, Cincinnati. Brighton Casino. Hotel Brighton.

Cutaneous Medicine and Surgery—Chairman, H. G. Anthony; Secretary, R. R. Campbell, Chicago. Shelburne Hotel. Shelburne Hotel.

Materia Medica, Pharmacy and Therapeutics—Chairman, O. T. Osborne, New Haven, Conn.; Secretary, C. S. N. Hallberg, Chicago. Young's Hotel. Young's Hotel.

Pathology and Physiology—Chairman, Joseph McFarland, Philadelphia; Secretary, Henry A Christian, Boston. Green's Hotel. Hotel Windsor.

THE EVENING MEETINGS.

The evening meetings, to be held on Young's Pier, which is capable of accommodating a large concourse, will, it is announced, this year contain other features besides the orations. The following is the programme:

Tuesday, June 7th.—Oration in Medicine: The Importance of Pathologic Anatomy in Clinical Medicine, by Dr. George Dock, of Ann Arbor, Mich. Followed by a Symposium on Research Work at (*a*) the Carnegie Institute, by Dr. J. S. Billings, of New York; (*b*) the Rockefeller Institute, by Dr. L. Emmett Holt, of New York; (*c*) the Memorial Institute for Infectious Diseases, by Dr. Frank Billings, of Chicago; (*d*) Harvard Institute, by Dr. Harold C. Ernst, of Boston; (*e*) the William Pepper Laboratory, by Dr. Alfred Stengel, of Philadelphia.

Wednesday, June 8th.—Oration in Surgery: The Association of Surgical Diseases in the Upper Abdomen, by Dr. W. J. Mayo, of Rochester, Minn. Followed by a Symposium on The Mutual Relations and Duties of the Government Medical Services and the Medical Profession, by Surgeon-Major W. C. Borden, United States Army; Surgeon C. F. Stokes, United States Navy, and Surgeon-General Walter Wyman, United States Public Health and Marine Hospital Service.

Thursday, June 9th.—Oration in State Medicine: Preventive Medicine; its Achievements, Scope, and Possibilities, by Dr. Herman M. Biggs, of New York. Followed by a Symposium on the Government Scientific Bureaus: (*a*) The Bureau of Animal Industry; its Service to Medical Science, by Dr. William H. Welch, of Baltimore; (*b*) The Service of the Medical Profession to the Bureau of Animal Industry, by Dr. D. E. Salmon, of Washington, D. C.; (*c*) The Bureau of Chemistry and Medical Science, by Dr. H. W. Wiley, of Washington, D. C.

THE EXHIBITIONS.

The Scientific Exhibit.—The scientific exhibit, a feature of the association's meeting inaugurated four years ago at the previous meeting in Atlantic City, bids fair to be of great interest this year. Demonstrations are to be given on Wednesday, Thursday, and Friday afternoons, June 8th, 9th, and 10th, by Dr. Henry Christian, Dr. W. T. Councilman, Dr. W. M. L. Coplin, Dr. M. J. Rosenau, Dr. Alfred Stengel, Dr. William H. Welch, Dr. Harvey W. Wiley, and others. The subjects of the demonstrations will be: Recent work at Harvard on Aleppo boil, diphtheria, scarlatina, typhoid, variola, vaccinia, with lantern demonstrations; tuberculosis in all its phases, human and animal; arteriosclerosis and allied organic lesions; heart-lesions; yellow fever; adulterated food products; new physiological apparatus, etc. All exhibits should be addressed to Dr. Frank B. Wynn, Director of the Scientific Exhibit, Young's Pier, and should be in Atlantic City by Saturday, June 4th.

The Commercial Exhibit.—Dr. A. D. Cuskaden, of Atlantic City, is chairman of this division. Up to May 15th space had been engaged for exhibits by the following exhibitors:

Allison Co., Indianapolis; American Ferment Co., Jersey City; American Peroxide Co., New York; American Vibrator Instrument Co., Chattanooga, Tenn.; Ammonol Co., New York; D. Appleton & Co., New York; Armour & Co., Chicago; Ballardvale Lithia Water Co., Ballardvale, Mass.; Battle Creek Sanitarium Co., Battle Creek, Mich.; Bernstein Manufacturing Co., Philadelphia; F. S. Betz & Co., Chicago; James G. Biddle, Philadelphia; Biogen Co., New York; Bioplasm Co., New York; P. Blakiston's Son & Co., Philadelphia; Bovinine Co., New York; Churchill Chemical Co.; Clark & Roberts, Chicago; F. A. Davis Co., Philadelphia; Denver Chemical Co., New York; De Zeng Optical Co., Philadelphia; Diemel Linen Mesh Co., New York; Electro-Surgical Instrument Co., Chicago; Fairchild Bros. & Foster, New York; Fitchmul Co., Concord, N. H.; E. Fougera & Co., New York; Fritzsche Bros., New York; Gleason Grape Juice Co., Ripley, N. Y.; Globe Manufacturing Co., Battle Creek, Mich.; Horlick's Food Co., Racine, Wis.; Imperial Granum Co., New York; Keasbey & Mattison Co., New York; W. T. Keener & Co., Chicago; Keystone Electric Co., Philadelphia; Kress & Owens, New York; Lea Brothers & Co., Philadelphia; Charles Lentz & Sons, Philadelphia; J. P. Lippincott Co., Philadelphia; Londonderry Lithia Water Co., Nashua, N. H.; Malt Diastase Co., Brooklyn; Maltine Co., Brooklyn; McKesson & Robbins, New York; Meinecke & Co., New York; Mellin's Food Co., Boston; O. Nelson & Co., Chicago; Norwich Pharmacal Co., Norwich, N. Y.; Oakland Chemical Co., New York; Philadelphia Casualty Co., Philadelphia; Rebman & Co., New York and London; Rochester Surgical Co., Rochester, N. Y.; W. B. Saunders & Co., Phliadelphia; Schieffelin & Co., New York; Smith, Kline, & French Co., Philadelphia; A. H. Thomas Co.; Trommer Co., Trommer, Ohio; R. V. Wagner & Co., Chicago; Wall & Ochs, Philadelphia; H. K. Wampole & Co., Philadelphia; W. R. Warner & Co., Philadelphia.

THE LOCAL COMMITTEES.

Committee of Arrangements: Chairman, Dr. B. C. Pennington; treasurer, Dr. J. A. Joy; registrar, Dr. E. A. Reilly; secretary, Dr. Philip Marvel.

The chairmen of special subcommittees are as follows: Finance, Dr. W. Blair Stewart. Halls and Meeting Places, Dr. Walter Reynolds. Registration, Dr. E. A. Reilly. Exhibits, Dr. A. D. Cuskaden. Entertainments, Dr. Theo. Senseman. Bureau of Information, Dr. E. C. Chew. Banquets, Dr. Emery Marvel. Printing, Dr. Edward Guion. Hotels, Dr. W. E. Darnall. Badges, etc., Dr. Joseph F. de Silver. New Membership, Dr. W. P. Conway. Transportation, Dr. J. M. Marshall.

ENTERTAINMENTS.

Even if no measures were taken by the association for the provision of special entertainment, Atlantic City is itself such a veritable source of enjoyment, that the attendants and their families would find themselves well provided with amusements. The local committee on entertainment, however, is planning various amusements, such as are customary at the meetings of the association, and special efforts are being made to provide adequate entertainment for the visiting ladies, during the absence of their escorts in attendance on the scientific sessions. Among other things, a boating party at the Atlantic City Yacht Club has been decided on for their entertainment by the committee of ladies who have taken their entertainment in special charge.

SUBSIDIARY MEETINGS.

The following is a list of the meetings of various independent medical societies, arranged to take place in Atlantic City during the meeting of the American Medical Association. When practicable, the programmes and places of meeting are given.

American Academy of Medicine, June 4th, 5th, and 6th.
Medical Society of New Jersey, June 4th, 5th, 6th, and 7th.
National Confederation of State Medical Examiners and Licensing Boards, June 6th. Young's Hotel.
American Gastroenterological Association, June 6th. Haddon Hall.
Association of American Medical Colleges, June 7th. Islesworth Hotel.
American Orthopædic Association, June 7th, 8th, and 9th. Rudolf Hotel.
American Urological Association, June 10th and 11th. Windsor Hotel. For programme, see page 990.
American Laryngological Association, June 6th.
American Proctological Society, June 8th and 9th.
American Ophthalmological Society, June 13th.
American Medical Editors' Association, June 6th.
American Association Life Insurance Examining Surgeons, June 6th.
National Association for the Study and Prevention of Tuberculosis, June 6th. Public School Building. See page 991.
National Association of United States Pensions Examining Surgeons, June 6th and 7th.
American Medical Temperance Association, June 8th and 9th. Hotel Dennis. See page 988.

PHILADELPHIA CLINICS AND DEMONSTRATIONS.

Preceding the Meeting of the American Medical Association.

Monday, May 30th.

Polyclinic Hospital, Lombard Street, above Eighteenth Street.—10 a. m., McKee: Pædiatric clinic. 10 a. m., Stewart: Surgical clinic. 11 a. m., Vansant: Nose and throat clinic. 12 m, Goepp: Medical clinic. 12 m., Schamberg: Dermatology. 1 p. m., Packard: Ear clinic. 2 p. m., Watson: Nose and throat clinic. 2 p. m., Ashton: Medical clinic. 5 p. m., Christian: Genitourinary clinic. 5 p. m., Roberts: Surgical clinic.

Tuesday, May 31st.

Jefferson Medical College, Tenth and Walnut Streets.—*Hospital Amphitheatre.* 9.30 to 10.30 a. m., Brick, J. Coles: Rectal clinic. 11 a. m. to 12.30 m., Roe, W. J.: Oral clinic. 2.30 to 4 p. m., Stewart, Francis T.: Surgical clinic.

Polyclinic Hospital.—10 a. m., Hamill: Pædiatric clinic. Baldy: Gynæcological clinic. 11 a. m., Steinbach: Surgical clinic. Gibb: Nose and throat clinic. 12 m., Eshner: Medical clinic. Schamberg: Dermatology. 1 p. m., Stout: Ear clinic. 2 p. m., Baer: Gynæcological clinic. Young: Orthopædic clinic. Freeman: Nose and throat clinic. Sailer: Diseases of the stomach. Makuen: Defects of speech. 5 p. m., Slocum: Gynæcological clinic. Riesman: Medical clinic.

Wednesday, June 1st.

Jefferson Medical College.—*Hospital Amphitheatre.* 10 to 11 a. m., Jones, W. S.: Laryngological clinic. 1 to 3 p. m., Montgomery, E. E: Gynæcological clinic. *College Building.* 11 a. m. to 1 p. m., Bland, P. Brooke: Pathology of certain pelvic organs, with lantern demonstrations. *College Lecture Room.* Coplin, W. M. L.: Insects and lower animals as carriers of contagion.

Polyclinic Hospital.—10 a. m., McKee: Pædiatric clinic. Baldy: Gynæcological clinic. 11 a. m., Vansant: Nose and throat clinic. 12 m., Goepp: Medical clinic. Schamberg: Dermatology. 1 p. m., Packard: Ear clinic. 2 p. m., Watson: Nose and throat clinic. Ashton: Medical clinic. 3 p. m., Spiller: Neurology. 4 p. m., Christian: Genitourinary clinic.

German Hospital, Girard and Corinthian Avenues.—1 to 5 p. m., Deaver: Surgical clinic.

Thursday, June 2nd.

Jefferson Medical College.—*College Building.* 9.30 to 11 a. m., Ellis and Radasch: Demonstrations in the Pathological and Histological Laboratories. *Hospital Amphitheatre.* 11 a. m. to 12 m., Da Costa, Jr., J. C.: Recent advances in diagnosis by examination of the blood. 12 to 1 p. m., Cohen, S. S.: Clinical lecture, illustrating recent advances in medical diagnosis. 2 to 3.30 p. m., Horwitz, Orville: Genitourinary clinic. *Maternity Building,* 224 South Seventh Street. 4 p. m., Davis, Edward P.: Modern Obstetrical surgery.

Medico-Chirurgical Hospital, Cherry Street, between Seventeenth and Eighteenth Streets.—11 a. m., to 12 m., Mann, James P.: Orthopædic clinic. 12 m. to 1 p. m., Christian, H. M.: Genitourinary clinic. 3 p. m. to 4 p. m., Gleason, Edward B.: Otological clinic.

Polyclinic Hospital.—10 a. m., Hamill: Pædiatrics. 11 a. m., Adler: Rectal diseases. Gibb: Nose and throat. 12 m., Eshner: Medical clinic. Schamberg: Dermatology. 1 p. m., Stout: Ear clinic. 2 p. m., Young: Orthopædic clinic. Sailer: Diseases of the stomach. Freeman: Nose and throat. Makuen: Defects of speech. 3 p. m., Spiller: Neurology. 5 p. m., Riesman: Medical clinic.

German Hospital.—1 to 5 p. m., Deaver: Surgical clinic.

Friday, June 3rd.

University of Pennsylvania Hospital, Thirty-sixth and Spruce Streets.—*Medical Amphitheatre.* 11 a. m., Edsall: Demonstrations of the methods employed in the analysis of the gastric contents. 12 m., Steele: Diagnosis and treatment of diseases of the stomach. 1 p. m., Fussell: Exhibition of cases of heart disease, with special reference to myocarditis. 3 p. m., Randall: Stereopticon demonstration of the clinical anatomy of the tympanic cavity.

Jefferson Medical College.—*College Building.* 9 to 10.30 a. m., Rosenberger: Bacteriological laboratory demonstrations. 11.30 a. m. to 1 p. m., Brubaker, A. P.: Demonstrations in physiological laboratory. 3 to 4 p. m., Graham, E. E.: Typhoid fever in infancy and early childhood. *Hospital Amphitheatre.* 10.30 to 11.30 a. m., Kyle, D. Braden: Laryngological clinic. 1 to 2.30 p. m., Spencer, George W.: Surgical clinic. 4 p. m., Hansell, Howard F.: Ophthalmological clinic.

Medico-Chirurgical Hospital.—10 a. m. to 11 a. m., Rodman, William L.: Surgical clinic. 11 a. m. to 12 m., Shoemaker, John V.: Dermatological clinic. 12 m. to 1 p. m., Anders, James M.: Medical clinic. 3 p. m. to 4 p. m., Mann, James P.: Orthopædic clinic.

Polyclinic Hospital.—10 a. m., McKee: Pædiatrics. Stewart: Surgical clinic. 11 a. m., Vansant: Nose and throat. 12 m., Goepp: Medical clinic. Schamberg: Dermatology. 1 p. m., Packard: Ear clinic. 2 p. m., Baer: Gynæcological clinic. Watson: Nose and throat clinic. Ashton: Medical clinic. 3 p. m., Spiller: Neurology. 4 p. m., Christian: Genitourinary. 5 p. m., Slocum: Gynæcological clinic.

Saturday, June 4th.

University of Pennsylvania Hospital.—*Medical Hall.* 10 a. m. to 12 m., Smith, A. J.: Demonstration of Autopsy Technics and of Pathological Specimens. *Medical Amphitheatre.* 12 m., Tyson: Medical clinic. *Gynæcological Amphitheatre, University Hospital.* 1 p. m., Anspach: Demonstration of a series of natural color preparations, illustrating the value of routine histological examination of gynæcolgical specimens. 3 p. m., Clark: Gynæcological clinic.

Jefferson Medical College.—*College Building.* 9 to 10 a. m., Brubaker, A. P.: Demonstrations in the Physiological Laboratory. *Hospital Amphitheatre.* 10 a. m. to 12 m., Da Costa, J. C., Gynæcological clinic. 1.30 to 3.30 p. m., Hearn, W. Joseph: Surgical clinic. *Maternity Building,* 224 South Seventh Street. 4 p. m., David, Edward P.: The preventive treatment of eclampsia.

Medico-Chirurgical Hospital.—10 a. m. to 11 a. m., Ashton, W. Easterly: Gynæcological clinic. 11 a. m. to 12 m., La Place, Ernest: Surgical clinic. 12 m. to 1 p. m., Boyd, George M.: Obstetrical clinic. 3 p. m. to 4 p. m., Rodman, William L.: Surgical clinic

Polyclinic Hospital.—10 a. m., Hamill: Pædiatrics. 11 a. m., Steinbach: Surgical clinic. Gibb: Nose and throat. 12 m., Eshner: Medical clinic. Schamberg: Dermatology. 1 p. m., Stout: Ear clinic. 2 p. m., Freeman: Nose and throat. Sailer: Diseases of the stomach. Young: Orthopædic clinic. Makuen: Defects of speech. 3 p. m., Spiller: Neurology. 5 p. m., Riesman: Medical clinic.

Philadelphia Hospital, Thirty-fourth and Pine Streets.—9 a. m., Haehnlen. 10 a. m., Allyn. Lectures.

Pennsylvania Hospital.—11 a. m., Harte: Surgical clinic.

German Hospital.—1 to 5 p. m., Deaver: Surgical clinic.

Monday, June 6th.

University of Pennsylvania Hospital.—*University Hospital.* 10 a. m., Muller: Pathology of the pancreas. *Medical Amphitheatre.* 11 a. m., Edsall: Diagnosis and treatment of diseases of liver. 1 p. m., Mills: Some of the newer aspects and methods of cerebral localization. *Orthopædic Amphitheatre.* 12 m., Young: The surgery of paralyses. *Surgical Amphitheatre.* 3 p. m., Spiller: Tumors of the brain. 4 p. m., Frazier: Surgery of brain tumors.

Note: Subject of lectures by Dr. Mills, Dr. Spiller, and Dr. Frazier will be Brain Tumors. Each lecturer will discuss or demonstrate a different phase of the subject, so that there will be no repetition.

Jefferson Medical College.—*Hospital Amphitheatre.* 9.30 a. m. to 12 m., Wilson, H. A., and Professor Hoffa, of Berlin: Orthopædic clinic. 1 to 3.30 p. m., Keen, W. W.: Surgical clinic. 4 p. m., Fisher, John M.: Gynæcological clinic.

Philadelphia Hospital, Thirty-fourth and Spruce Streets.—4 p. m., Hansell, Howard F.: Ophthalmological clinic.

Medico-Chirurgical Hospital.—10 a. m. to 11 a. m., Pearce, F. Savary: Neurological clinic. 11 a. m. to 12 m., Haehnlen, W. Frank: Obstetrical clinic. 12 m. to 1 p. m., Fox, L. Webster: Ophthalmological clinic. 3 to 4 p. m., Daland, Judson: Medical clinic.

Philadelphia Hospital.—10 a. m., Stengel, A. 11 a. m., Cryer, M. H. 4 p. m., Hansell, H. F. Lectures.

Pennsylvania Hospital.—11 a. m., Harte: Surgical clinic.

THE PROGRAMME OF THE AMERICAN MEDICAL ASSOCIATION, JUNE 7TH, 8TH, 9TH, AND 10TH.

We give herewith an index abstract of the papers to be read at the Atlantic City meeting, arranged in sections. Following this is an index of the readers of papers, with numerical references to their papers in the respective sections.

PRACTICE OF MEDICINE.

1. Anæmia, Pernicious, Relation of to Gastric Digestion. C. G. Stockton.
2. Aneurysm of Innominate Aorta. A. P. Francine.
3. Appendicitis; From Physician's Standpoint. Bonney.—Relation of Influenza as a Causative Factor to. P. Marvel.
4. Arteriosclerosis, Symposium on. W. H. Welch, W. S. Thayer, C. Travis Drennen, G. Dock, Frank Billings, R. Cabot, W. Osler, James Anders.
5. Arthritis Deformans, Symposium on. Thomas McCrae, J. J. Walsh, Clarence E. Skinner.
6. Cabinet, Pneumatic, in Treatment of Heart Disease. C. E. Quimby.
7. Convulsions, Uræmic and Eclamptic. R. N. Willson.
8. Delirium, Prolonged, in Pericarditis and Endocarditis. E. M. Green.
9. Diabetic Glycosuria, Pancreatic Extracts in. A. C. Croftan.
10. Digitalis, Limitations of in Heart Disease. F. Jones.
11. Dysentery, Amœbic. James P. Tuttle.
12. Ergot in General Practice. Alfred T. Livingston.
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PHILADELPHIA CLINICS AND DEMONSTRATIONS.

Following the Meeting of the American Medical Association.

Friday, June 10th.

University of Pennsylvania Hospital.—4 p. m. Opening Exercises of the New Medical Laboratories.

Saturday, June 11th.

University of Pennsylvania Hospital.—*Orthopædic Amphitheatre.* 9 to 11 a. m., Allis: Congenital dislocation of the hip. A demonstration on the cadaver, in which both hips will be dislocated simultaneously by force simulating routine contractions, with brief remarks on the ætiology, diagnosis, and treatment. 11 a. m., Willard: Treatment of congenital dislocation of the hip.

Jefferson Medical College.—*Hospital Amphitheatre.* 9 to 10 a. m., Fisher, John M. 10 to 11 a. m., Montgomery, E. E. 11 a. m. to 12 m., Da Costa, J. C. Gynæcological clinics.

Medico-Chirurgical Hospital.—9 to 10 a. m., Pearce, F. Savary: Neurological clinic. 10 to 11 a. m., Ashton, W. Easterly: Gynæcological clinic. 11 a. m. to 12 m., Anders, James M.: Medical clinic.

Philadelphia Hospital.—9 a. m., Peck, E. L. 10 a. m., Riesman, David. 11 a. m., Martin, Edward. Lectures.

Pennsylvania Hospital.—11 a. m., Harte: Surgical clinic.

Monday, June 13th.

University of Pennsylvania Hospital.—*University Hospital.* 10 a. m., Evans: Serum diagnosis of typhoid and other infectious fevers. The precipitins and their medicolegal value. 11 a. m., Sailer: Application of the Röntgen ray in the diagnosis of thoracic diseases. 4 p. m., Shumway: Lantern demonstration on the embryology of the eye. *Clinical Amphitheatre.* 12 m., Stengel: Practical demonstrations of methods used in the diagnosis and treatment of valvular heart disease and arteriosclerosis. *Maternity Amphitheatre.* 1 p. m., Hirst: Plastic and abdominal surgery for complications and consequences of childbirth. *Gynæcological Amphitheatre.* 3 p. m., De Schweinitz: Ophthalmological clinic, with special reference to ocular traumatisms.

Jefferson Medical College.—*College Building.* 9 to 10 a. m., Ellis and Radasch: Demonstration in the Pathological and Histological Laboratories. 1 to 2 p. m., Stelwagon, Henry W.: Dermatological clinic. *Hospital Amphitheatre.* 10 to 11.30 a. m., Rugh, J. T.: Treatment of ankylosed joints. 12 to 1 p. m., Dercum, F. X.: Neurological clinic. 3 to 4 p. m., Metheny, S. A. S.: X ray demonstrations. 4.30 to 5.30 p. m., Roe, W. J: Oral clinic

Medico-Chirurgical Hospital.—10 to 11 a. m., Shoemaker, John V.: Applied therapeutics clinic. 11 a. m. to 12 m., Haehnlen, W. Frank: Obstetrical clinic. 12 m. to 1 p. m., Cleveland, Arthur H.: Laryngological clinic. 3 to 4 p. m., Daland, Judson: Medical clinic.

Philadelphia Hospital.—10 a. m., Spiller, William G. 11 a. m., Marshall, G. M. 3 p. m., Potts, C. S. 4 p. m.. Hansell, H. F. Lectures.

Tuesday, June 14th.

University of Pennsylvania Hospital.—*Medical Amphitheatre.* 10 a. m., Stanton: Demonstration and application of the methods of determining blood pressure. 11 a. m., Griffith: Pædiatric clinic. *Surgical Amphitheatre.* 12 m., Musser: Medical clinic. 1 p. m., Martin: Surgical clinic. 4 p. m., Pancoast: The relative results obtained with the Röntgen ray and radium in the treatment of carcinoma and other lesions. *Medical Hall.* 3 p. m., Piersol: Demonstrations of monstrosities.

Jefferson Medical College.—*College Building.* 9 to 11 a. m., Brubaker, A. P.: Demonstrations in the Physiological Laboratory. *Hospital Amphitheatre.* 11 a. m. to 12 m., Cohen, S. S.: Medical clinic. 12 to 1 p. m., Brick, J. Coles: Rectal clinic. 2 to 3 p. m., Spencer, George W.: Surgical clinic. 3 to 4 p. m., Stewart, Francis T.: Surgical clinic.

Philadelphia Hospital, Thirty-fourth and Spruce Streets.—4 to 6 p. m., Hansell, Howard F.: Demonstrations in the changes of the fundus of the eye in Bright's disease.

Medico-Chirurgical Hospital.—10 to 11 a. m., Hollopeter, W. C.: Pædiatric clinic. 11 a. m. to 12 m., La Place, Ernest: Surgical clinic. 12 to 1 p. m., Fox, L. Webster: Ophthalmological clinic. 3 to 4 p. m., Boyd, George M.: Obstetrical clinic.

German Hospital.—1 to 5 p. m., Deaver: Surgical clinic.

DEDICATION OF THE RUSH MONUMENT,

AT WASHINGTON, D. C.

The Rush monument is to be dedicated on Friday afternoon, June 10th. Special trains will probably be run from Atlantic City to Washington for the occasion.

The monument consists of a full length bronze figure of Dr. Benjamin Rush, posed on a limestone pedestal, with granite steps. The height of the figure is seven feet six inches. The inscriptions are as follows: Front panel: "Benjamin Rush, 1745-1813. Physician and Philanthropist." Right panel: "The First American Alienist." Left panel: "Signer of the Declaration of Independence." Rear panel: "Studium sine calamo somnium."

The monument is erected in the park opposite the United States Naval Museum of Hygiene and Medical School. Mr. Lewis Metcalfe, of New York, is the architect, Mr. R. Hinton Perry the sculptor, and the Henry-Bonnard Bronze Company the founders.

The committee consists of Dr. J. C. Wilson, of Philadelphia; Dr. H. D. Holton, of Brattleboro, Vt.; Dr. Frank Billings, of Chicago; Dr. L. Duncan Bulkley, of New York; and Dr. W. L. Rodman, of Philadelphia. Dr. J. C. Wilson will deliver the dedicatory oration.

Book Notices.

Die progressive Myoklonus-Epilepsie (Unverricht's Myoklonie). von Dr. HERMAN LUNDBORG, Privatdozent der Psychiatrie und Neurologie in Upsala. Herausgegeben mit Unterstützung aus Wilhelm Ekman's Universitätsfonds. Upsala: Almovist & Wiksell. Pp. 207.

During the past few years considerable attention has been given by neurologists to the consideration of the various forms of myoclonus and to their ætiology and pathology; therefore, the very thorough study of this type of disease by Lundborg comes at an opportune time. The incentive to this study arose in the discovery of a family in which various members had suffered from myoclonia for several generations. In fact, Lundborg was able to construct a family tree which covered the years between 1720 and 1884, comprising ten families, all derived from a common trunk, and among the members of which were eighteen who suffered from Unverricht's myoclonia.

Lundborg adopts the name myoclonus-epilepsy proposed by Clark and Prout, but suggests its modification by the addition of the word "progressive." He divides the myoclonias into three classes: 1. Myoclonia symptomatica; cases in which the myoclonus occurs as a symptom complicating a number of nervous and mental diseases; 2. myoclonia simplex, or essentialis, or multiplex. This is the paramyoclonus multiplex of Friedreich. 3. Myoklonus-epilepsia (myoclonia epileptica). This includes two forms: *(a)* The progressive (cyclic) form: Unverricht's family type; *(b)* the intermittent (sporadic) form; Rabot's type. He considers Henoch's chorea electrica, Dubini's chorea, Morran's chorea fibrillaris, and Schultze's myokymia as related forms.

He divides the course of the disease itself into three stages. First, the epileptic-tetanylike stage, which lasts only a brief period or for a few years, and is characterized by epileptic seizures mostly nocturnal, in which the tonic stage comes to predominate. The disease is generally regarded as epilepsy during this period. Secondly, there develops the myoclonus epileptoid stage, which as a rule lasts many years, although occasionally the case passes through this period very rapidly. The symptoms now become more pronounced in the daytime and consist of tremor, fibrillary twitchings, and myoclonic spasms. These latter appear first in the upper extremities and later in the lower. It is characteristic of this stage that the intensity of the spasms varies from day to day, beginning gradually and culminating in a day, when there are epileptic seizures. After this there is a remission of days or weeks; hence it is called a cyclic, or circular, type. Various external stimuli may bring on the myoclonic spasms. On the quiet days the patient sweats profusely and excretes an abundance of saliva. Psychical disturbances, such as loss of intellectual power, depressive states and stupor, and even loss of consciousness, accompanied with delirium and agitation, are developed gradually in this stage.

Thirdly, there is the terminal stage, which is characterized by gradually increasing exhaustion and cachexia. Myoclonic spasms are increased in their severity and duration and the epileptic attacks become less frequent. The case loses its cyclic character, since the periods of remission become shorter and finally disappear.

During this stage the patients show a similarity to cases of paralysis agitans in the gradual development of muscle rigidity, so that their bodies become fixed in a position of flexion. They also perspire and secrete saliva freely at this time. Their mental state is a somnolent, half stuporous one, and finally they become demented. Death comes from exhaustion or complications.

As to the ætiology, Lundborg finds that the disease is slightly more frequent among women than among men, that it begins generally in childhood before puberty, and that the epileptoid attacks are the first evidence of the disease, followed within a year or a few years by the myoclonus. Heredity plays a leading rôle in its causation, and generally a number of members in one family are affected, though direct inheritance from one generation to another is exceptional. The families in which myoclonia develops generally give evidence of a susceptible nervous system in the prevalence of other nervous and mental affections.

Regarding the pathology of the disease, next to nothing has been found. The autopsies have not been many, nor has the material been satisfactorily studied. Clark and Prout found certain changes in the cortical cells of their case which corresponded to what they consider to be characteristic of epilepsy. But it is very doubtful whether their findings are to be regarded as of much significance in that condition. Lundborg thinks that some form of self-intoxication will be found to be the underlying element in causing the disease.

The monograph contains a very exhaustive bibliography, and every feature of the disease is illustrated by citations of cases from the literature. In fact, one of the commendable features of the work is the broadmindedness shown by Lundborg in referring to cases reported in all languages. For one interested in this perplexing condition Lundborg's monograph will furnish the best exposition there is of the subject. It is a piece of work of which the author may well feel proud.

Anatomy Applied to Medicine and Surgery. By D. E. MUNDELL, B. A., M. D., Professor of Applied Anatomy, Faculty of Medicine, Queen's University, etc. Kingston: Printed at the *British Whig*, 1903. Pp. 499.

This book is intended to assist the student in the practical application of the knowledge acquired in the dissecting room. It is divided into forty-seven chapters, in which the various parts of the body, such as the region of the clavicle, the thorax, the stomach, the thigh, the orbit, etc., are discussed under separate headings. After a brief *résumé* of the anatomy pertaining to each section, landmarks, functions, and deformities, the more important diseases, surgical and medical, and in some instances, treatment are taken up. The author has attempted to free the student from the maze in which he frequently finds himself, and no doubt this little work will help explain and make more interesting much that must of necessity be otherwise meaningless and dull to him.

The book is well written, is very concise, and contains a few explanatory diagrams. We feel certain that it will prove to be of distinct value to the student of anatomy.

Lectures, Chiefly Clinical and Practical on Diseases of the Lungs and Heart. By JAMES ALEXANDER LINDSAY, M. A., M. D., F. R. C. P. (Lond.), Professor of Medicine, Queen's College, Belfast; Physician to the Royal Victoria Hospital, Belfast, etc. New York: William Wood & Company, 1904. Pp. 447. (Price, $3.50 net.)

This book represents the field of pulmonary and cardiac diseases covered by the author's lectures to students at Queen's College and Royal Victoria Hospital in Belfast. It contains chiefly a discussion on diagnosis, prognosis, and treatment of diseases of the lungs and heart, and does not touch upon the subject of ætiology and pathology excepting as they may assist in furthering the presentation of the others.

The subjects are well presented, important topics are emphasized, and clinical methods are insisted upon. The book will prove to be of more value to students than to practitioners.

A Manual of Clinical Diagnosis. By Means of Microscopical and Chemical Methods for Students, Hospital Physicians, and Practitioners. By CHARLES E. SIMON, M. D., of Baltimore, Md. Fifth Edition, Thoroughly Revised and Enlarged. Illustrated with 150 Engravings and 22 Plates in Colors. Lea Brothers & Co., Philadelphia and New York, 1904. Pp. 695. (Price, Cloth, $4.00 net.)

Five editions in eight years indicates the demand for this great manual on clinical diagnosis. The author has kept abreast of all the newer exact methods used in the clinical laboratory and has embodied them in what still remains the best book in the English language on aids to clinical diagnosis.

This edition contains much that is new in clinical hæmatology; in fact, the chapter on the blood is almost entirely rewritten. One of the valuable features of technics in blood work is the clear demonstration in this chapter on the nature of aniline dyes and the principles underlying their use in staining blood cells. The book shows careful revision throughout.

Lessons on Massage. By MARGARET D. PALMER, Masseuse and Manager of the Massage Department of the London Hospital, Instructor of Massage to the Nursing Staff of the London Hospital. Second Edition. New York: William Wood & Co., 1904. Pp. xvi-261.

In this edition there will be found a few alterations and additions, also new chapters upon the Nauheim treatment and upon bandaging. The subject matter is gone over very concisely, yet thoroughly, and numerous illustrations help greatly to render the understanding of the text easy.

The book is rather elementary, but of distinct value to any beginner in this subject.

PUBLISHERS' ANNOUNCEMENTS.

D. Appleton & Co., New York:

Adolescence, Its Psychology, and Its Relation to Physiology, Anthropology, Sociology, Sex, Crime, Religion, and Education. By G. Stanley Hall, President of Clark University. Two volumes, octavo. Cloth, boxed, $7.50 net. Postage, 42 cents additional.

W. B. Saunders & Co., Philadelphia:

The Practical Applications of the Röntgen Rays in Therapeutics and Diagnosis. By William Allen Pusey, A. M., M. D., of the University of Illinois; and Eugene W. Caldwell, B. S., of the Edward N. Gibbs Memorial X Ray Laboratory of the University and Bellevue Hospital Medical College, New York city. Second edition, revised and enlarged. Octavo volume of about 625 pages, with nearly 200 illustrations, some in colors.

A Text Book of Mechanotherapy (Massage and Medical Gymnastics). By Axel V. Grafstrom, B. Sc., M. D., late of City Hospital, Blackwell's Island, N. Y. Second edition, greatly enlarged and entirely reset. 12mo of 200 pages, fully illustrated.

Materia Medica for Nurses. By Emily A. M. Stoney, Superintendent of the Training Schoool for Nurses at Carney Hospital, South Boston. Second edition, thoroughly revised and enlarged. 12mo volume of 325 pages.

Obstetrical and Gynæcological Nursing. By Edward P. Davis, A. M., M. D., of the Jefferson Medical College, Philadelphia. Second edition, revised and enlarged. 12mo of 400 pages, fully illustrated. Bound in buckram.

BOOK AND MAGAZINE NOTES.

Wayside Tales for May has another story, by Dr. Axel V. Grafstrom, entitled The Rise of Dr. Russell. The plot makes a somewhat severe strain on the reader's imagination, but the telling of the story shows marked improvement in Dr. Grafstrom's style and ability to handle his personages and events.

The Postgraduate for April contains an article on Misokainismus, by Dr. Achilles Rose, in which he quotes from the Walpurgisnacht scene in Goethe's Faust. A clever translation into English is furnished by Dr. Kenneth W. Millican, which gives a good idea of the original in matter and form, the original metre being followed.

McClure's Magazine for May contains a charming story, by Dr. Henry C. Rowland, called The Doubting of the Doctor. It is concerned with the loves of a regular practitioner and a fascinating young Christian scientist, whose father has fractured his leg and finds it advisable to appeal to the doctor's skill after a few fruitless "demonstrations" on the part of his fellow believers. The tale is told with wit and spirit.

McClure's Magazine for May also contains what is probably the best story of the clever young author, Myra Kelly, who is the daughter of Dr. Thomas Kelly, of West Fifty-seventh Street. The story, H. R. H., the Prince of Hester Street, concerns the adventures of a son of a Hebrew district politician at a public school, and its climax is deliciously unexpected and humorous.

The sales of Dr. William Lee Howard's startling scientific romance, *The Perverts*, have exhausted a second edition, and a third is going to press. Some trifling typographical errors have remained uncorrected.

Young's Magazine for May has a cleverly constructed and amusing ghost story, by Dr. R. Martin Bruns, called The Fifth Case. The handling of the apparently supernatural is extremely plausible.

One of the most important publications for 1904, if not the most important of its class, will be The Psychology of Adolescence, by G. Stanley Hall, President of the Clark University, Worcester, Mass. (D. Appleton & Co.).

This work is the result of more than twenty-five years of study and teaching. It is the first attempt in any language to bring together all the best that has been ascertained about the critical period of life, which begins with puberty in the early teens and ends with maturity in the middle twenties.

The nature of the adolescent period is the best guide to education from the upper grades of the grammar school through the high school and college. Throughout the book the statement of scientific facts is followed systematically by a consideration of their application to education, penology, and other phases of life.

The practical applications of some of the conclusions of the scientific part are found in separate chapters on the education of girls, coeducation and its relations to marriage, fecundity, and family life, as seen by statistics in American colleges, with a sketch of an ideal education for girls.

Another chapter treats with some detail and criticism the various kinds and types of organization for adolescents from plays and games to the Y. M. C. A., Epworth League, and a score of other of the leading associations devised for the young.

The problem of the high school, its chief topics and methods, is considered from the standpoint of adolescence, and some very important modifications are urged.

The collaboration of Dr. Pusey, of Chicago, and Dr. Caldwell, of New York, is to give us shortly another compendious work on the use of the Röntgen rays in medicine and surgery, and the book may undoubtedly be expected to be a valuable addition to the growing literature of the subject.

A fresh sign of the interest taken in the therapeutic use of the imponderables is to be found in the announcement of a second edition of Dr. Grafstrom's book on mechanotherapy.

The announcement that a new edition of Dr. Davis's book on obstetrical and gynæcological nursing is soon to appear, coupled with a similar announcement as to Miss Stoney's work on materia medica for nurses, gives gratifying evidence that the trained nurses of the country take pains to keep themselves informed in matters pertaining to their art.

BOOKS, PAMPHLETS, ETC., RECEIVED.

Röntgen Ray Diagnosis and Therapy. By Carl Beck, M. D., Professor of Surgery in the New York Postgraduate Medical School and Hospital; Visiting Surgeon to St. Mark's Hospital and the German Poliklinik. With 322 Illustrations in the Text. New York and London: D. Appleton & Co., 1904.

Elements of General Radiotherapy for Practitioners. By Dr. Leopold Freund, Vienna. Translated by G. H. Lancashire, M. D., Brux., M. R. C. S., Eng., L. R. C. P., Lond., Assistant Physician to the Manchester and Salford Hospital for Skin Diseases. With 107 Illustrations in the Text and One Frontispiece. New York: Rebman Company. London: Rebman, Limited, 1904.

Bulletin No. I. The Story of Smallpox in Oregon, and its Testimony to the Value of Vaccination. Published by Authority. 1903. Salem, Oregon: J. R. Whitney, State Printer, 1903.

Bulletin No. II. Oregon State Board of Health. Hints Upon School Hygiene.

Bulletin No. III. Oregon State Board of Health. The Prevention of Typhoid Fever.

Bulletin No. IV. Oregon State Board of Health. Prevention and Cure of Consumption.

New Inventions.

AN IMPROVEMENT IN THE KELLY PAD.

Dr. Howard A. Kelly, of Baltimore, described in the *New York Medical Journal* for April 28, 1888, a rubber cushion for general surgical purposes which has come into quite general use under the name of The Kelly Pad. He has also devised cushions for perineal and ovariotomy drainage and for obstetrical cases which have likewise become popular. The cushions are open to the objection that the inner recesses of the apron under the rounded rim are difficult to clean. It was sought to meet this difficulty by attaching the rubber apron at the middle of the rounded rim so that the cushion might be used with either side up, but upon trial this proved unsatisfactory, the recess being too shallow. Dr. Kelly recently devised a modification of these various cushions which appears to obviate all the objections which have been found to the other forms of cushion. In this new form of cushion, which is described by him in *The Medical News* for April 9th, the modification consists of constructing the

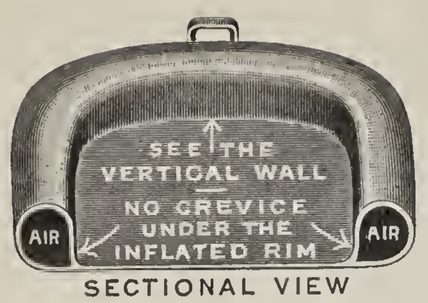


Fig. 1.

inner surface of the inflated rim in the form of a vertical wall, which joins the floor of the cushion at a right angle, as indicated by the arrows in the sectional drawing shown in Fig. 1. This modification retains all the depth of the original cushion, in fact, increases it somewhat, but makes every portion of the pad open to view, leaving no crevices or corners which are difficult to clean, and making it practically a perfect cushion. The surgical cushions are made in three sizes, one being 15 inches, one 20 inches, and one 24 inches wide, the 20-inch size being the one most generally used, and the 15-inch size being called the "perineal" cushion. Fig. 2 shows the 20-inch size with drainage apron hooked together, forming a closed outlet, or sleeve, through which the drainage is carried direct into the receptacle. When not hooked together the sleeve hangs as shown in the dotted lines.

The obstetrical pad or cushion is made with a closed sleeve which can be hooked up, thus forming a receptacle of its own, into which all the amnion, blood, and placenta may be collected and carried to the bathroom, weighed and inspected without the use of any other vessel. This reversible closed sleeve is shown clearly in Fig. 3.

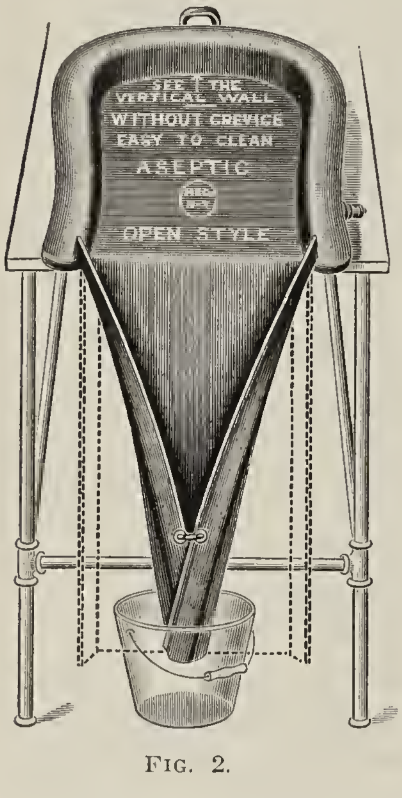


Fig. 2.

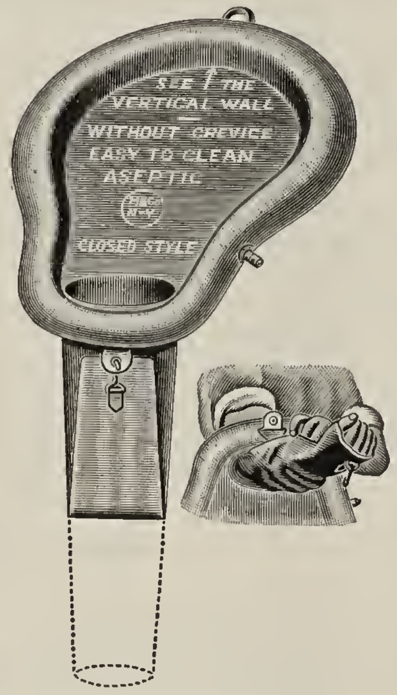


Fig. 3.

In ovariotomy and general surgery Dr. Kelly lays a sterilized towel between the cushion and the patient and in obstetrical cases he generally consumes from a pound to a pound and a half of absorbent cotton, unwrapping and tearing off a good handful of the cotton at a time and stuffing this between the buttocks below the vulva when the wad becomes saturated or soiled. He drops this into the receptacle formed by the apron and substitutes another piece, thus keeping the patient clean throughout the operation.

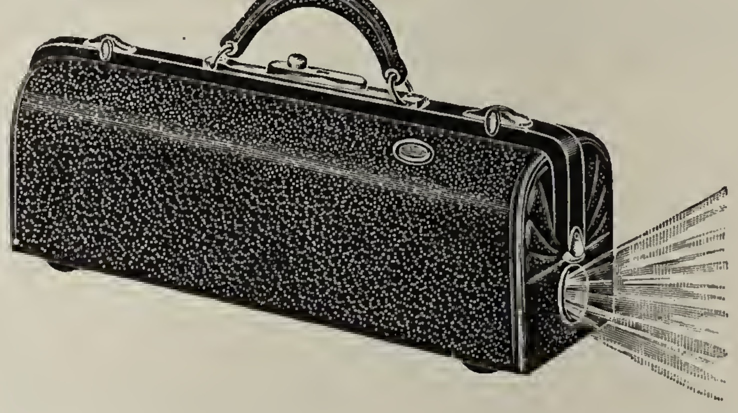
Dr. Kelly states that he is in the habit of sterilizing his cushions by soaking them for twenty-four hours in a bichloride solution of the strength of 1 to 1,000 or even 1 to 500. This treatment does not seem to injure the rubber. Should there be any marked odor this may be remedied by using Labarraque's solution.

A NEW BAG FOR PHYSICIANS.

By W. W. McCORMICK, M. D.,

NEW YORK.

The bags ordinarily used by physicians in carrying their instruments are open to the objection that when closed, a portion of the end projects into the bag; so that, in order to accommodate an instrument fourteen inches in length, it is necessary to have a bag measuring from sixteen to eighteen inches. This fault has been entirely overcome by a comparatively simple invention which I wish to lay especially before the medical profession, though it is, of course, applicable to all kinds of hand bags. The invention consists in the folding or pleating of the gusset surrounding the hinge of the iron jaws of the bag, so that when closed, the leather folds upon itself and is not projected inward encroaching upon the capacity of the bag. A decided economy is thus effected, as a sixteen-inch bag with this improved device has actually a greater clear inside space than an eighteen-inch bag of the old style. The economy extends also to cost and weight.



I have also contrived the application to the bag of a light which, though it adds but a pound weight to the bag, affords an illumination said to be equal to twenty-five candle power. Its manifold uses are obvious. While carrying the bag this light can be flashed on any object, e. g., the door of a house, so that the number can be seen. When the physician is summoned to an accident, this light, which can be thrown in any desired direction by simply turning the bag about, will be of incalculable value. Every part of the apparatus is detachable and interchangeable, so that any portion of it may be replaced when worn or broken. The light itself is a three and a half volt, tipless, tubular, lamp, with a surgical lens which intensifies the light. This is enclosed in an outer lens, thus affording a strong, clear light of great intensity.

If desired, the dry cell battery may be connected, by ordinary flexible wires, with any instrument utilizing a light for observation or diagnosis, the battery thus serving a double purpose. The bags which I have had constructed with these two inventions, are also fitted with the ordinary loops, for bottles, pockets, etc. The manufacturers assure me that they can make up these bags for any special purpose, incorporating in them the particular features indicated above.

27 East Twenty-second Street.

Miscellany.

The Medical Services of the Russian and Japanese Armies.—The *Journal of the Association of Military Surgeons* for May contains interesting papers on the Sanitary Organization of the Russian Army, by Lieutenant-Colonel John Van Rensselaer Hoff, of the United States Army, and on the Medico-Military Organization of the Japanese Army, 1894-1895.

The Senn First Aid Packet in the Japanese Army.—It is interesting to note that Dr. Suzretti, chief medical officer of the Japanese squadron before Port Arthur, is about to substitute the Senn First Aid Packet for the one formerly employed in his command.

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Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending May 14, 1904:

Place.	Date.	Cases.	Deaths.
Smallpox—United States.			
Florida—Jacksonville	Apr. 30-May 7	4	
Illinois—Chicago	Apr. 30-May 7	2	
Kentucky—Covington	Apr. 30-May 7	5	
Louisiana—New Orleans	Apr. 30-May 7	5	
Maryland—Baltimore	Apr. 30-May 7	5	
Michigan—Detroit	Apr. 30-May 7	1	
Michigan—Grand Rapids	Apr. 30-May 7	3	
Missouri—St. Louis	Apr. 25-May 7	35	
New Hampshire—Manchester	Apr. 30-May 7	2	
New Jersey—Camden	Apr. 30-May 7	1	
New York—Buffalo	Apr. 30-May 7	3	
New York—New York	Apr. 30-May 7	1	
Ohio—Bucyrus	Apr. 30-May 7	3	
Ohio—Cincinnati	Apr. 29-May 6	15	1
Ohio—Cleveland	Apr. 29-May 6	4	
Ohio—Dayton	Apr. 30-May 7	12	1
Ohio—Toledo	Apr. 30-May 7	1	
Pennsylvania—Philadelphia	Apr. 30-May 7	26	5
Pennsylvania—Pittsburgh	Apr. 30-May 7	6	
		One imported.	
South Carolina—Charleston	Apr. 30-May 7	2	
South Carolina—Greenville	Apr. 23-30	9	
Tennessee—Nashville	Apr. 30-May 7	8	
Wisconsin—Milwaukee	Apr. 23-May 7	4	
Smallpox—Insular.			
Philippine Islands—Manila	Mar. 12-26	9	1
Smallpox—Foreign.			
Argentina—Buenos Ayres	Feb. 1-29		51
Austria—Prague	April 16-23	2	
Belgium—Antwerp	April 16-23	16	6
Brazil—Rio de Janeiro	Mar. 27-Apr. 10	95	63
Canada—Sydney	To Apr. 30	55	1
Canada—Winnipeg	Apr. 23-30	1	
China—Shanghai	Mar. 26-Apr. 2		15
Colombia—Barranquilla	Apr. 18-24		1
Great Britain—Dundee	April 16-23	2	
Great Britain—Edinburgh	April 16-23	2	
Great Britain—Glasgow	Apr. 22-29	31	2
Great Britain—Hull	Apr. 16-23	3	
Great Britain—Leeds	Apr. 23-30	5	
Russia—Odessa	Mar. 26-Apr .23	9	1
Russia—St. Petersburg	Apr. 8-16	12	3
Turkey—Alexandretta	Apr. 8-16	16	1
Turkey—Constantinople	Apr. 10-24		11
Turkey—Smyrna	Mar. 26-Apr. 3		1
Yellow Fever.			
Brazil—Rio de Janeiro	Mar. 26-Apr. 10	8	4
Ecuador—Guayaquil	Apr. 9-16		8
Mexico—Merida	Apr. 24-30	2	1
Cholera.			
India—Calcutta	Apr. 2-9		104
India—Madras	Apr. 2-8		8
Plague—Insular.			
Hawaii—Honolulu	May 8		1
Philippine Islands—Manila	Mar. 12-26	8	8
Plague—Foreign.			
Brazil—Rio de Janeiro	Apr. 3-10	3	
India—Calcutta	Apr. 2-9		539
India—Bombay	Apr. 5-12		811
Peru—Callao	Apr. 3-10	1	1
Peru—Chosica	Apr. 14		2
Peru—Matacuna	Apr. 14	2	

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending May 14, 1904:

BARTLETT, COSAM J., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Liscum, Alaska, and ordered to San Francisco, Cal.; on arrival, will report by telegraph to the military secretary for further orders.

BOSLEY, JOHN R., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Thomas, Ky., and ordered to Fort Egbert, Alaska, for duty.

BUSHNELL, GEORGE E., Major and Surgeon. Ordered to assume command of general hospital, Fort Bayard, N. M., on departure therefrom of Edward T. Comegys, Lieutenant-Colonel and Deputy Surgeon-General, who is under orders for duty in the Philippines.

CLAYTON, JERE B., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Egbert, Alaska, and ordered to Fort William H. Seward, Alaska, for duty.

GEDDINGS, EDWARD F., First Lieutenant and Assistant Surgeon. Granted two months' leave of absence, to take effect about May 15th, with permission to apply for one month's extension.

KEAN, JEFFERSON R., Major and Surgeon. Appointed a member of a board of medical officers to meet at West Point, N. Y., about May 23rd, for the examination of the cadets of the graduating class and candidates for admission to the Academy.

LA GARDE, LOUIS A., Major and Surgeon. Assignment to the Philippine Islands revoked, and ordered to duty with the Isthmian Canal Commission.

LYSTER, THEODORE C., First Lieutenant and Assistant Surgeon. Appointed a member of a board of medical officers to meet at West Point, N. Y., about May 23, 1904, for the examination of the cadets of the graduating class and the candidates for admission to the Academy.

MABEE, JAMES I., First Lieutenant and Assistant Surgeon. Ordered to Fort Casey, Wash., for duty.

RAND, I. W., First Lieutenant and Assistant Surgeon. Relieved from duty at Ord Barracks, Cal., and ordered to cantonment, Presidio of San Francisco, Cal., for duty.

RUTHERFORD, HENRY H., First Lieutenant and Assistant Surgeon. Ordered to report to the commanding officer of the Army and Navy General Hospital for such duty as he may be able to perform.

STEDMAN, CHESTER J., First Lieutenant and Assistant Surgeon. Relieved from duty at Columbus Barracks, Ohio, and ordered to Fort Liscum, Alaska, for duty.

WATERHOUSE, S. M., First Lieutenant and Assistant Surgeon. Ordered to Fort Wooden, Wash., for duty.

WEBB, WALTER D., First Lieutenant and Assistant Surgeon. Appointed a member of a board of medical officers to meet at West Point, N. Y., about May 23rd, to examine cadets of the graduating class and candidates for admission to the Academy.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending May 14, 1904:

BLACKWOOD, N. J., Surgeon. Detached from the *Illinois* and ordered to the torpedo station, Newport, R. I., with additional duty in attendance upon naval and marine officers not otherwise provided with medical aid at Newport, R. I.

BRAISTED, W. C., Surgeon. Detached from the naval hospital, New York, and ordered to the *Relief;* authorized to delay one week *en route.*

GATES, M. F., Surgeon. Detached from the naval hospital, Philadelphia, Pa., and ordered to the Navy Yard, League Island, Pa.

LEDBETTER, R. E., Assistant Surgeon. Ordered to the *Lancaster,* Navy Yard, League Island, Pa.

MILLER, J. JR., Assistant Surgeon. Detached from the Naval Museum of Hygiene and Medical School, Washington, and ordered to the *Denver.*

NORTON, O. D., Surgeon. Detached from the Navy Yard, League Island, Pa., and ordered to the *Illinois.*

RODMAN, S. S., Passed Assistant Surgeon. Commissioned a passed assistant surgeon, with rank of lieutenant, from December 14, 1903.

SPRATLING, L. W., Surgeon. Detached from duty with the marine battalion on the Isthmus of Panama and ordered to duty with the Panama Canal Commission.

SUTTON, R. L., Assistant Surgeon. Detached from the Bureau of Medicine and Surgery, Navy Department, Washington, and ordered to duty with the marine battalion on the Isthmus of Panama.

WILSON, G. B., Surgeon. Detached from the torpedo station, Newport, R. I., and ordered to the naval hospital, Chelsea, Mass.

ZALESKY, W. J., Assistant Surgeon. Ordered to the naval hospital, Philadelphia, Pa.

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending May 12, 1904:

ALEXANDER, E., Acting Assistant Surgeon. Leave of absence for ten days from May 1, 1904, granted Acting Assistant Surgeon Alexander by Department letter of April 26th, revoked.

BURKHALTER, J. T., Assistant Surgeon. Granted extension of leave of absence for ten days. May 9, 1904.

CARRINGTON, P. M., Surgeon. Detailed to represent the service at meeting of the American Medical Association, June 7, 1904, stopping *en route* at the bureau.

COMFORT, N. C., Pharmacist. Reassigned to duty at Manila, P. I., effective February 7th.

GOLDBERGER, JOSEPH, Assistant Surgeon. Relieved from duty at Tampico, Mexico, and directed to proceed to Monterey, Mexico, for duty. May 6, 1904.

HOLT, J. M., Assistant Surgeon. Bureau letter of February 9, 1904, directing Assistant Surgeon Holt to report to Passed Assistant Surgeon V. G. Heiser at Manila, P. I., for examination for promotion, revoked.

KERR, J. W., Passed Assistant Surgeon. Granted leave of absence for one month from May 20th.

MCKEON, F. H., Assistant Surgeon. To proceed to New York, N. Y. (Stapleton), and report to medical officer in command for duty and assignment to quarters. May 9, 1904.

NEVES, GEORGE, Pharmacist. Directed to proceed to Cairo, Ill., and report to medical officer in command for temporary duty during the absence, on leave, of Pharmacist C. G. Carlton. May 9, 1904.

NYDEGGER, J. A., Passed Assistant Surgeon. Granted extension of leave of absence, on account of sickness, for one month from April 6th.

PETTYJOHN, JOSEPH, Assistant Surgeon. To proceed to New York, N. Y., and report to Surgeon G. W. Stoner, Immigration Depot, for duty. May 4, 1904.

RICHARDSON, N. D., Acting Assistant Surgeon. Granted leave of absence for seven days from February 25, 1904, under paragraph 210 of the regulations.

SIEDENBURG, FRANK, Pharmacist. To proceed to San Francisco, Cal., and report to medical officer in command for duty and assignment to quarters. May 6, 1904.

SLAUGHTER, A. W., Acting Assistant Surgeon. Granted leave of absence for fourteen days from June 1st.

SPRAGUE, E. K., Passed Assistant Surgeon. Relieved from duty at Calcutta, India, and directed to proceed to the United States. May 4, 1904.

SPRATT, R. D., Assistant Surgeon. To proceed to New Orleans, La., and report to medical officer in command for duty and assignment to quarters. May 9, 1904.

SWEET, E. A., Assistant Surgeon. To proceed to New York, N. Y., and report to Surgeon G. W. Stoner, Immigration Depot, for duty. May 4, 1904.

WIGHTMAN, W. M., Assistant Surgeon. Granted leave of absence for seven days from May 1, 1904, under paragraph 191 of the regulations.

Appointments.

F. H. MCKEON, of Connecticut; J. PETTYJOHN, of Georgia; E. A. SWEET, of Massachusetts; and R. D. SPRATT, of Alabama, commissioned as assistant surgeons. May 2, 1904.

Reinstatement.

FRANK SIEDENBURG, of Illinois, reinstated as pharmacist of the third class. May 3, 1904.

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Births, Marriages, and Deaths.

Born.

ANDERSON.—In Montreal, Canada, on Saturday, April 23rd, to Dr. Duncan Anderson and Mrs. Anderson, a son and a daughter.

Married.

ABNEY—WINN.—In Atlanta, Georgia, on Sunday, May 1st, Dr. Samuel Abney and Miss Lena Winn.

BURR—GEER.—In San Marcial, New Mexico, on Tuesday, May 3rd, Dr. William H. Burr and Miss Editha Lynde Geer.

CROSS—RIDGWAY.—In Jenkintown, Pennsylvania, on Wednesday, May 11th, Dr. Sumner H. Cross and Miss Murrell Ridgway.

GILLIGAN—MACNEILL.—In Brooklyn, N. Y., on Wednesday, May 4th, Dr. Alexander Gilligan and Miss Jessie Torrance MacNeill.

SNYDER—WILSON.—In Lowell, Massachusetts, on Thursday, May 5th, Dr. Charles E. Snyder and Miss Helen M. Wilson.

VANDERGRIFT—KENNY.—In Brooklyn, N. Y., on Thursday, May 12th, Dr. George M. Vandergrift and Miss May Kenny.

WHITING—TAYLOR.—In Poughkeepsie, N. Y., on Saturday, May 7th, Dr. James Raynor Whiting and Miss Mildred Eveleigh Taylor.

Died.

BAIR.—In Buffalo, N. Y., on Saturday, April 23rd, Dr. Edward A. Bair, in the thirty-sixth year of his age.

BARTHOLOW.—In Philadelphia, Pennsylvania, on Tuesday, May 10th, Dr. Roberts Bartholow, in the seventy-third year of his age.

CAREY.—In Chicago, Illinois, on Monday, May 2nd, Dr. T. Lloyd Carey, in the sixty-first year of his age.

CUSHING.—In Washington, D. C., on Tuesday, May 10th, Dr. Clinton Cushing.

FUQUA.—In Stewartsville, Virginia, on Thursday, April 28th, Dr. Walton Fuqua, in the thirty-second year of his age.

GIBBONS.—In Keokuk, Iowa, on Sunday, May 1st, Dr. John Antoine Gibbons.

GOODRICH.—In New Haven, Connecticut, on Friday, May 6th, Dr. Edward P. Goodrich, in the sixty-first year of his age.

LEE.—In Kansas City, Missouri, on Sunday, May 8th, Dr. J. C. Lee, in the forty-seventh year of his age.

LEVY.—In Perth Amboy, New Jersey, on Thursday, May 5th, Dr. Henry Levy, in the forty-eighth year of his age.

MACKAY.—In New York, N. Y., on Thursday, May 12th, Dr. Barnard Mackay, in the seventy-second year of his age.

MCDONALD.—In Conyers, Georgia, on Sunday, May 1st, Dr. Horace H. McDonald.

MCGEE.—In Belvidere, New Jersey, on Wednesday, May 11th, Dr. William H. McGee, in the fifty-seventh year of his age.

SCHLEY.—In Waverly Hall, Georgia, on Saturday, May 7th, Dr. E. B. Schley.

SPENCER.—In Guilford, N. Y., on Monday, May 2nd, Dr. Marshall D. Spencer.

WATERWORTH.—In Brooklyn, N. Y., on Wednesday, May 11th, Dr. William Waterworth, in the fifty-fourth year of his age.

WISE.—In Richmond, Virginia, on Thursday, May 5th, Dr. Henry A. Wise, of Williamsburg, in the thirty-first year of his age.

New York Medical Journal
AND
Philadelphia Medical Journal.
CONSOLIDATED.

A Weekly Review of Medicine

Vol. LXXIX, No. 22. SATURDAY, MAY 28, 1904 Whole No. 1330.

Original Communications.

THE CONSTRUCTION OF THE VALVULAR PART OF THE AORTA AND THE SIGNIFICANCE OF ITS ELASTIC AND COLLAGENOUS TISSUE.*

By FRITZ SCHWYZER, M. D.,

NEW YORK.

Some authors hold that the valvular part of the aorta belongs to the heart, others that it belongs to the aorta, while Norman Chevers and, in a more exact way, Perls, declare the valvular part a distinct apparatus separate from the heart and aorta. This part, according to Perls,[1] consists of two horizontal fibrous rings, the ostium, or annulus cardiacus (aortæ or pumonalis), and the ostium arteriosum. The latter serves as point of insertion for the tips of the semilunar valves, while from the former the convex lower edges of the valves originate. Perls measured these two rings in a great number of bodies, and found that in younger people the lower ring was slightly wider than the upper one, while in people of more than forty years of age the upper ring was slightly wider than the lower one, therefore the valvular part in young people represented a conus with its base toward the ventricle, while in old people the base of the conus pointed toward the aorta. The two rings are, as I will show later on, connected with each other by three vertical fibrous stripes, which extend like three columns at equal distances between the two rings, leaving three very elastic spaces between them, the three sinus Valsalvæ.

The valvular part shows, roughly speaking, the same division into intima, media, and adventitia as the aorta; but it seems to me better to adopt the theory of Bonnet[2] and Schieferdecker[3] dividing the wall of the aorta into two parts only, the endothelial tube and the perithelial tube. According to Bonnet the endothelial tube corresponds to the intima, while the perithelial tube comprises media and adventitia or the elastica interna, the tunica elastica longitudinalis of Remak and Henle, the striated layers of Kölliker, the muscularis with its elastic fibres and lamellæ, the elastica externa and the more spongy tissue of the adventitia. However, as we shall see later on, the valvular part of the aorta varies in quite a marked degree from this description.

Embryology does not teach us much about the origin of the valvular part, while the development of the other parts of the aorta is pretty well known, especially through the work of Thoma.[4]

The valvular part of the aorta (or pulmonalis) is constructed mainly of three different kinds of tissue, the tendinous tissue forming the cardiac and aortic rings, the collagenous and elastic tissues the sinus Valsalvæ. The elastic tissue plays one of the principal rôles in the construction of the valvular part of the aorta. The wall of the sinus Valsalvæ contains an exceedingly large amount of elastic fibres, and the semilunar valves are partly made up of elastic tissue, which radiates into the semilunar valves as a direct continuation of the endocardial elastic tissue. Before we can understand the rôle played by the elastic tissue in the construction of the valvular part, we must glance over its distribution in the heart. Seipp,[5] who made a study of the elastic tissue of the heart, finds that the endocardium of the ventricle contains a great number of elastic fibres, while the endocardium of the auricle does not contain so many. In the myocardium there are no elastic fibres except along the coronary blood vessels. The wall of the auricles is interspersed with a network of elastic fibres, a continuation of which goes over into the veins. The epicardium contains systems of elastic fibres which are in communication with the adventitia of the large blood vessels.

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* This article is the first of a series of three papers on the elastic tissue of the normal and diseased aorta. It is exceedingly technical, but these technical remarks are essential to the understanding of the position taken by the author in the third paper, on the pathology of aneurysms. The author is, we believe, the first to advance the view that the elastic tissue of the aorta is *not* the main carrier of ductility, but is the factor which prevents *over*-distention. This view throws an entirely new light on the pathogenesis of aneurysms, and has considerable practical importance.

[1] *Deutsches Archiv f. klin. Med.*, V, p. 381.

[2] *Deutsche med. Wochenschrift*, 1896, p. 243.

[3] Sitzungsberichte der niederrhein. *Ges. f. Naturwiss. u. Heilkunde*, 1896, February 16th. Also Merkel and Bonnet: *Ergebnisse der Anatomie u. Entwickelungsgeschichte*, Bd. VIII, 1898.

[4] *Virchow's Archiv.*, 93, p. 143, 1883.

[5] *Anatom. Hefte* VI, 1, pp. 61-116.

In the intrauterine life the heart-valves contain no elastic fibres, they develop after birth in the semilunar valves on the side of the ventricle, in the atrioventricular valves on the side of the auricle, or, as it seems to me, always on the side which during function is most exposed to distention.

Ludwig Joseph[6] has described the different kinds of tissue which compose the valvular parts: "The aorta begins," so he expresses himself, "with a ring of felt-like tissue containing an abundance of elastic fibres." He describes a layer of elastic fibres situated on the lower side of the semilunar valves as a continuation of the elastic tissue of the endocardium of the ventricle. Later authors consider with Joseph the tendinous lower ring as the base of the aorta, but in controversion to Joseph several of them emphasize the relative poverty of elastic fibres in it.

When thus looking over the known facts about the construction of the valvular part of the aorta I found that several points still needed to be cleared up. It seemed to me necessary to find out the rôle played by each kind of connective tissue in the construction of the valvular part of the aorta. I therefore made serial sections, cutting horizontally and vertically, and using ordinary hæmatoxylin stains as well as the modern methods for staining elastic fibres. For making my histological series I used by preference anatomical preparations of aortæ which had been hardened under 16 cm Hg pressure. Sections from ordinary alcohol specimens are often so distorted that they scarcely allow one to get an idea of the direction of the different systems of fibres. I filled the aortæ of fresh bodies, after tying all their branches through one carotis, with warm liquid paraffin, which congealed at about 40° C., and gave a very good picture of the functional position and the form of the aorta under blood pressure. I generally used a pressure of 16 cm Hg, in several instances 20 cm, and kept this pressure up until the paraffin was hardened. Thoma used a similar method for the study of the arcus aortæ. In a number of instances I thus got nearly perfect casts of the valvular part, the valves closing almost entirely (Fig. 1). These casts represent the diastole, but not the moment of the recussion of the blood column. At that moment the pressure in the valvular part must be considerably higher than the normal arterial blood pressure.

Before going into the histological details of these preparations I wish to mention a few macroscopical observations. The valvular part hardened under pressure is in several places comparatively very much distended, in others scarcely changed, whether hardened under pressure or without it. Thus we see the radius of the annulus cardiacus scarcely one mm larger in the pressure preparations than in those hardened in the ordinary way. The annulus aorticus, also, and the three vertical columns which act as the base for the vertical valvular parts show very little distention. The three sinus Valsalvæ, on the other hand, protrude as hemispherical prominences half way over the circumference of the aorta, so that the radius, drawn from the axis of the valvular part to the most prominent part of the sinus, exceeds the radius of the aorta by about six to twelve mm or more. The annulus aorticus seems to be a trifle more distended than the lower ring, but it resists the pressure much more than the other parts of the aortic tube. In other words, the valvular part consists of a very strong, unyielding, fibrous, basilar ring, on which are erected at equal distances (one third of a circle each) three strong fibrous columns of relatively little ductility. These carry the annulus aorticus, a ring very similar to the first one (Fig. 2A). The three spaces between the vertical columns are taken up by the sinus Valsalvæ, the walls of which are very distensible and elastic (Remark). It might be useful to add a remark about the terms elasticity and ductility. We call a body elastic that will return to the form from which it is bent, extended, pulled, or distorted, as soon as the force applied is removed. A body is ductile that yields easily to force; therefore, a body may be highly elastic and not ductile (like glass), or highly ductile but not elastic (like old rubber tubing), or both highly elastic and ductile, like good new India rubber.

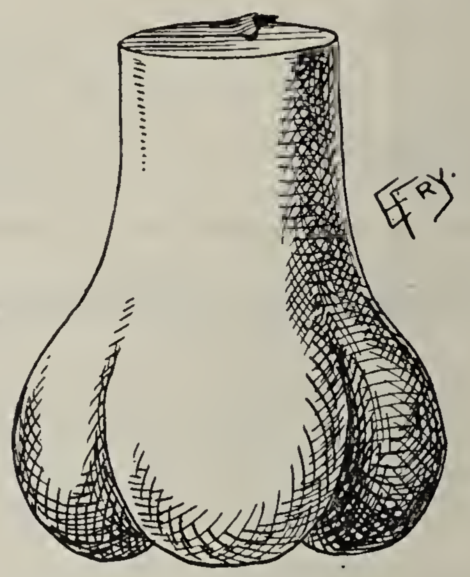
FIG. 1.—Paraffin cast of aorta, 16 cm. Hg. pressure.

The columns are kept in position by the edges of the valves, and each sinus Valsalvæ forms, with its semilunar valve, a spherical body so that we may compare the distended valvular part to an elastic tube, the end of which is closed by globular bodies which are pressed one against the other (the upper side of each body being of course cut off).

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[6] *Virchow's Archiv,* XIV, p. 244.

Let us now look more closely into the histological details. The valvular part is built up of three different tissues, a tendinous unyielding fibrous tissue, a collagenous connective tissue, which is yielding, and the so called elastic tissue, which is unyielding. The lower ring, built up by tendinous tissue, contains very few elastic fibres, the lateral columns consist chiefly of tendinous connective tissue, out of which the elastic systems of the sinus Valsalvæ take their origin. The upper ring contains much more elastic tissue than the two parts mentioned before, but even there one cannot but recognize the prevalence of the tough tendinous fibres. The sinus Valsalvæ consists, in the central parts, of a fibrillous texture in which elastic fibres and lamellæ mixed with collagenous fibres are worked together in a felt like mass. The ramifications of the elastic network and the collagenous fibre disappear in the rings and columns. When the sinuses are distended it is easier to distinguish the meshes between the fibres, but when they are relaxed the elastic texture resembles felt (Figs. 2A, B, C, and D).

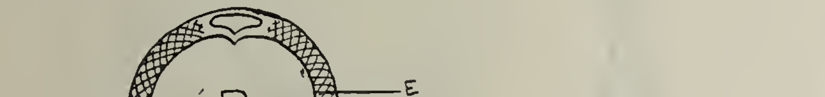

Fig. 2.—A. Valvular part hardened under 16 cm. Hg. pressure; a. Annulus aorticus; b. Vertical tendinous column; c. Annulus cardiacus; d. Myocardium. B. Transverse section through annulus aorticus; e. elastic tissue. C. Transverse section through sinus Valsalvæ; e. elastic tissue. D. Transverse section through annulus cardiacus; f. tendinous column.

The construction of the semilunar valves is very interesting and complicated; it can be understood only when one considers in what way the valve is used during function. During the systole of the heart, the valve as a flabby skin is pushed into the sinus Valsalvæ so as to offer no resistance to the blood that rushes out of the heart. During the diastole, the valves are distended and their free borders pressed against each other. The manner in which the valve is fastened to the rings and columns prevents their retroversion, the middle part of the valve being mainly horizontal; the vertical side parts act as supports for the centrum. The valve during function (during the diastole) has almost twice the width of the surface of the valve during the systole. Its ductility is not uniform; in the middle of the valve it is much greater than near the free border. This, and the line of attachment to the aorta, insure the baggy form of the valve during function. The three valves *seen from above*. when hardened in the functional position, appear like three sectors of a circle, with a central angle of 120°, and a radius equal to the radius of the aorta. But as the valves in reality are much larger than these sectors, their free borders must of necessity touch each other with quite large surfaces. If the valves are cut off at their line of insertion and put down into a plain, they correspond to a semicircle (Fig. 3). The line formed by the insertion of the valves on the near surface of the aorta may be compared to a figure made by the penetration of the aorta cylinder by the segment of a cylinder. the diameter of which equals the distance between the points of the valves; the direction of this penetration to be 45° from outward upward. The insertion of the valve is narrow only in its lateral parts, but the base of the valve has an insertion into the aortic wall several mm broad. We will discuss this point more fully later on. The three noduli Arantii form, during the diastole, the centre of the closed valve, whereby even in the centre the free border of the valves stands upright in a vertical position (the three free borders being pressed against each other). The sides of the valves touch each other with a larger surface, and form in the paraffin cast deep cuts between the sinus Valsalvæ.

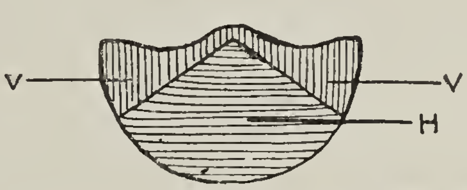

Fig. 3.—Aortic valve, hardened and distended on cork; h. horizontal part; v. vertical part.

What are the qualities necessary for the semilunar valves? The valve must be ductile; it must not turn over; it must be very elastic, so as to snap back into the systolic position; it must be strong enough to stand the pressure of 20 cm Hg, and the recussion of the blood. The ventricular side of the valve is smooth and shows in the centre of the free border running parallel to this one, a spindle shaped thickening which is known as the nodulus Arantii. The aortic side of the valves shows prominent stripes which run from the line of insertion (espepecially from the vertical parts to the valves) toward the nodulus Arantii, but they do not all run like radii into one point; many of them meet in the line that divides the two symmetrical sides of the valves. In many valves (as it seems to me in very strong hearts) this line is thickened so as to form a radial beam, like the main carrier of an iron bridge construction. As we have said above, this construction can only be understood when one considers the forces that exercise their pressure on the valves. The recussion of the arterial blood is a force which could easily tear the valve. A tear would be either radial or transversal (either in the direction of the symmetrical line of the valve, or parallel to the free border, corresponding to the valvular closing line). Nature has in a very fine way provided against these two possibilities. The transversal thickening of the nodulus Arantii serves as a strengthening agent against a radial tear, and the above mentioned radial thickening against a tear that would run parallel to the free border of the valve. At the line of insertion the radial fibres are so strong that a tear in that region is almost impossible. To prevent a radial tear between the radial beams there is also a protection, that is the trestle work of thin, but strong, fibres which extends between the radial beams. All this can readily be seen in the valves that have been cut off from the line of insertion, laid flat on cork, and hardened in alcohol. They can afterwards be made transparent in oil of cloves, so that one can even take a photograph of the construction of the valve. I also made serial sections from flat hardened valves, and was thus enabled to follow all the different fibre systems. The distribution of the elastic and fibrous tissue can be seen in the flat sections, as well as in the radial ones. Otto Veraguth[7] describes the radial microscopical section as follows:

1. Endothelial with narrow cellular zone.
2. Light zone with few nuclei and much intercellular substance.
3. Endothelial layer as No. 1.

Thus far can one get with ordinary methods of staining the radial sections. When staining for the elastic fibres I find from the aortic side:

1. Endothelial layer.
2. Subendothelial layer with a very thin layer of finest elastic fibres running in all directions.
3. Throughout the fibrous layer cut transversally and longitudinally on the aortic side, we see a very thin stratum of radial elastic tissue which emanates from the following layer near the insertion of the valve.
4. A rather thick layer of radial elastic tissue which runs along the ventricular side of the valves as a continuation of the endocardial elastic tissue.
5. Endothelial layer.

Those mentioned under 3 disappear towards the nodulus Arantii, those under 4 also, but on the ventricular side in the lateral parts of the valves. On the ventricular side also there are systems of elastic fibres that radiate from the aortic wall through the tip up towards the noduli.

Let us examine layers 3 and 4 more closely (Figs. 4A and B). Layer 3 originates, as mentioned above, in the tendinous basilar ring, and extends in the functional position of the valves at an angle of 60° downward into the valve. Layer 4, on the other hand, originates in the endocardium and bends off from this one at the same angle upward, so that the two layers unite only at a distance of a few mm from the valvular ring. The fibrous and the elastic layers form with the vertical wall of the lower valvular ring a more or less equilateral triangle. This triangle shows during the systole a very sharp angle downward, and during extreme diastole a sharp angle upward. The triangle space is filled with loose connective tissue which offers no resistance at all to whatever movement the two layers may make. The significance of this space will be clear as soon as one considers it as a joint. If the insertion of the semilunar valves were linear the fibres would, during the functioning of the valves, be broken by the constant bending upward and downward in one place. This opening and

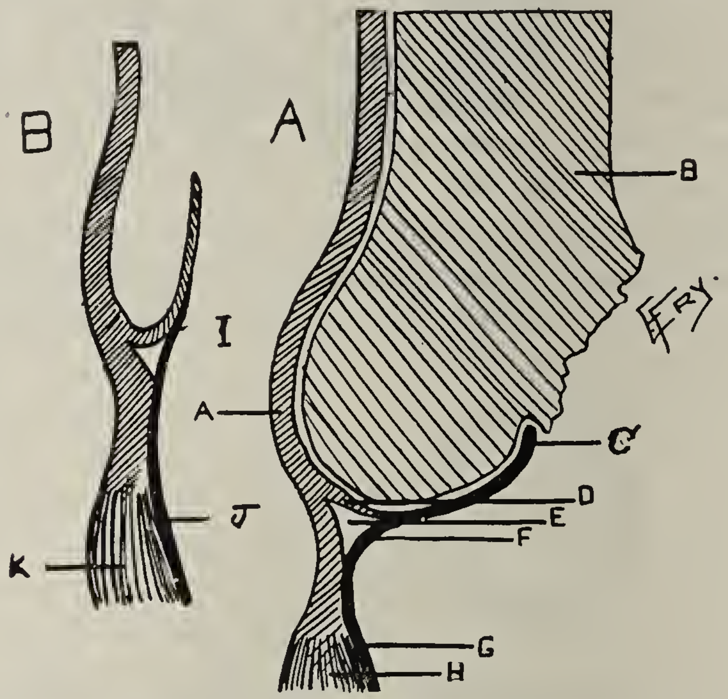

FIG. 4.—A. Aortic valve in diastolic position; a. sinus Valsalvæ; b. paraffin cast; c. valvula semilunaris; d. collagenous part of the valve; e. triangle space; f. elastic valvular ligament; g. elastica of the endocardium; h. myocardium. B. Valve in systolic position; i. and j. elastica · k. myocardium.

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[7] Untersuchung über normale und entzuendete Herzklappen. *Virchow's Archiv*, CXXXIX, p. 59, 1895.

shutting repeated 72 times a minute, or over 100,000 times a day, or in 60 years over two thousand million times, would ruin any tissue; a break would of necessity occur at this place. In the lateral and upper parts of the valvular insertion the motion is very much smaller, only 10° to 15°, therefore there is no necessity for a joint-like construction, and the space mentioned is missing there. The lower component of the valve, mentioned under 4, is thickest in the middle of the valve; towards the sides it gets weaker and weaker. It is a direct continuation of the elastic endocardium. It seems to me that this elastic layer must have a certain significance on the position of the valve. Any motion of the endocardial elastic layers must be transmitted to the elastic layer of the valve, and if this moving is strong enough it must even move the valve. During the systole the ventricle is shortened by a change in the position of the heart, and the diminution of the ventricular cavity. Therefore, the endocardium and its elastica relaxes entirely during the systole, and at the same time the valvular ligament, mentioned above, relaxes so as to allow the valve to fall back into the sinus Valsalvæ. However, as soon as the ventricle relaxes (widens) the endocardium is stretched, and probably pulls at the elastic ligament. Thus the relaxation and the tension of the valvular ligament seem to coincide with the systole and diastole of the ventricle. It also seems very probable to me that the position of the valves must thereby be modified to a certain extent. The valves are opened of course by the onrush of the blood, and the main cause of the closing is its regurgitation. Still it appears to be more than probable that the elastic ligament has something to do with the position of the valve.

Before concluding my description of the construction of normal semilunar valves, I wish to speak about the blood vessels in the valves. Luschka[8] believed he could show the presence of blood vessels in normal semilunar valves. Kölliker, Gerlach, and others denied their presence in normal valves. Ludwig von Langer[9] demonstrated that normal semilunar valves contained no blood vessels. Several later authors, amongst them Otto Veraguth[10] and Ribbert[11] deal with the same question. Ribbert believes that in rare cases a few normal valves (chiefly the mitralis) contain blood vessels, but that the presence of blood vessels in the valves generally indicates a former endocarditis. In my experience with aortic and pulmonic valves I have always found traces of former inflammation whenever I could detect blood vessels in those valves.

The significance of the elastic tissue in the construction of the aorta and the valvular part will form the subject of the second part of this paper. The aorta is an elastic tube. This means that with hydraulic pressure we can dilate the tube of the aorta to a certain extent, and that as soon as the pressure is withdrawn, the aorta returns to its normal diameter. Nature has given the normal aorta much greater elasticity, and very much greater strength than is ever required in life. The limit of the possible blood pressure is perhaps 30 cm mercury, which by heavy lifting may be increased to 40 cm, while that of the elasticity of the aorta is about 120 cm Hg pressure, which means that only 4 to 6 times the normal blood pressure could widen the normal aorta so that it would not return to its usual diameter. The limit of resistance surpasses the possible blood pressure 30 to 40 times. The object of the elasticity of the aorta, and the blood vessels in general, is to transform the blood waves induced by the contractions of the heart into a continuous current, thereby saving the thin capillary tubes. If the blood vessels were not elastic, the pulsation in the capillaries would be so great that they would burst, a fact which occurs in old people suffering from severe arteriosclerosis of the large blood vessels. There is one part of the aorta which is more exposed to hydrodynamic insults than any other; this is the valvular part. As soon as the heart relaxes, at the beginning of the diastole, the semilunar valves close, and the recussion of the blood causes the greatest pressure near the valves. It is, therefore, necessary to have a kind of safety valve here, and as such I consider the very yielding sinus Valsalvæ. Theoretically, the force of the recussion for every valve is divided into three components: one which presses vertically on the valve; one which presses the vertical interior edge of the valve towards the other valves; and one which widens the sinus Valsalvæ so that the extended part can hold several ccm of blood. In this way the force of the recussion is greatly diminished.

The elasticity of the aorta is mainly physical; it is no vital action of the aortic wall; it has nothing to do with the nervous system. In the smaller blood vessels, on the other hand, the elasticity is less a physical and more a vital quality, as the small blood vessels have a strong layer of smooth muscle fibres, the contractility of which depends upon the action of the nervous system. According to the general opinion, the elasticity of the aorta and pulmonalis depends upon the network of elastic fibres which form the principal part of the aortic valve. Aside from the thin subendothelial layers of elastic fibres, the elastic network begins with the membrana elastica interna, the interior layers of which are longitudinal fibres, while the exterior layers contain large circular ones. Next to the elastica interna, we find the bulk of the media, chiefly circular in construction. The fibres of the elastic ring are united by radial and longitudinal fibres and lamellæ, which belong partly to ellipsoid, and partly to spiral systems. In the study of the elastic tissue of the aortic wall, one is confronted with such a conflicting picture of a trestle work that one might almost be inclined to overlook the main body of the media, a sclerotic, fibrous, connective tissue, which contains very few nuclei, and which fills the space between the elastic fibres and the lamellæ.

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[8] *Virchow's Archiv*, Bd. IV, p. 171.

[9] *Virchow's Archiv*, 109, p. 465.

[10] *Virchow's Archiv*, 139, p. 59.

[11] Beiträge zur pathologisch. Anatomie des Herzens. *Virchow's Archiv*, CXLVII, p. 493, 1897.

More than fifty years ago it was affirmed that the elastic tissue was the factor which gave elasticity to the aortic wall (Wertheim).[12] Earlier writers (Wertheim, E. H. Weber, and Wundt), tried to find a modulus of elasticity for the aortic tissue. But they never succeeded in establishing, for organic tissue, the same laws as, for instance, for steel and glass. This seems quite natural, when one considers the fact that the aortic wall is composed, not of one, but of several different substances. Triepel[13] speaks of the fact, and considers it useless to hunt for geometrical lines of elasticity, as Wertheim has found hyperbolæ for the aortic wall, and Preyer logarithmical lines.

Such measurements as Luck's,[14] for instance, has published on the enlarging of the diameter of the carotis, during the increasing pressure (8 per cent. between 2 cm and 16 cm Hg) have, of course, only significance for the particular branch of the vascular system, and they should be made with every blood vessel of the body; but they do not bring us any nearer to a modulus of elasticity of the elastic tissue. Landois found the yielding power between the empty carotis, and the carotis under 16 cm Hg pressure to be 30 per cent. The longitudinal yielding of elastic tubes has been studied by E. H. Weber.[15] He finds that the longitudinal yielding of a rubber tube is only one sixth of its transversal yielding. Triepel[16] has advanced a step in the knowledge of elastic tissue. He proposes to drop the name elastic tissue, as the word elastic implies a certain physical meaning which the tissue does not possess, and to call the elastic tissue, yellow connective tissue. He also wishes to drop the word elastin, emphasizing that the elastic tissue is not even a uniform chemical body. He also emphasizes that the collagenous fibres of the blood vessels are much more yielding than the elastic fibres, and that they possess quite a perfect elasticity. The significance of the elastic fibres is not their yielding quality, but their moderate yielding power. If the large blood vessels consisted of elastic fibres only, they would offer too much resistance to the heart, and if they consisted of collagenous tissue only, or of very smooth muscular fibres, they would be too yielding.

At this point I should like to insert a few of my own observations. I tried to isolate the two substances, but found it impossible, as the fibres would thereby be altered. And still it is absolutely necessary to know the moduli of elasticity of the yellow and the collagenous connective tissue. The only way to arrive at a conclusion of the elasticity of the collagenous substance of the aorta, is the study of the elasticity of the aortic wall under compression. In this way we avoid the greater part of the influence exercised by the trestle work of elastic fibres, and can draw conclusions about the elasticity of the collagenous substances. After detaching the adventitia of very fresh human and animal aortæ, I compressed parts of them between glass plates, and found that even after applying considerable weight (up to 1000 grammes pro cm^2), the thickness of the wall returned to its former size. But I had not attempted to establish a geometrical proportion between weight and compression, because the elastic trestle work plays a great rôle in keeping the collagenous fibres together, thereby preventing disintegration. A modulus thus established would apply only to the aortic wall, and not to the collagenous tissue, and even in this way we should find, as E. H. Weber, Wundt, and others did, that compression or distention do not augment proportionally to the increasing weight. Again we should find a contradiction to the general laws in the elasticity of the elastic or collagenous tissue.

I would like to advance the following theory: the aortic wall owes its elasticity to two elastic substances; the collagenous and the yellow (or elastic) connective tissues. These two substances form a peculiar structure, so that the stretching of the aortic wall not only employs their ductility, but also changes the geometrical construction of the elastic meshes. As long as the aortic wall is not under tension, the elastic skins, membrana elastica interna and externa, are relaxed and slightly corrugated, and the meshes of the elastic trestle work are more or less rectangular. At the beginning of the tension the two large elastic membranæ are straightened (their transversal section forming two concentric circles), and the meshes of the trestle work become fusiform when stretched. If the tension is increased, and both substances equally stretched, the elastic tissue offers more resistance than the collagenous. When the meshes are stretched, the collagenous substance, which fills the mesh, is compressed and the two elastic membranes, under tension, are much nearer each other than in the relaxed state of the aortic wall, which exercises a certain pressure on the collagenous substance. It is doubtful whether the two substances united in the aortic wall have the same elastic resting point. It may be that the yielding power of the collagenous tissue is employed first—that is to say, when the elastic fibres are just beginning to be stretched. Sections through the wall of the aortæ, hardened under different degrees of pressure, show these conditions very plainly; but it is scarcely possible to establish the physical conditions more accurately, as long as it is impossible to isolate the two substances without injuring them.

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[12] *Annales de chemie et de physique.* III S. Tome XXI, 385, 1847.

[13] *Anatom. Hefte,* Bd. X, 1, p. 1, 1898.

[14] Ueber Elasticitäts-Verhältnisse gesunder und kranker Arterienwände. *Inaug. Diss.* Dorpat, 1889.

[15] Ueber Anwendung der Wellenlehre auf die Lehre vom Kreislauf des Blutes. *Verhandlungen d. saechisch. Ges. d. Wissenschaften, Math. phys. Klasse,* 1850, p. 164.

[16] Ueber gelbes Bindegewebe. *Anatomischer Anzeiger,* Band 15, page 300, 1899, and Elastisches Gewebe und Bindgewebe, *Anatomischer Anzeiger,* Band XV, page 488.

To make the above theoretical details more comprehensive, I classify them thus:

The ductility and elasticity of the aorta between O and about 15 cm Hg pressure depend upon the collagenous substance, as within the limits of blood pressure, both ductility and elasticity are dependent upon the two substances. If greater pressure were exercised the collagenous substance would still follow the pressure, but the limit of the yielding power of the elastic substance would be reached and would put a stop to the distention. It would require a pressure many times that of the normal blood pressure, which will never occur in the living body, to exceed the limit of the elasticity of the elastic fibres. Thus we understand why Preyer draws the curve of the yielding of the aorta as a logarithmical line, as the inhibition of the elastic tissue prevents further distention. This also explains why the elasticity of the aortic wall does not correspond to the physical law; the quality to which Wundt gave the mystical name of "elastische Nachwirkung." If Wundt had considered that the aortic wall was composed of two distinct elastic substances, he would not have had to drop the foregoing hypothesis.

The aorta when compared with other elastic tubes does not correspond to a simple rubber tube, but to what may be called a pressure tube. In strengthening a high pressure rubber tube, technique employs very strong hemp tissue wound around the tube, or thin wire spirals, while Nature, for the same purpose, uses a tissue made up of highly elastic, but not very yielding, elastic fibres. Organism gives the aorta a much more complicated function than merely that of a pressure tube; it must transform the intermittent current of the blood into a constant one, and for that reason must be looked upon as a pressure tube and air chamber (sinus Valsalvæ) combined.

I tried to have the systems of elastic fibres which strengthen the aortic wall explained in a mathematical way, and had the good fortune to interest Professor W. Ritter, of Zurich, in the matter. He finds the conditions too complicated to be figured out with graphical statics. Organism is so much more complicated than even the most elaborate of engineering constructions, that it is impossible to divide the purely static from the physiological conditions. If the aorta were a straight tube, the mathematical way of strengthening it would be to have circular and longitudinal wires, at equal distances from each other, inserted into the wall. The circular wire would be under double the pressure of the longitudinal one. Wherever the tube widened the longitudinal wire would have to be the stronger. If the tube were bent in one plane, the strength of the longitudinal wire would have to be increased on the convex and decreased on the concave side. If the tube were bent in more than one plane, the best means of strengthening it would be spiral wiring. We find, in fact, that Nature in the construction of the elastica of the aorta uses all these points. In it we have circular and longitudinal, spiral and loop-formed fibre systems.

It is an interesting fact that the construction of the strengthening elastic fibre systems follows the laws of graphical statistics just as well as they are followed by the spongiosa of the bones (Hermann von Meyer).

The following remarks may serve to prove my theory of the function of the elastic tissue as an inhibitory factor:

1. If the elastic construction were more yielding than the collagenous substance of the aorta, a point would be reached where the collagenous substance would be overtaxed in its elasticity, or even in its ductility. That is, the substance would not return to its normal configuration, or it would tear. Pathology never saw this happen; yet; on the other hand, tears in the elastic tissue are well known, and are considered by all authors to be caused by changes in the blood pressure. Many of them see in such tears the first stages of aneurysms.

2. In the aortic system we find elastic tissue wherever it is desirable to have perfect elasticity, and not too great ductility. In order not to offer too great resistance to the beginning of the yield-

ing, Nature has made use of great constructive art. This ingenious construction has made possible a comparatively easy yielding in the beginning, without making use of the ductility of the elastic fibres. As soon as the line of yielding in the construction is made use of, we see quite a strong resistance developing in the less yielding elastic fibres and lamellæ.

3. In its central parts the sinus Valsalvæ is very yielding. In sections through the relaxed sinus we find the elastic fibres corrugated in the central parts. They are straighter when the sinus has been hardened under slight pressure, but if a pressure of 16 cm Hg has been used, we find the meshes of the construction quite straightened out. This means that from this point on there is only a small possibility of further stretching.

4. The whole construction and architecture of the elastic fibrous systems, the circular, the spiral and longitudinal fibres, the ellipsoid systems, which extend over the arcus aortæ, have all the character of a protective or inhibitory agent.

5. Where no yielding, and therefore no elastic, inhibition is needed Nature has provided not elastic fibres, but tendinous ones. For instance, the lower valvular ring contains almost no elastic fibres, but is made up of a very dense unyielding or tendinous tissue; we find in it only the ends of the elastic fibre systems of the sinus Valsalvæ.

6. On the other hand, the semilunar valves, whose ductility is founded in their fan-shaped construction, could not have any elastic tissue in their principal part, as it would make them too stiff, too unyielding. The subendothelial stratum has few and extremely fine elastic fibres which seemingly are not connected into a system. The semilunar valves have no transversal system of elastic fibres, because of the great ductility necessary in this direction.

7. The way in which the elastic tissue is employed in strengthening the smaller arteries also helps to support my theory. The lienal artery, for instance, which goes through the abdomen to the spleen, has its elastic tissue chiefly on the outer side of the media, as membrana elastica externa; its muscularis is inside of the elastic tissue. This shows that the elastica is only an inhibitory agent in extreme distention.

8. Ziegler[17] reports on a number of examinations which emphatically sustain my theory. In a normal condition of the pulpa of the spleen there are none, or very few, elastic fibres, but they develop as soon as there is an increase in the venous blood pressure (cyanosis). The same in the cyanotic kidney and the cirrhotic liver, in which elastic fibres are to be found in the interior of the acini. We find similar conditions in the heart. In hypertrophic hearts a great many elastic fibres appear between the muscle fibres, especially if there is any fibrous degeneration of the papillary muscles.

Benda found that elastic tissue developed in the testicles only after puberty. I would say: It develops when the pressure of secretion begins—to prevent overdistention of the testicles.

Siegmund von Schumacher[18] upholds Ziegler's remarks about the distribution of elastic fibres in the spleen, etc. The pulpa is not mentioned.

9. Seipp's topography of the elastic tissue in the heart conforms with my theory. "The endocardium, especially of the left ventricle, contains a number of elastic fibres from which an elastic ligament extends up to the ventricular side of the semilunar valves." Seipp found no elastic fibres in the normal myocardium, but Ziegler believes there is a fine net of elastic fibres even under normal conditions. On the other hand, in the wall of the auricles, where there is a much weaker muscular layer, there are strong systems of elastic tissue. This tissue replaces in part the missing muscle fibres.

In a case of mitral insufficiency I was able to show an extraordinary development of the elastic tissue in the hypertrophic left auricle. Further investigation of this point is very necessary and desirable.

10. The elastica interna disappears in the smallest ramifications of the arteries. The formation and production of elastic and collagenous fibres seem to take place in and from the intercellular substance, and as necessity requires either the one or the other, is formed according to the physical condition to which the tissue in question is exposed. The formation of new elastic fibres, under pathological conditions, will require close study before it is entirely made clear. Most of what we know we owe to Thoma, as will be seen in a later paper.

The methods which I employed in this study were, aside from Unna's orcein hydrochloric acid staining, Manchot's fuchsin method and the method of Weigert for staining elastic fibres. The latter has the advantage of giving durable preparations, while Manchot's method is very desirable for topographic photographs with small magnifying power, 10-30 times with Edinger Leitz Camera. My post mortem material I owe partly to the German Hospital of the City of New York.

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[17] Ueber das elastische Gewebe verschiedener Organe in normalen und pathologischen Zustanden, nach Untersuchungen von Melnikow-Raswedenkow. Taken from the *Centralblatt für Pathologie*, page 832, October. 1899, and *Verhandlungen der deutsch. pathol. Gesell. auf der 71 Versamml. deutsch. Naturforscher.* München, 1899.

[18] Das elastische Gewebe der Milz. *Arch. f. micr. Anat.*, etc., LV, 1900, pp. 151-171.

RÉSUMÉ.

The elasticity and ductility of the aorta depends upon three factors: on the network construction of the elastic fibre systems of the media; on the elasticity and great yielding power of the collagenous substance; and on the great elasticity and moderate ductility of the elastic elements. The elastic elements can only in their combination as a construction be considered as the carriers of ductility. They are themselves highly elastic, but have relatively little yielding power, and their function is first of all to prevent exaggerated distention. The other fibres of connective tissue are either very ductile, as, for instance, in the semilunar valves, or they are more tendinous, unyielding, as in the valvular ring. The elastic ligament on the ventricular side of the semilunar valves is probably not only made to strengthen, but in connection with the elastic endocardium, it could be considered as a steering apparatus for the position of the semilunar valves, and in combination with the main part of the valves, it forms the joint at the base of the same. Nature appears to make use of the elastic mesh tissues whenever there is any initially large ductility desired, and where afterwards elastic inhibition is necessary.

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EXAMINATION OF THE BLADDER IN TWENTY CASES OF VENTRAL SUSPENSION.

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For several years it was taught by some authors that after replacement of the uterus by ventral suspension, frequent urination was the result, caused by the new position of the uterus and the accustoming of the bladder to its new surroundings. It was stated that this condition of frequent micturition was likely to continue for six months, and even longer.

By many this doctrine was accepted, and the irritable condition of the bladder, with the frequent desire to empty itself, was attributed to this cause. and the patient allowed to suffer.

After operating and finding a number of cases in which this condition did not occur, I was led to make examination by a Nitze cystoscope in some twenty cases of ventral suspension, the results of which so far justified that determination. The cases were not selected, but the first twenty patients requiring this operation of ventral suspension were examined. No effort, therefore, will be made at classification, but the operation and bladder examination will be reported just as the women came under our advisement and care. They are as follows:

Case I.—Girl, white, age twenty-four years. Had never been ill until two years previously, when she had a burning, irritating discharge from the vagina. The discharge was thick and yellow, and was followed by pain and tenderness in the pelvic region, and she was finally confined in bed, suffering from what her physician called peritonitis. She remained in bed for three weeks. Until the operation she had never been comfortable in the lower parts of the abdomen, had had difficulty in retaining her urine, and was distressed by walking. A physical examination disclosed the uterus adherent posteriorly and greatly retroflexed. She was operated on, the adhesions were broken up, and the uterus suspended.

The examination of the bladder was negative, but the urethra was highly sensitive, and was treated by silver nitrate solution (¼ grain to 1 ounce) and gradual dilatation. After two weeks of the treatment, which was instituted forty-eight hours after the operation of ventral suspension, all desire for frequent micturition ceased.

Case II.—Woman, white, forty years old, married, mother of four children. She had classical symptoms of prolapsus uteri. Physical examination revealed eczema of the skin over the labia majora, lacerated anterior and posterior vaginal walls, uterus descended to vestibule of vagina, and greatly retroverted. An operation for these conditions was advised and performed.

The examination of the bladder revealed a small stone in the bladder, which was removed at the time of the operation. The bladder was afterwards washed with normal salt solution, with no after desire for frequent micturition.

Case III.—Girl, white, aged eighteen years. She had sustained a fall from a haymow in a barn eighteen months previously, which was followed by pain and tenderness in the lower abdomen, especially when tired from exercise or walking. There was some leucorrhœa, at times tinged with blood.

An examination disclosed retroflexed and adherent uterus. Examination of the bladder showed congestion and local swelling around the entrance of the left ureter, and the orifice almost indistinguishable.

An operation for breaking adhesions and ventral suspension was performed. For the condition in the bladder, silver nitrate (¼ grain to 1 ounce) and warm sterile salt solution were employed, beginning forty-eight hours after the operation. In three weeks, irritation of the bladder disappeared, and there were no signs of congestion or swelling.

Case IV.—Woman, white, aged twenty-six years, mother of one child. She was suffering from classical symptoms of uterine displacement, was emaciated and anæmic; had a continual discharge from the vagina of a watery fluid, which burned and irritated the skin around the vagina, and even of the inner parts of the legs to the knees. Physical examination showed laceration of anterior and posterior walls of the vagina and of the cervix uteri, and the uterus prolapsed and enlarged. Coming apparently from the cervical canal was a fluid resembling urine, which, upon further examination, proved to be such. It came from a communication between the bladder and cervix uteri.

An operation for repairing the laceration of tissues, and closing the fistula was performed, and no irritation of the bladder or frequent desire to empty it resulted.

CASE V.—Woman, thirty-two years of age, married, no children, seamstress. She suffered from pain and tenderness in lower abdomen, which was increased by her work, and she was in such an irritable condition she was advised to give up her employment. Her desire to urinate was incessant, accompanied by such pain and burning that at times she fainted.

An examination disclosed cystic right ovary, uterus displaced backward and to the left, and at the entrance of the meatus a well defined and bleeding caruncle. The bladder examination showed general cystitis, the walls in places being relaxed, and in places cicatrized.

An operation and ventral suspension were performed, the ovary being removed and the caruncle excised. Benzoic acid, strychnine, and eserine were used. The patient recovered slowly, but in three months symptoms had disappeared, although the walls of the bladder were still somewhat slow in contracting. At the end of six weeks, however, frequent urination had entirely ceased.

CASE VI.—Woman, aged forty-eight years. She was scarcely able to walk on account of soreness and tenderness in the lower abdomen. She showed classical symptoms of uterine displacement, the uterus being easily seen protruding from the vagina. She had frequent and painful micturition, and a continual discharge.

The bladder, examined with the Nitze cystoscope, revealed an old cystitis, and atrophic and contracted membrane.

An operation for repair of torn tissues and ventral suspension were performed. Local treatment to bladder with boric acid, silver nitrate, and normal salt solution was given, and patient was ordered a tonic and appropriate diet. At the end of the sixteenth day all bladder symptoms had disappeared, and judging from symptoms, a complete recovery ensued.

CASE VII.—Girl, nineteen years of age, employed in a department store, where she was obliged to lift heavy packages. She had suffered for three years with pelvic pains, at times during her periods being confined to bed.

Examination showed retroflexion of uterus and catarrhal endometritis. At the entrance of the left ureter was a swelling and local congestion.

Ventral suspension was performed, and the bladder was washed with silver nitrate and salt solution. After one week there was no frequent micturition, and congestion in the region of the ureter opening had disappeared.

CASE VIII.—Girl, eighteen years of age. She gave a history of having been infected four months previous with gonococci, and at this time was still compelled to empty the bladder every half hour. She was suffering from pain in the lower abdomen, and a continual vaginal discharge.

Examination showed specific catarrh of the uterus, uterus displaced posteriorly and adherent. By examination with the Nitze instrument, the bladder showed a swelling and local congestion around the left ureter opening.

The operations of ventral suspension and curettage were performed, and after the first forty-eight hours, local treatment to the bladder was started with silver nitrate and normal salt solution. Symptoms improved in two weeks, and all evidence of bladder trouble disappeared at the end of that time.

CASE IX.—Woman, aged thirty-four years. She had been well until her last confinement, a year previous, since which time she had had a copious discharge from the vagina, thick, yellowish in color, and at times somewhat irritable. She suffered from pains and showed symptoms of uterine displacement, with frequent micturition.

Examination disclosed a pus tube on the left side, uterus displaced backward and to the right, probably infected by gonococci, as evidence of the same was found in pus sac. Upon examination with the Nitze instrument, congestion in patches was found, and was especially marked around the left ureter opening.

Operation for the removal of right pus tube and ventral suspension performed, and after forty-eight hours silver nitrate and salt solution were used every other day. Four treatments were sufficient to relieve all bladder symptoms.

CASE X.—Girl, twenty years of age. Had been infected by gonococci one year previously. The infection extended to the uterine cavity. A profuse discharge, pain in lower part of abdomen, and other symptoms characteristic of gonorrhœa in genital tract, led the family physician to curette the uterus for catarrh, in total ignorance of the cause of the same, six months afterward. This resulted in an attack of peritonitis. The patient remained in bed for six weeks, and at that time had double salpingitis, infected uterine cavity, and the uterus bent down posteriorly by adhesions. Her desire to urinate was constant, and was especially marked immediately after urinating. The bladder membrane was not affected, but there was a stricture of the urethra.

Operation for removal of tubes, breaking up of adhesions, and ventral suspension was performed. Forty-eight hours after the operation dilatation of the stricture was begun, and under great care continued until six weeks afterward, when the patient seemed to be entirely cured. One month after operation there was no bladder distress, and no desire to frequently empty bladder existed.

CASES XI and XII.—These were very similar. Both were cases with torn posterior walls and retroflexion. One woman was thirty-one years of age, the mother of two children; the other, thirty-eight years of age, and had had four children.

The examination by the Nitze instrument was negative, the bladder at no time after operation causing any trouble, although both had frequent desire to micturate before the operation.

Case XIII.—Woman, aged forty-four years, with history of symptoms of uterine displacement. This case was interesting only because the patient suffered with a complete prolapse of the uterus, and frequent and extremely painful urination, yet the instrument failed to show any evidence of cystic trouble, and immediately after repair to the uterus, and the vaginal walls, followed by ventral suspension, the bladder symptoms disappeared completely.

Case XIV.—Was that of a woman, aged twenty-two years, who had borne a child six months before. Symptoms referable to uterine displacement.

Examination showed a condition called by Goodell "subinvolution." Curette scrapings were negative, and bladder was also examined negative. Finding no cause for this condition after curettage and packing of the uterine cavity, ventral suspension was performed.

This woman before the operation was unable to retain in the bladder but two ounces of urine. Eight days after the operation improvement began to take place, and in five weeks the urinary symptoms had disappeared.

Case XV.—Girl, white, aged nineteen years. She was very uncomfortable in the pelvic region, easily fatigued, and when so suffered from severe backache and frequent micturition. There was retroflexion of the uterus, and the bladder by the Nitze instrument showed a small polypus.

Operation for removal of the polypus and ventral suspension was performed, and after ten days there was no disturbance in the bladder. The urine was kept neutral, and the bladder cleaned every day by sterilized warm water, and a weak solution of boric acid was left in the bladder.

Case XVI.—Woman, twenty-four years of age, unmarried, great horsewoman. One year previously she was thrown from her horse, sustaining an injury which resulted in peritonitis and the formation of a vesicovaginal fistula, which had healed. This was caused by a sharp iron rod entering the bladder through the vagina.

Examination showed the uterus bent down by posterior adhesions, and scarred tissue in the bladder. Symptoms of bladder irritation had passed upon the healing of the bladder injury.

Operation for breaking up adhesions and ventral suspension was performed, there being no bladder disturbance immediately before or after the operation.

Case XVII.—Woman, aged twenty-nine years, mother of two children. She was well until the time the last child was born and for six months afterward, which was a year before she applied for treatment. She then had a frequent desire to urinate, causing a burning sensation, and suffered from a thick, yellowish, irritating discharge from the vagina, with pelvic congestion and its symptoms.

Examination showed enlarged uterus, backward displacement, and right salpingitis. The bladder wall was filled with local areas of congestion, and there was much swelling around the left ureter opening.

Operation. Ventral suspension was performed, and removal of the tube was effected. The bladder was treated by silver nitrate and sterile normal salt solution. After two weeks, desire for frequent micturition had passed.

Case XVIII.—This was a woman, white, aged thirty-four years, who had no symptoms of illness whatsoever, but wished to satisfy herself that no symptoms of cancer existed in her female parts, as in her family there had been several cases of internal cancer. Nothing but a uterine retroflexion existed, and this was corrected at her request.

Upon examination, the bladder showed a negative condition. Before and after operation no symptoms of bladder disturbance were at any time evident.

Case XIX.—Woman, aged fifty years, married, mother of three children. She complained, since her last child was born, four years before, of pains and distress in the pelvic region, some leucorrhœa, and inability to walk a long distance, and had classical symptoms of uterine trouble.

Examination showed that her last confinement had resulted in a tear completely through the sphincter ani, and through the anterior vaginal wall of the bladder, but not into it. The uterus was nearly two inches outside of the vagina, and the anterior lip was hypertrophied and the urine was continually pouring over it and keeping it much inflamed. There was no ability to retain the urine, but it constantly flowed over the surface of the neck of the uterus and adjacent parts of the vaginal outlet.

Bladder examination showed the entrance around the left ureter opening congested and swollen. The bladder was very small, and it was atrophied and catarrhal.

After some preparation of the adjoining parts for one month, she was operated on, ventral suspension was performed, and amputation of the cervix and repair of torn tissues made. Congestion around the left ureter opening was not noticed after fifteen days of treatment, but the bladder could hold only six ounces of urine, and was emptied about every four hours, day and night.

Case XX.—A woman, thirty-three years old. She complained of continual desire to empty the bladder, in conjunction with well described uterine symptoms of prolapse, such as "bearing-down pains," a feeling as "though everything were coming out of her," etc., a daily staining of the undergarments with blood, but not enough to be more than a spot or two.

Examination revealed uterine retroflexion and prolapse. Bladder examination showed a dark mass at the region of the left ureter, which, as it faded into the light, was seen to be a cluster of papillomatous growth. The urine contained some blood cells.

Ventral suspension was performed, the patient was operated on for the removal of the papillomatous growth (which, by mistake, was not after wards examined), and the ureter was transplanted. In two months she was about, and no symptoms referable to the bladder were apparent. The Nitze instrument failed to disclose any abnormity in the walls, except a scar from the operation.

There are two other cases in this connection that are pertinent to the report.

The first was that of a woman who had been admitted with the object of correcting a uterine prolapse and cervical and perineal tear. The bladder was examined, and a carcinoma was plainly seen on the left wall near the entrance of the ureter. A curetting and examination of the uterus resulted in a diagnosis of cancer of the body of the uterus.

This patient was not operated on, as a further examination revealed a lump in the stomach and some nodules in the liver, undoubtedly cancerous. The woman at this time complained only of her uterine trouble, but in three months died suddenly, probably from hæmorrhage; but as she came from a distance, and as no post mortem examination was made, the physician could only state his opinion, and his judgment is most probably correct.

The second case is an interesting one. A woman, aged thirty-nine years, came to ascertain why she still had so much trouble with her bladder. She had had the operation of ventral suspension performed, yet she urinated every hour, and found it at times a painful undertaking to refuse to empty the bladder.

A very well-known and skillful operator had performed perinæorrhaphy and ventral suspension, and the frequent micturition continued, much to her disgust. The result of the operation was all that is usually obtained, consequently the bladder was examined, with the result that it was found that the whole upper left quadrant and part of the lower left quadrant was the seat of a villous growth. Thus the cause of her cystic distress was evident.

Upon being told of the condition, she left immediately in an ill frame of mind, and since that time she has not been prevailed upon to return, even for a microscopical diagnosis of a part of the growth.

One naturally would say that these cases are too few from which to reach a positive conclusion or statement in regard to frequent urination in conjunction with ventral suspension, and in this I agree; but they are sufficient to warrant us in the following deductions:

1. In all cases requiring ventral suspension the bladder should be thoroughly examined by a cystoscope.

2. In no cases reported among this number was there any trouble with frequent micturition after the operation of ventral suspension, except where there was some evidence found which would cause such disturbance.

3. The new position of the bladder after ventral suspension aided and relieved, rather than caused, frequent micturition.

4. The said operation may have caused this relief by removing pressure from the neck of the bladder, which pressure undoubtedly helps to cause frequent micturition.

5. The left ureter opening and surrounding parts were often affected, but the cases are too few to state positively why this existed in these cases.

6. Immediate and prompt treatment saves much suffering and adds much to the surgeon's reputation, and to that of the operation.

7. By examining the bladder and surrounding parts we may find cases in which suffering may be relieved, when for some reason an operation for uterine disease cannot be performed.

8. To make such examination eliminates errors, and is more scientific; and the more exact we become, the firmer ground we tread.

THE SURGERY OF NEPHRITIS.*

By GEORGE M. EDEBOHLS, M. D.,
NEW YORK.

(*Concluded from page 966.*)

A few remarks relative to some points more recently arisen in connection with our subject, or perhaps not sufficiently touched upon or elaborated in former communications, may not be out of order. Familiarity on the part of the reader with my previous writings upon the same subject is presumed, as it would lead to too great length to attempt even an abstract here.

THE INDICATIONS FOR RENAL DECAPSULATION FOR CHRONIC NEPHRITIS.

The indications for renal decapsulation for chronic Bright's disease, from the writer's present point of view, are not difficult to state. I say from my present point of view very advisedly, because the confidence and positiveness with which I now advise decapsulation for chronic Bright's disease have only been, and in the nature of things *could* only be, obtained as the result of extended favorable personal experience. During the stage of development of this confidence, it was my custom when consulted with reference to the advisability of operation to present all the facts in connection with decapsulation, as far as I knew them at the time, to the patient, if of average or greater than average intelligence, for his or her careful consideration, and then to await a request from the patient for operation or the expression of a decision not to have an operation. The great and serious responsibility incurred in advising a surgical operation for chronic Bright's disease, advice so diametrically opposed to *all* the teachings and traditions of both medicine and surgery, was ever before my mind, and dominated even my last report of but a year ago. But gradually accumulating experience and knowledge of the final results in a sufficiently large number of cases to entitle me to an approximately final judgment have changed all this. I now consider myself derelict to duty imposed by knowledge gained from experience if at the present stage of the question, and with three conditions fulfilled, I fail to advise renal decapsulation for every sufferer from chronic Bright's disease who consults me and who has a reasonable expectation of not less than a month of life without operation.

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* Read by title before the Medical Society of the State of New York, February 4, 1904.

These three conditions are: first, the clear and unequivocal establishment of the diagnosis of chronic Bright's disease; second, the absence in the given case before us of absolute contraindications to *any* operation; third, the possibility of securing the services of a surgeon reasonably familiar, from practical experience, with the surgery of the kidney. Before discussing these conditions, I may be permitted to call attention to a practically important distinction in connection with the thirty day limitation of probable life without operation. If this limit has been gradually reached in the course and by virtue of the steady tendency of the disease to a fatal termination, the patient's chances of help from operation are decidedly less than when, for instance, an acute exacerbation of chronic nephritis has suddenly jeopardized life. The most certain symptom of impending dissolution, as far as my experience goes, is the characteristic dyspnœa or air hunger of the final stages of chronic Bright's disease, whether the air hunger be due to involvement of the lungs, to threatening acute dilatation of the heart, or to poisoning of the respiratory centres.

The first of the three conditions named, the clear and unequivocal establishment of the presence of *chronic* Bright's disease, can fortunately be fulfilled in any case, though it may in exceptional and individual instances require a brief period of observation and several urine examinations to reach a final positive conclusion. To enter further upon the question of diagnosis would carry us too far.

The second condition, the absence of absolute contraindications to *any* operation, may profitably occupy our attention for a moment. The finding of an *absolute* contraindication to an operation for the cure of chronic Bright's disease means for the victim not only that he must abandon all hope of life, but also that he must, as such cases go, even prepare for *early* death. The question of contraindications to renal decapsulation for chronic Bright's disease has already been touched upon in previous papers, and need but be supplemented here by a few remarks based upon the results of more extended experience.

RENAL DECAPSULATION INDICATED IN ALL VARIETIES OF CHRONIC NEPHRITIS.

In the first place, it may be stated that the variety of chronic nephritis, whether interstitial, parenchymatous, or diffuse, need no longer enter into the question of indications and contraindications to decapsulation. My experience has abundantly demonstrated that good results may be obtained from operation in every one of the varieties of nephritis named. Of forty-seven surviving patients operated on at periods varying between six months and twelve years ago, whose present condition is known, seven suffered from chronic parenchymatous nephritis, seventeen from chronic interstitial nephritis, nineteen from chronic diffuse nephritis, and four from a combination of right chronic interstitial and left chronic diffuse nephritis. Of the seven patients with chronic parenchymatous nephritis, three are cured, two are progressing satisfactorily toward cure, and two are improved. Of the seventeen cases of chronic interstitial nephritis, eleven are cured, three are progressing toward cure, one is improved only, and two are unimproved. Of the nineteen cases with chronic diffuse nephritis, six are cured, eight are progressing satisfactorily toward cure, two are improved, and three are unimproved. Finally, of the four cases of combined right chronic interstitial and left chronic diffuse nephritis, one is cured, two appear to be progressing satisfactorily toward cure, and one is unimproved. The above figures represent the status of my patients on February 1, 1904. A greater proportion of cases of interstitial nephritis have been cured simply because my earlier operations were mostly upon cases of interstitial nephritis, and in these cases, therefore, the average length of time elapsed since operation is greater than obtains in my diffuse and parenchymatous cases.

AGE AS A CONTRAINDICATION OF RENAL DECAPSULATION.

I have already in a previous paper expressed myself in reference to age as well as to cardiac and vascular changes as contraindications to renal decapsulation. I have there said that these contraindications are relative in character only, and that in their practical application judicious individualization must be practised. In regard to age as a contraindication, I find on looking over my records, that I have performed decapsulation of both kidneys for chronic Bright's disease upon nine patients who at the time of operation were fifty years, or over, of age. Three of the nine, aged fifty years, sixty-two years, and sixty-seven years, respectively, died within a week of operation; three died at ulterior dates; one, aged fifty years, three weeks after operation; one, aged fifty-six years, five months and a half after operation; and one, aged fifty-one years, ten months and a half after operation. Of these six patients, only the last two were at all benefited by operation, one enjoying two months of comparative health before he again began to fail, and the other experiencing but moderate improvement extending, however, through the remainder of his life. It is but fair to state that of the six patients aged between fifty and sixty-seven years who died soon after, or at periods more or less remote from, operation, in only one was operation advised by the writer. The other five patients, three of whom were physicians, either requested or demanded operation with a full knowledge of the special risks involved in their cases. Of the surviving three of the nine, one, aged fifty-one years, is cured twenty months after operation; one, aged fifty years, is almost well, one year and a half after operation; and one, sixty-three years of age, is doing only fairly well seven months after operation.

CHANGES IN THE HEART AND BLOODVESSELS AS CONTRAINDICATIONS TO RENAL DECAPSULATION.

In regard to contraindications arising by virtue of the existence of cardiac and vascular derangements, I have but little to add to what I have already stated; that little, however, seems to me both interesting and important. During the course of the year past I have had the unexpected pleasure a number of times, on again seeing and examining patients at periods remote from operation, to find that very pronounced cardiac hypertrophies and derangements charged against them on my records as existing prior to operation, had become totally insignificant and in some cases had even entirely disappeared as the health of the kidneys was gradually regained. These changes for the better in the condition and action of the heart I have to come to regard as the surest indication that the health of the kidneys is improving. In this connection, and as illustrating a possible life insurance aspect of renal decapsulation, I will but mention one case, that of a physician, thirty-six years of age, who for three years before operation had suffered from chronic Bright's disease with enormous hypertrophy of the heart and such violent and tumultuous heart thumping that he was unable to sleep at night. An application for life insurance made two years before operation was turned down. Fourteen months after operation his heart was perfectly normal in every way, and he again applied for insurance to one of the three large life companies of New York, stating the facts of his long illness with chronic Bright's, of the decapsulation of his kidneys, and of his steady favorable progress towards health since operation. The medical examiner pronounced the heart normal and found a trace of albumin and a few granular casts in his urine, the daily amount of the latter being 1800 c. c., with a specific gravity of 1013. On the strength of all the facts, a conditional policy for $5,000 was issued to the happy applicant, who has a family to provide for. Thus it has come to pass, strange as it may read, that we are curing heart disease by operating upon the kidneys.

Possibly the one cardinal point that should guide us in advising for or against decapsulation for chronic Bright's disease in the presence of cardiac derangements, especially enlargements of the heart and degeneration of the heart muscle, is the fact as to whether the compensation of whatever lesion may be present is sufficiently good to warrant the assumption that the patient will safely stand the anæsthesia. In this connection it must be borne in mind that practically all cases of chronic Bright's disease of any duration have more or less hypertrophy of the heart. As long as the enlargement of the heart is mainly hypertrophic and not due to dilatation, as long as the hypertrophy is concentric, an anæsthetic may be administered with a reasonable degree of safety. It is only when dilatation of the heart predominates over the hypertrophy that the danger of sudden death from acute dilatation of the heart is ever present, and no general anæsthetic should be administered to such a patient. The most ominous single auscultatory sign of predominant dilatation of the heart and danger of sudden death is, in my opinion, insufficiency of the aortic valves as denoted by an intermittent aortic regurgital murmur, occurring, say, every third, fourth, or fifth beat, or even less frequently. When this condition is clearly present and cannot be removed by suitable medication, the patient is *very* near the end of life and I advise against operation.

RETINITIS ALBUMINURICA AS A CONTRAINDICATION TO RENAL DECAPSULATION.

The presence of retinitis albuminurica is another element in a case which should be considered as demanding careful consideration in determining for or against renal decapsulation. In this connection œdema or dropsy of the retina must be differentiated from true retinitis with hæmorrhage and exudates. The former may disappear the same as a dropsy in any other part of the body. The importance of true retinitis albuminurica in relation to a contemplated renal decapsulation lies in the fact that it is one of the late manifestations of chronic Bright's disease. Its occurrence signifies that a time has come when the general changes produced throughout the body by the disease can scarcely be made good short of a miracle, and in themselves lead to death, even if the function and health of the kidney can be in greater or less degree restored by operation. In sixty-seven per cent. of cases of chronic Bright's disease in which retinitis albuminurica occurs the patients will die within a year after the development of the eye affection, while of the remainder, none, perhaps, will survive two years. The very occasional occurrence of an exception only proves this rule, which is based upon large statistics.

Among my own 72 patients operated on up to the end of the year 1903, I find that nine had retinitis albuminurica at the time of operation. Not one of the nine is alive to-day, all having died within a year after operation, and only two having experienced decided benefit from operation. A further significance of retinitis albuminurica lies in the fact that it denotes such widespread disease of the vascular system that the danger of rupture of bloodvessels in any part of the body is always imminent, often leading to death from cerebral, pulmonary, intestinal, and other hæmorrhages. While not prepared, therefore, to state that the presence of retinitis albuminurica, especially in a young patient, is an *absolute* contraindication to decapsulation, I would, in the light of my experience to date, weigh very carefully all the pros and cons in such a case before advising operation. Larger experience, however, is needed before the last word can be said in this matter.

The last of the three conditions mentioned as requisite to be fulfilled when advising renal decapsulation for chronic Bright's disease, is that the services of a surgeon reasonably familiar, from practical experience, with the surgery of the kidneys can be secured. Otherwise the additional risk from unnecessarily prolonged anæsthesia, let alone the extra danger of the operation itself and the possibility even of its not being successfully completed, are drawbacks which may outweigh the possible benefits to be derived from operation. Should renal decapsulation for chronic Bright's disease receive anything like general recognition, the present and rising generations of surgeons can be depended upon to qualify speedily to meet any demand that may arise for expert services in this connection.

THE TECHNICS OF RENAL DECAPSULATION.

My method of performing renal decapsulation remains practically the same as first described in my paper of 1901 (19). Nor is it likely that any material or important changes in the method will be heralded in the near future; decapsulation as an operative procedure is perfectly satisfactory as it is. The only slight alteration or modification that has been suggested since I first proposed the operation, is *always* to anchor the decapsulated kidneys to the muscles of the back. Such fixation of the kidney, which in itself is neither desirable nor indeed always possible, has been proposed on the erroneous supposition that it is possible to get a better new vascular supply from the muscles than from the perinephric fat. The experiments of Anzilotti on animals have shown the fallacy of this supposition. Anzilotti, in some of his experiments, imbedded the denuded kidney in a muscular bed, and found that, as compared with simply dropping the kidney back into its fatty capsule, the new capsule formed was thicker and denser, but *never* more vascular after the former than after the latter procedure. Now a thicker, and especially a denser capsule, is exactly what we do *not* desire. The logical deduction is that, in operating for chronic Bright's disease, fixation of the kidney should be added to decapsulation under exceptional circumstances only, i. e., when the kidney is both movable and the mobility of the kidney, in itself, gives rise to decided symptoms. This is the rule which I have followed, and from which, for the present, I see no reason for deviating. As to pulling down a kidney found well sustained by its natural supports in its normal place, as obtains with the majority of kidneys affected with chronic Bright's disease, and deliberately and in cold blood sewing it fast in an unnatural position, that, from my viewpoint, would be a crying surgical sin.

The only other point that I desire to emphasize anew is the necessity of securing healing by first intention, in order to obtain the best results from renal decapsulation. Nephritics do not stand suppuration well; and the difference between primary union and suppuration may mean for the patient the difference between life and death. In my own work I have been fortunate enough to obtain primary union in practically all of my renal decapsulations. Infection occurred in only two of my patients, in both instances from causes that were unavoidable; both patients ultimately made good recoveries.

INTERPRETATION OF THE GOOD EFFECTS OF RENAL DECAPSULATION.

By some who are either unable or unwilling to believe in a surgical treatment for chronic Bright's disease, the rest in bed of the three weeks after operation has been invoked to explain the undeniable and striking immediate good effects of renal decapsulation—the return of color and strength, the disappearance of dropsies, headaches, backaches, digestive and circulatory disturbances, the improvement in the condition and action of the heart and cerebrospinal centres. The fact is ignored or overlooked that many of these same patients, who were so greatly benefited by operation, had prior to operation spent months and, in a number of instances, even the greater part of a year at a time, in bed without experiencing the slightest improvement worthy of the name. The changes in the patient's condition and general health after decapsulation, on the contrary, are nearly always impressive and in some cases simply marvellous. The improvement, moreover, is progressive, continuing and increasing even after the patient has left his bed and resumed his place and work in life. The correct explanation of these phenomena lies so near as to be readily overlooked, and is to be sought and found in the improved work of the kidneys, as denoted especially by the increased daily urea output, promptly following decapsulation. Indeed, decapsulation puts any diseased kidney in the best possible condition gradually to regain its health, and while regaining its health to do the best work possible for that particular kidney to accomplish. As a lay writer has expressed it, " with the surgeon's help the kidneys take off their coats and go to work in their shirt sleeves."

UNILATERAL CHRONIC NEPHRITIS.

In my publication of 1901 I reported eight instances of unilateral nephritis among nineteen cases of chronic Bright's disease on which I had operated. This feature of my report evoked, perhaps, more comment than any other, and met with dissent and incredulity in not a few quarters. It was even used in an effort to discredit all my work and observations by some writers who were unable to divorce themselves from the preconceived traditional notion that chronic nephritis must in all cases and *at every stage* of the disease be a bilateral affection. In the publication named I have given my interpretation of my observations, and have said all that need be said upon this subject. Since then a number of both physicians and surgeons of the highest rank have expressed their conviction, based upon enlarging experience, that chronic Bright's disease is not always a bilateral affection, thus fully sustaining my position.

That I happened to meet with so large a proportion of cases of unilateral nephritis in my earlier work was because my first operations were mainly upon milder and less advanced cases of chronic Bright's disease. Following the publication of these cases, there came for operation a series of very far advanced cases, many of them in the final stages of the disease, and in the last 53 cases only three instances of unilateral nephritis were observed. Adding to these the eight cases of unilateral nephritis observed in the first nineteen patients, we have a grand total of seventy-two cases, composed of eleven cases of unilateral and sixty-one cases of bilateral chronic nephritis.

SOME GENERAL CONSIDERATIONS CONCERNING RENAL DECAPSULATION.

In conclusion, it is at once fully and freely conceded by the writer that a major surgical operation is not by any means an *ideal* treatment for chronic Bright's disease. The same may be said, however, for surgical measures which cure in other diseases in which the resources of medicine fail. When the medical science of the more or less near future shall have found, as I confidently hope and believe it will find, some simpler, more readily and generally applicable, safer, and equally efficient treatment, let us say cure, for chronic Bright's disease, then will renal decapsulation become a memory and a matter of history. For the present, in view of the helplessness of medicine in the presence of established chronic Bright's disease, the advance in treatment represented by renal decapsulation should be welcomed by every physician called upon to treat chronic nephritis. Nor is the physician justified in taking the position that only after all other measures have failed, as fail they must, will he resort to decapsulation. That is giving neither the operation nor his patient a fair chance, to which the latter, at least, is certainly entitled. For even at the present writing we are able to affirm as the result of experience, that renal decapsulation applied early in the course of a chronic nephritis, and in the absence of complications, is *almost* free from danger in expert hands, and is *almost* a certain cure. Why, then, wait until the inevitable all around breakdown in health, which is sure to come in every case of chronic Bright's disease, forces us to operate in the last stages of the disease, perhaps upon a dying man or woman, with all the gloom that invests such an occasion, or else to abandon the unfortunate sufferer to his or her fate? In my own experience I have had no less than three patients with chronic Bright's disease die on the very day appointed for operation, all idea of any operation having to be abandoned at the last moment, and I recall with especially painful vividness the passing away of a valuable life while the final preparations for operation were going on in an adjoining room.

That physicians are not unwilling on occasion to try in their own persons methods of treatment which promise more than those heretofore known to medical science, seems indicated by the fact that of 72 persons whose kidneys I have decapsulated for chronic Bright's disease up to the end of 1903, no less than ten were physicians, and two others were members of the immediate families of physicians; one physician and his wife, indeed, were operated upon on the same afternoon.

Much of what has been written above rests upon the assumption that the curability of chronic Bright's disease by renal decapsulation is a proved fact. To establish the truth of this fact a *sufficiently* large number of cases of chronic Bright's disease observed for a *sufficient* length of time after renal decapsulation was an absolute essential. This essential condition has now, perhaps, been fulfilled to a reasonable degree in the practice and experience of the writer. On three previous occasions, in 1899, in 1901, and again in 1903, I reported the results, to date of publication, of my attempts to cure chronic Bright's disease by operation. The results and conclusions which I had obtained and reached at each of the periods named, although they possessed only a conditional value, limited by the fact that they were based upon a comparatively brief period of observation, still indicated and foreshadowed with growing clearness the final triumph of renal decapsulation for chronic Bright's disease. As a result of my experience and observations to date, embracing 72 cases operated on between six months and eleven years and a half ago, no less than sixty-nine of which, by dint of unremitting watchfulness and exertion, I have been able to follow either to the termination of their lives or to the present writing, I am happy to be able to state that my expectation and hopes of years ago have been in large measure realized, and that the promise of a yet fuller realization appears bright. For renal decapsulation for chronic Bright's disease has not as yet had, and in the near future is not likely to have, a full and fair test and trial. As a rule, only severe, advanced, and often absolutely hopeless cases have thus far come to operation, and the same statement will probably still hold true whenever it may happen to be made during the course of several years to come. Yet it is not until a much larger proportion of cases of chronic Bright's comes to operation early in the course of the disease, an event not likely to happen in the very near future, that the full possibilities for good of renal decapsulation will be realized.

I am at present engaged in collecting information concerning the outcome to date from all patients I have ever operated upon for chronic Bright's disease. As soon as possible after the completion of these investigations, I intend to issue a fourth publication of the results of my work. In this coming publication, in addition to giving the history of each patient in full detail, including uranalyses, I will also attempt an analysis of the results thus far obtained. Such a course will probably silence the objections of those critics who have found my previous communications too terse and brief in view of both the novelty and importance of my theme; one French writer, indeed, carries this implied reproach to the extent of designating my style or diction as "telegraphic." It will also fulfill, as far as lies in my power, an obligation assumed when I first advanced the proposition to treat chronic Bright's disease as such by decapsulation of the kidneys.

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A NEW METHOD TO FACILITATE OPERATIONS IN THE MOUTH, FOR THE PURPOSE OF MINIMIZING THE DANGER OF ASPIRATION OF BLOOD DURING GENERAL ANÆSTHESIA.

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NEW YORK.

During operations in the mouth and nose under general anæsthesia we always have to guard against the aspiration of blood. This, we all know, is in a great many cases very difficult, necessitating sometimes the ligation of the external carotid artery, sometimes a pendent position of the head, making the operation very awkward, and sometimes a preliminary tracheotomy and the insertion of a tracheal tampon of the model of either Trendelenburg or Gerster. While the latter instruments are very useful when they are in good working order, it will be admitted by those having used them that they are not always to be relied upon. Even so, either a preliminary tracheotomy or the ligation of the external carotid artery is a sufficiently serious operation to make it worth while, I hope, to give my suggestion a trial. The matter is very simple. Intubate the patient and connect the intubation tube by means of a tightly fitting end piece with a rubber tube, which is passed through the patient's nose, so that the inspired air or anæsthetic is taken into the lungs through the tube passed through the nose.

The necessary outfit is very inexpensive, as it can be procured through any instrument maker for about a dollar. I take it, of course, for granted that the operator owns both an intubation set and a laryngeal forceps. The only piece that has to be procured is the end piece, which must be a piece of tapering oval tubing to fit easily but tightly into the intubation tube, and a small plug, which may be used for the purpose of closing the end piece, if desired.

My method of procedure is as follows: After intubating the patient, insert the plug into the end piece, so as to occlude it and prevent it from becoming clogged with nasal mucus. Pass the rubber tubing, to which the end piece is firmly wired, end piece first, through the nose, and when it shows behind the soft palate, take hold of it by means of a forceps and extract the plug. Then take hold of the end piece by means of a laryngeal forceps and insert firmly into the opening of the intubation cannula. Thus the larynx is occluded as safely as can be desired. The patient will breathe through the rubber tube and the anæsthetic can be administered in this way as easily as through the tracheotomy tube.

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WHAT SHOULD THE GENERAL PRACTITIONER KNOW OF OPHTHALMOLOGY?

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When the prisoner is "caught with the goods," his defense is a matter of difficulty. In the present instance the attack upon the patience of the long-suffering general practitioner deserves less mercy in that it is not a first offense. The excuse that a paper is written "by request," to oblige a friend, is hackneyed, and is allowed without protest, only because of the gentlemanly courtesy of the members of the medical profession; in other circles a similar coy admission is often a subject for derisive comment. In a somewhat modified form, however, it constitutes the writer's plea of self-defense; with increasing frequency he is asked questions which have been condensed into the title of this paper. The attitude of the questioners seems to be a variable mixture of pride and self-complacency, self-depreciation and regret. While the admission of total ignorance of ophthalmology is frankly made, advice is sought as to the advisability of "learning the ophthalmoscope," as if this were the easiest and most necessary part of the subject for general work instead of the diametrically opposite.

My future self-protection will consist in answering these questions with: "You will find that considered bv me in a paper read before (more or less of) the Association of the Alumni of Bellevue Hospital, on the seventh day of October, 1903, and published in the *New York Medical Journal and Philadelphia Medical Journal* for ——." This time-honored and time-saving device generally closes the interview, while lending an air of importance to the last speaker, and giving a proper sense of shame to the other for not having been familiar with the gifted effusion which—for aught he knows—may be good for something. Although unlikely to go to the labor of reading it, he may refer to it in complimentary terms before others, which is the utmost any medical writer should expect.

The annoying misapprehensions regarding ophthalmology seem in part to come from the teaching of the medical schools. Here are combined the faults of an all-star theatrical performance with the defects of schools in general; where, the more earnest the teacher, the more is his subject exaggerated, with distortion of relative importance in the minds of the pupils.

In addition to this defect of early teaching, medical practitioners are exposed to the claims of over-enthusiastic dabblers or ignorant pretenders. A common expression among these people is: "I know how to use the ophthalmoscope." So did Master George Washington and Mrs. Carrie Nation know how to use a hatchet, for that matter, and the latter had the greater pride in her performance.

The sincerity of some of our natural ophthalmoscopists is not to be questioned, for they are entirely willing to demonstrate their ability before known experts, entirely unconscious of the fact that their commonplace and irrelevant yet weird performance is more suggestive of an attempt to revive the child's play of Miss Jenny O'Jones than of serious scientific work. Should it be suggested to them that retinitis albuminurica and chronic glaucoma were different conditions, their reply would be apt to be similar to that of the commander of the expedition for hunting the Snark:

> "What's the use of Mercator's North Poles and Equators,
> Tropics, Zones, and Meridian Lines?"
> So the Bellman would cry; and the crew would reply:
> "They are merely conventional signs."

A third reason for misapprehension is due to the exploitation by a certain class of eye specialists of the organ of vision as a central starting point of general disease. Now, the effect of eyestrain upon the nervous system is interesting and, in a way, important, but it should be kept subsidiary to matters of more importance still in eye work.

Lastly, perhaps the American tendency of covering the ground superficially, rather than of knowing thoroughly a portion of a subject, has not entirely died out. Of course, we are the greatest nation on earth, etc., and do not welcome foreign criticism, but we may well listen to the words of a fellow countryman: "It is better not to know so much, than to know so much that ain't so."

There is no better place in which to judge the relative importance and ease, or difficulty, of diagnosis of the different forms of eye trouble, than a large, well-conducted clinic for diseases of the eye.

Here the external inflammatory cases receive first consideration. It does not require long training for a physician to begin to handle these cases. He must examine the conjunctival surface of the lids of the cases with purulent or mucopurulent secretion, in order to see their condition, and whether granulations are present; and he must know that photophobia, pain, circumcorneal injection, or diminished vision does not belong to conjunctivitis, but signifies disease of the eyeball. If he is unable accurately to diagnosticate one of these cases, he is expected to refer it to some one who is able to do this. It is most important that iritis or glaucoma should not be overlooked, for delay in these cases results most surely in impairment or loss of vision.

The differential diagnosis of these diseases is easy on paper, but in practice the severe pain and contracted, immovable pupil of the one is frequently confounded with the severe pain, dilated immovable pupil, and hard eyeball of the other. The non-expert specialist has one advantage over the general practitioner: he is not likely to diagnosticate acute glaucoma as gastritis because of the vomiting, and, as may happen to the latter, calmly allow the affected eye to go to its doom, while he treats the stomach. What the men with most experience in the matter do not know about glaucoma would fill a book—has, in fact, already filled many books. The salient points stand as they did nearly half a century ago; an eyeball harder than normal is glaucomatous, and when there is glaucoma the eye shows this increased tension. It is estimated by feeling the eyeball through the upper eyelid with the tips of both forefingers, while the patient looks downward. The prognosis is regularly bad without proper treatment, and the best treatment in general is an iridectomy early in the disease.

External inflammatory diseases of eyes are the easiest to learn to diagnosticate and the most important; treatment is more necessary than for internal non-inflammatory cases; the results are better; and as the average age of the patient is less, more vision for the future is preserved, so to speak.

Let us pass on to the other cases. Of the disturbances of motility the squints are evident deformities, the paralyses have double visions or pupillary disturbances, and their study belongs more properly to the department of neurology; muscular insufficiencies belong to cases of eyestrain, soon to be considered.

The vision in all cases had better be tested, but for the external inflammatory cases, the diagnosis may often be made easily without this, and it is thus omitted in large clinics for lack of time. For internal diseases a test of vision should always be made. A novice is allowed to make these tests after a few minutes' instruction; he is told the meaning of the test cards and needs to know that eyes having good vision, with or without glasses, are presumably healthy. Those with poor vision must be referred to the chief of clinic for ophthalmoscopic examination, and it is necessary for him to have years of experience before his opinion is considered valuable, if it is then.

Eyes with good vision which required treatment suffer usually from eyestrain with headache. These cases have been over-exploited by a certain class of enthusiasts, but eyestrain, to quote a former visiting surgeon to Bellevue Hospital about another matter, belongs among the minor ills of life, like lost collar buttons and troublesome mothers-in-law. Loss of vision is a tragedy and is only to be compared in medical circles with loss of life itself. From the broader standpoint of benefit to the community, saving vision is more important than saving life. If patients, general practitioners, and eye specialists, would keep in mind the fact that the eye is the organ of vision, that deteriorating sight is the important danger sign, that diseases showing this will rarely right themselves without proper treatment, and that delay is dangerous, the world would be a great gainer thereby.

It takes but a few moments to learn how to test central vision; this is considered sufficient for examinations for the army and many positions in which it is not important to differentiate colors. Most of the ravages of the refracting optician would be prevented by a law which would punish him for selling glasses to a person who could not see properly through them with each eye. The physician who wished to cover the ground could readily learn the use of the perimeter in addition to the test for central vision, and thus be able to detect an occasional case of chronic non-inflammatory glaucoma or atrophy of the optic nerve, in which diminished vision at the periphery of the field might precede lessened central sight. Should he desire to do more, he might learn with this the easiest part of ophthalmoscopy, the diagnosis of fixed or floating opacities in the lens or vitreous.

Thus, we have run over the different branches of ophthalmology in an attempt to find those diseases most important to diagnosticate and treat from a general standpoint. Enough has been said to show that proper use of the ophthalmoscope is too difficult and tedious for the general practitioner to learn, especially if we consider that what is known as medical ophthalmoscopy is the last part of the subject in which the ophthalmoscopist becomes expert. This statement is not likely to be denied, but the suggestion already made that ophthalmoscopic diagnosis is not very useful for general medical purposes is at variance with current views and needs some explanation. Let us consider some of the more important internal changes in the eye from general disease. With those diseases causing arterial degeneration it is of little more use for general diagnosis to know that hæmorrhages are present than that vision has deteriorated. No one expects to base a diagnosis of nephritis or diabetes solely upon cataract, or of tuberculosis upon indefinite chorioidal changes. From the circumstances attending the cases it is almost never necessary for the general practitioner to base a diagnosis of syphilis upon specific chorioiditis. The lesion most urged upon the general practitioner for diagnostic purposes is retinitis albuminurica. Most cases of chronic nephritis do not have this, but there is a retinal change in some so distinctive that I have never seen it in any other disease. Nor have I seen nephritis with this distinctive ocular lesion, where the diagnosis could not have been made without it by the time it was evident.

To depend too much upon the ophthalmoscopic changes may lead to error. A patient was sent to me some time ago with a written statement from her physician made on the authority of a most excellent eye specialist, who had seen her several months before, that she had gouty hæmorrhages in one eye. The history of gout was not clear, and the retina, at the time I saw it, suggested Bright's disease. Careful examination of the macula of the other eye showed more typical changes. It turned out that the patient was under treatment for Bright's disease before, and at the time of, the first examination. Another case was sent to me because the family physician found difficulty in holding out against an experienced specialist, who insisted that a retinal lesion showed Bright's disease. These changes bore enough resemblance to the real thing to create some suspicion, which the course of time showed to be unfounded. At one time a medical friend described to me at length the treatment of one of his patients by first one, then another, eye specialist of skill. The patient was said to have had retinal hæmorrhages, so I asked if the urine had been examined. It seemed not, and my friend appeared at my office a few days later with an anæmic and puffy patient whose urine had just been found to be loaded with albumin and casts. The ocular difficulty turned out to be detachment of the retina, and the patient had been confined in bed for a long time, to the great impairment of his general health, and with the usual failure in this disease to prevent blindness.

In the above mentioned cases several of the best eye specialists, although proud of their knowledge of general diagnosis, were at fault about existing general disease. In addition to the more general moral, it would also appear that a little theoretical knowledge of the meaning of the ocular signs of general disease could be put to some practical use by any physician without the necessity of his attempting ophthalmoscopic diagnosis.

Papillitis, or choked disc, is an important sign of cerebral tumor; yet it is not a localizing symptom, and I have seen an occasional case with other disease of the brain, following traumatism of the head, and after pneumonia with severe headache. Other observers have described it with disease of the kidneys or uterus. A sign of brain tumor with no more practical indication than is furnished by choked disc would be of little use to the general practitioner as compared with other symptoms of which he is usually ignorant.

Primary atrophy of the optic nerve gives rise to a suspicion of locomotor ataxia. It is incurable and, like choked disc, has interest principally for the oculist and neurologist. The latter, of course, has need for ophthalmoscopic diagnosis, although ocular paralyses including pupillary reflex signs are of more use to him.

And now, with minutes only to complete this paper before our meeting, the horrible and awful thought arises that in no part of the article have reasons been given to show why the general practitioner needs any knowledge of ophthalmology at all. He needs, then, to know that eyestrain is the most frequent cause of headache and may produce certain disturbances of the nerves or stomach, because this has been matter of common knowledge for years. Ignorant of it, he appears something like the captain of police who does not know that the excise and gambling laws are violated in his precinct. Of course, there will always be men to deny the influence of eyestrain, just as there will always be those who deny the propriety of vaccination. The general practitioner should know how to evert an upper lid, because he sometimes ought to know what is upon the conjunctival surface. He should also know that poor sight, double vision, photophobia, pain, circumcorneal injection, unnatural pupils, or hard eyeballs are danger signs, in order to be able properly to advise his patients. For the physician who does not know this is likely to contribute to the general total of blindness and to lose the confidence of some of his patients, perhaps even their patronage. On the other hand, the man who keeps these things in mind makes the specialist often take a secondary place; the patient understands that sort of knowledge and it appeals to him, while the other part of the work, done by the specialist, seems a mass of tedious technicalities.

There is no legal or moral obstacle which prevents the general practitioner from acquiring such further knowledge of ophthalmology as his taste, time, and opportunity will permit.

118 East Seventy-second Street.

Therapeutical Notes.

An Aniline Compound of Mercury.—Fedtchenko *(Roussky Vratch,* March 20th) describes an aniline compound of mercury (mercuric anilinate). In dry form this preparation occurs as a light, white powder, tasteless and odorless, having a fatty feel. Under the microscope it shows a crystalline structure in the form of small thin needles. It contains 52.1 per cent. of pure mercury, and is rather insoluble in water. The author has employed it in the treatment of syphilis, in the form of solutions in vaseline for subcutaneous injection; in the form of a strong ointment for inunctions, and a weak ointment for treating ulcers; in the form of a plaster to be used wherever mercurial plaster is indicated, and in the form of pills.

Subcutaneous injections were given in the form of four parts of the salt in 30 of vaseline, to which a small amount of cocaine was added (0.25 gramme to 30.0 grammes of ointment). The results of these injections were excellent, the remedy being easily absorbed and not giving rise to any unpleasant effect. Internally the aniline salt was given in the form of pills of one quarter of a grain each, in extract of gentian or licorice, from 4 to 8 pills being taken daily. These pills were easily borne, and were as active as any other mercurial preparation, although the therapeutic effect was obtained not quite so rapidly as was the case with some other forms of medication. There is no question, however, that the aniline salt is superior to the iodide so frequently employed.

Parenchymatous Keratitis.—Grandclément cited, in *Lyon médical,* for March 20, 1904, states that the usual antisyphilitic treatment is useless and that local measures are all important. In sixty to one hundred days rotatory massage, increasing in force, gives the most remarkable curative results. The eyes should be rubbed with ointments of yellow mercury oxide and the massage by an expert for fifteen minutes every hour, with great energy. Massage may act by a mechanical dissipation of the superfluous leucocytes or by resuscitating the lost constriction of the pericorneal vessels. Subconjunctival injections of mercuric cyanide used simultaneously, can at least do no harm.

Diabetic Albuminuria.—Laumonier *(Bulletin général de thérapeutique,* for January 15, 1904) calls attention to the value of glycogen in the treatment of diabetic albuminuria. He recalls the fact that last year he was led to conclude that the hepatic cell in diabetics seemed to have lost the power of fixing glycogen in its cytoplasm. His researches have since been confirmed by Monier, of Liége. This brings to mind the fact that Frerichs, many years ago, having obtained by trocar from a diabetic patient a fragment of hepatic tissue, ascertained microscopically the absence of glycogen in the hepatic cell. Albuminuria is a grave complication of diabetes and requires active treatment. Unfortunately, this symptom and diabetes are, as it were, antagonistic, the former requiring a milk diet, or at least a diet rich in hydrocarbons; the second, on the contrary, demanding a diet from which are excluded as much as possible starches and sugars. Again, considering the condition of the kidneys in diabetics, certain remedies now used, antipyrine and other toxics, cannot be employed. The writer found that the methodical use of glycogen seemed to avoid this difficulty, and mentions a number of cases with charts to sustain his point. The dose administered began, as a rule, with one gramme (15 grains) in the course of the day.

Blue Light for Neuralgia.—Arienzo is cited by *Journal de médecine de Paris,* for January 17, 1904, as having employed in obstinate cases an ordinary reflector with an incandescent lamp of 30 candle power, applied for from ten to fifteen minutes, the patient being some 15 centimetres from the apparatus. Four cases of neuralgia of the trigeminus, one of the auriculotemporal nerve, and one of the spermatic nerve were speedily jugulated by the treatment; the number of treatments averaged ten, one being administered daily; in one case only was it necessary to continue treatment for twenty days. According to Arienzo, blue rays have a specific anæsthetic effect; he thinks the light penetrates the tissues and the subjacent organs and has a special action on the vasa nervorum.

Stomach Vertigo.—Dr. Albert Robin is cited in *Revue française de médecine et de chirurgie,* for May 7, 1904, as reviving what was practically the treatment of Bretonneau, who flourished about 1815. A small dose of infusion of quassia is given early in the morning, and a first breakfast follows half an hour later, of a boiled egg, stewed fruit, and toast; nothing is drunk at this meal. At the other meals, the patient must avoid cooked butter, fats, sauces, stews, pan fried foods, pastry, pork, salad, uncooked foods, and acids; he is allowed soup, fowl well cooked, fish boiled without sauce, eggs boiled or scrambled, boiled vegetables with butter added at the table, plain cake, cooked fruit, whole wheat bread, and simple desserts, plain or mineral water. Five drops of tincture of nux vomica may be given in water five minutes before luncheon and dinner, and a hot infusion of mint immediately after. After dinner and at bedtime, one of the following powders should be given in a little sweetened water:

℞ Sodium bicarbonate } of each............4 grammes
Calcined magnesia } (1 drachm);
Precipitated calcium carbonate } of each..6 grammes
Lactose } (90 grains).
M. Divide into 12 powders.

The foregoing treatment may be continued for eight days, and followed by suspension for the same period, until the vertigo disappears. Coffee, tobacco, and constipation are the three great ætiological factors in stomach vertigo. For constipation, the following prescription is recommended, dispensed preferably in capsules:

℞ Cape aloes............8 centigrammes (1$^{1}/_{5}$ grain);
Gamboge ....3 centigrammes ($^{9}/_{20}$ grain);
Turpeth ....2 centigrammes ($^{3}/_{10}$ grain);
Extract of belladonna } of each.....1 centigramme
Extract of hyoscyamus } ($^{3}/_{20}$ grain);
Extract of licorice.....10 centigrammes (1½ grain).
M. For one capsule.

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RADIANT ENERGY IN MEDICINE.

The legal as well as scientific status of the Röntgen rays in British dominions has recently been sharply tested in the Dublin law courts. A juvenile native of Galway, the site of the western limb of the Royal University, was admitted into the city infirmary with a damaged knee into which there was a suspicion that a needle had penetrated. On that account Professor Colohan, under whose care the lad had been placed, sent the latter to the physical laboratory in order to have the ailing joint questioned by the x rays. The experiment was carried out by the laboratory assistant, who was conversant with the management of all the machinery, and who had sometimes taken x ray photographs before. A solution of continuity of the cutaneous surface developed in time. The patient was sent to Dublin, and the hospital surgeon consulted sent him to a photographer, to have the limb again questioned. The latter, on seeing the " sore," at once said that it was an " x ray burn ! " Neither of the photographers was, of course, connected with the profession of medicine or surgery. But the expression of the opinion just mentioned proved to be the germ of one of the heaviest suits which have for many years been tried in the Dublin courts, as it is the first in which the legal and medical professional responsibilities and limitations of x ray photography have there been publicly investigated. Three actions were brought—against the physician, the laboratory assistant, and the college authorities, respectively. A small cicatrix was all that remained to show the existence of a lesion which the plaintiff's guardians would fain have charged to culpable and injurious negligence. We are very much pleased to be able to add that the jury did not accept this mischievous view, and exonerated the defendants from all blame.

Developing simultaneously with such suspicions and incriminations, we have hopeful reports and prognostics regarding the possible and even probable if not actual effects of the x rays (and their congeners) on the great opprobia of our profession—tuberculosis, carcinoma, and sarcoma. Very definite results have already been attained by the employment of the filtered rays of Finsen against the hideous plague of lupus. The advantages obtained by the application of x rays to organs invaded by carcinoma or sarcoma must still be regarded as *sub judice;* but even the skeptical must allow that the general impression left on the collective professional mind is decidedly encouraging. If the career of the *Bacillus tuberculosis* has been permanently arrested in a given patch of facial lupus, may we not easily be justified in hoping that we may at an early date be able to use such agency in blighting its growth within a pulmonary tubercle? And, while the experience of the conflict between other rays and other diseases still retains us in suspense, we have almost annual revelations of wave energy and radiant energy of which there are good grounds for hoping for final success in this field. For the discoveries of the past few years have decidedly tended to show that the views of Democritus and Epicurus on the nature of atoms and molecules were at least as near the truth as those of the leaders of physical science in the nineteenth century; that the dreamy lucubrations of mediæval alchemists contained a larger proportion of prophetic truth than the advanced materialist of the past decade has been able to conceive—or, at least, to admit; that the idea of the oldest of ancient Greece's "wise men"—of the origin of all existing varieties of matter from a single element—was not quite so silly as the average smart undergraduate has been prone to believe; and that the tendency of the most recent discoveries is to reduce the structure of all chemical elements and compounds to the constituents of the all-pervading ether—with or without the mechanism of Cartesian vortices.

Turn in what direction we may, we find that the invisible and inaudible vibrations of the mysterious ether are now agitating the intellectual media of all the representative communities of civilization. Radioactivity is undoubtedly the engrossing scientific topic of the present hour. "Radiations" pervade the heavens above, they penetrate the earth beneath, and they permeate the waters under the earth. As Professor Duncan not long since expressed it, "Space is all aquiver with waves of radiant energy, ranging in length from many feet to a size infinitesimally small. To only a few of these are our bodily senses fitted to correspond or our mechanisms to detect. Waves of radiant energy constitute what has been called 'the harp of life.' We vibrate in sympathy with a few strings here and there—with the x rays, actinic waves, light waves, heat waves, in the treble; and the huge electromagnetic waves of Hertz and Marconi, and the grand air waves of sound, in the bass; but there are great spaces, numberless strings, an infinity of possible radiations, to which we are deaf."

The wave of newly illuminated thought and research which was suddenly called into existence by the discovery of the Röntgen rays may be said to have led in its diffusion to our knowledge of the Becquerel radiation. The metallic element uranium and its compounds have long provided a specially fruitful field in the department of physical optics, and Professor Becquerel, in the course of experimentation, unexpectedly made the discovery that the double sulphate of this metal and potassium affected a photographic plate through a fold of black paper and an aluminum plate; and, further, that its proximity caused the immediate discharge of a gold leaf electroscope. At nearly the same date M. Niewenglowski obtained a corresponding photographic impression from calcium sulphide, and M. Troost from hexagonal blende. In 1898 M. Schmidt and Mme. Curie, independently, observed that thorium possessed analogous properties. The further researches of the latter revealed the fact that there were certain minerals more active than any of the above named agents. The special interest in this department was soon concentrated on pitchblende. From this mineral they separated an "active bismuth," possibly a new element, to which the name *polonium* was given, in honor of Mme. Curie, who is Polish by birth. Next came, from the same source, an "active barium," which was found to contain a new element, the now celebrated *radium*. The properties and powers of this latter appear to justify the almost unlimited hopes which are now entertained of the uses to which it may be applied in the near future. It is self-luminous, and is, accordingly, able to take its own photograph; its very proximity determines various chemical reactions; it converts oxygen into ozone, changes yellow phosphorus into red, colors glass, ionizes gases and even liquids, such as petroleum and liquid air, and insulates solid bodies, such as paraffin, simultaneously developing in the latter substance a residual conductivity which lasts for a long time after the direct influence of the radium has been removed. And the occurrence of burns produced by the proximity of this element was soon announced, analogous to, but much more penetrating than, those produced by the Röntgen rays, of which we have recently been hearing so much. Necessarily, then, its effects on carcinomatous and sarcomatous growths are more pronounced than those of the Röntgen rays. And these effects—one and all—result, we are told, from corpuscular discharges, which are shot off by the radium into all surrounding forms of matter. The cannonade of those corpuscles, we are led to believe, breaks up the constituent molecules, and even atoms, of the various growths exposed to them. Having such powers placed by scientific research in skilled hands, what beneficial results may we not hope to attain if by due discipline we can concentrate them in the proper directions?

THE X RAYS IN MALIGNANT DISEASE.

In another article in this issue we sketch the hopes, if not the expectations, of many competent observers as to the efficiency to which it may be possible to attain in the treatment of malignant disease by means of the various forms of radiant force. As suggested in that article, our brief and necessarily inconclusive experience in the application of Röntgen's discovery to therapeutics has led to intense interest in the possible curative effects of other manifestations of radiant energy, including the Finsen modifications of ordinary light.

As regards the Röntgen rays themselves, we may have been too hopeful. At least that seems to be the opinion of the author of one of those admirable *revues critiques* for which our French colleagues are noted, published in the April number of the *Revue de médecine*. The x rays, says this author, have appeared to cure superficial epitheliomata, and to cause the almost complete disappearance of certain sarcomata that were not of deep situation, but, as Macyntyre puts it, we have not a single example of the undoubted cure of cancer of the deep organs by these rays. Though diminished vitality of the tumor is the ordinary effect of the Röntgen rays, provided their intensity is sufficient and their action sufficiently prolonged, we may understand that it is difficult to exert the necessary influence on cells that are deep seated unless we use appliances that increase the penetration of the rays to such an extent that they may no longer be harmless, but be prone to give rise, not only to cutaneous injury, but also to functional disorder of deep seated organs, though this latter danger is as yet merely theoretical.

But though the x rays were the first of the radiant forces to be subjected to systematic study with a view to learning their effects on the living tissues, we may well allow that the study is thus far incomplete, and, far from finding ourselves obliged to blot out the expectations early entertained with regard to their efficiency in the treatment of malignant disease, we may yet hit upon modifications of technics, perhaps, among other things, the association of cutting operations with the employment of the rays, that will give us a very considerable mastery of malignant disease. At all events it is hardly likely that blank discouragement will settle down upon the enthusiastic pursuers of the idea that the Röntgen rays have a definite power over cancer. By all means let them keep on in their meritorious and not unpromising course of inquiry; even if at last they should feel constrained to acknowledge that achievement has not kept pace with expectation, they will at least have deserved well of all who are enlisted in the work of promoting the advance of medicine.

THE ZOOLOGICAL DISTRIBUTION OF CANCER.

The study of cancer is unexcelled in interest at the present time by any other branch of pathological research, and investigations which at first thought have little if any direct bearing upon the questions most pressing for elucidation in connection with the natural history of malignant disease may nevertheless ultimately prove to be of the highest importance. Among these is the first investigation undertaken by the Cancer Research Fund, under the direction of the Royal College of Physicians of London and the Royal College of Surgeons of England, which deals with the zoological distribution of cancer, with the limitations of its transmissibility, and with the histological and cytological characters of malignant new growths. For a copy of the report on these subjects we are indebted to Dr. E. F. Bashford, the general superintendent and director of the central laboratory.

Probably the first and most prominent impression made by this report upon anybody who has not made a more or less special study of the subject of cancer in the lower animals will be that of the frequency with which the disease occurs in the domesticated animals and in other vertebrates. The truth is that this frequency has been almost entirely overlooked in the past, and it is altogether likely that it would not even now have been brought to the knowledge of the general medical profession but for the extraordinary ardor with which in recent years every aspect of the study of cancer has been pursued. The reasons for its being overlooked are the comparative rarity with which exhaustive post mortem examinations of the lower animals have been made and the fact that such animals do not usually reach the age at which cancer is prone to occur. To some extent, perhaps, attention has been diverted from the necessary examinations by a preconceived conviction of the insusceptibility of the animals to malignant disease—a conception founded on the uniform failure of attempts to inoculate them with material from cancer occurring in the human subject, which failure is accounted for in the report by the statement that "the transferred cells are treated as albumins strange to the species."

Malignant disease has, as a matter of fact, been observed in the horse, in the cow, in the dog, in the sheep, in the hog, in the mouse, in the cat, in the domestic fowl, in the Indian parakeet, in the giant salamander, in the cod, in the gurnard, in the trout, and perhaps in others of the lower animals, and, in this range of animal life, all the forms of malignant disease met with in man have been found. It is evident that the study of the zoological distribution of cancer is worthy of further pursuit, and we owe much to the Cancer Research Fund for the steps already taken in this direction.

DIPSOMANIA AND INEBRIETY.

The word dipsomania is a misnomer and misleading. This psychokinesia is not demonstrated by an insane craving for drink, but a morbid uncontrollable desire for alcohol or any narcotic that will give relief from intense periodical mental restlessness and physical weakness. There is no thirst pushed to the insane point, no rabid, feverish desire for fluids, as the word would indicate. Narcomania would be a more correct term, for all the symptoms point to a functional disease of the nervous system characterized by a morbid uncontrollable demand for some narcotic that will give relief from periodical mental sufferings. The unfortunate victims belong to the constitutionally discontent, except during their periods of inhibitory insanity, which for them is euphoria. It was careless and superficial observation of this class of cerebral neurasthenics, with slight understanding of the causes for these periodical attacks of uncontrollable impulses, that caused writers of the last decade to designate the victims dipsomaniacs. True it is that these victims of unstable nervous equilibrium drink enormous quantities of liquors without regard to time, price, or quality, but only because this narcotic can be readily and constantly obtained, supplies the morbid craving for something that produces mental hebetude and physical comfort, and can be consumed with apparent safety by the unfortunate in unlimited quantities. This condition gives us a hint as to the ætiology of these periodical outbreaks, for it is a fact that during the height of the atack the subject will go without food and sleep for days while consuming alcohol in quantities large enough to bring on delirium tremens or kill outright several normal individuals, and this without showing any decided symptoms of alcoholic intoxication. This may go on for several weeks, the subject getting but little food or sleep, and this sporadically. The attack over, he will cease almost immediately taking his alcohol—an entirely different condition from that met with in the inebriate and drunkard. So little understood is this difference between inebriety and dipsomania (I use the term for familiarity's sake) that one is not surprised to find laboratory workers confounding the symptoms with the effects. Berkley (*Treatise on Nervous Diseases*) says delirium tremens frequently follows dipsomaniacal attacks. This has not been my experience. The true victims of this nervous explosion seem to be physiologically unaffected by the enormous quantities of alcohol consumed.

The individual who is the victim of periodical attacks of mental restlessness and who succumbs to the uncontrollable demand for alcohol is of a type distinct from the chronic inebriate. Socially and mentally he belongs to the intellectual and educated class. He is to be found in the studio and in the pulpit, pleading in courts of justice, prescribing for his wealthy patients, or interesting large audiences in the theatre. He is found to be an individual of pronounced mental gifts and intense nervous activity; he is often a genius. While in his normal and untrammeled state of mental activity he repudiates any thought of help from the physician; and when he is wandering aimlessly without any lucid consciousness of self, he does not want any medical advice; he is contented. In this latter state he does not stagger, is not noisy or quarrelsome, but is genial, is wasteful of his money, and exhibits an exaggerated ego which has all the objective symptoms of incipient paresis. He gravitates to saloons and "dives" unknown to his other self; yet is not vicious, has no lecherous thoughts, nor will he join the denizens of these dens in their orgies. He will talk in Orphic tones on any and all subjects, exhibiting always a high degree of knowledge and intellect, but demonstrating want of continuity and logic. Companions he must and will have, and he seeks those who will listen to his uncontrollable volubility and drink with him, frequently using up a score or more of the bar room "bums" and degenerates who try to consume all the liquor that he will pay for. These alcoholics are the "dipsomaniacs" seen in hospitals and clinics—the real type, the temporarily alienated, who can physiologically absorb such quantities of liquor without showing any symptoms of acute poisoning, never appearing in the public hospital, except to be treated for some secondary effect of these continued attacks, which have in time, of course, produced pathological changes. One must have an intimate acquaintance with the world outside of the laboratory and clinic to understand these unfortunates. Berkley *(loc. cit.)*, in describing the habits of the dipsomaniac, says: "They sit silent and alone; companions are shunned." As I have said, quite the contrary is the case. The inebriate, the drunkard, will "sit silent and alone." Oppenheim *(Diseases of the Nervous System)* also misunderstands the true nature of this brain disturbance, for he confounds the symptoms with the disease. He advises the patient after being discharged from an institution to take the pledge or join some temperance society. One might with equal justice ask the epileptic not to fall when he recognizes the aura.

In the dipsomaniac we have a temporarily heightened mental activity with loss of inhibition over judgment, will, and correlative forces, with companionship of a controllable nature an absolute necessity to complete the cycle of content. In inebriety we have a deadened, sluggish mentality with physical inertness due to alcoholic poisoning, an entirely different condition from that seen in the dipsomaniac. In the inebriate we often find a chronic or subacute myelitis, in the dipsomaniac seldom. In the subject of chronic alcoholism epilepsy is common, in the dipsomaniac it is rare, as is also alcoholic neuritis. As a large percentage of the dipsomaniacs are of a gouty diathesis, there are sometimes pains after the attacks, but they are gouty pains and not alcoholic.

William Lee Howard.

A POST OFFICE CHECK ON QUACK ADVERTISEMENTS.

A Washington dispatch to the *Tribune*, published on May 25th, contains news that seems too good to be true. It is to the effect that the post office contemplates the issue of fraud orders, with consequent stoppage of mail, against the vendors of various quack medicines advertised in the lay press to cure tuberculosis, "to restore lost manhood," etc. The harm that these infamous tricksters have done is incalculable and the particular vileness of the "nervous debility" fakirs, is, we regret to think, unlikely of other punishment than its mere stoppage. The thousands of young men who have had their nervous systems wrecked by the sensational pictures of the masturbator's future, as drawn in the disgusting pamphlets issued by these debility concerns, should rise up and call the post office blessed for its action. It is well that the suppression of these quacks comes from a source outside of the medical profession, which would inevitably have been accused of jealousy had it inaugurated the crusade. It is a pity that the powerful Federal arm cannot reach the vultures who confine their depredations to their own neighborhood and do not need the mails.

THE AMERICAN GYNÆCOLOGICAL SOCIETY.

This year's meeting, held in Boston this week, was notable for the amount of consideration given to such gynæcological subjects as fall fairly within the general practitioner's sphere. In particular, the "symposium" on non-operative treatment was of value. It showed a wholesome tendency toward other than operative procedures, though the general consensus was to the effect that one should not cling blindly to either operative or non-operative treatment. The meeting was one of the most profitable that have ever been held. A list of the officers for the ensuing year and of physicians elected to membership in the society appears in our news columns.

THE BOSTON CITY HOSPITAL.

Exercises appropriate to the fortieth anniversary of the opening of the hospital were held this week, and appreciative mention was made of the labors of the medical staff, two of whom, Dr. David W. Cheever and Dr. John G. Blake, have served continuously ever since the hospital began its beneficent work.

News Items.

Society Meetings for the Coming Week:

Tuesday, *May 31st.*—Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

Wednesday, *June 1st.*—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; New York Genitourinary Society; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

Thursday, *June 2nd.*—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

Friday, *June 3rd.*—Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; the Manhattan Clinical Society.

Saturday, *June 4th.*—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

Changes of Address.—Dr. C. S. Patterson, to 160 West One Hundred and Twenty-ninth Street, New York; Dr. Edwin A. Hatch, to 857 Marcy Avenue, Brooklyn.

NEW YORK

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending May 21, 1904:

	Week end'g May 14.		Week end'g May 21.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	1,516	45	1,482	39
Diphtheria and croup	389	51	400	49
Scarlet fever	363	29	392	26
Smallpox	2	..	..	..
Chickenpox	113	..	88	..
Tuberculosis	426	172	475	187
Typhoid fever	28	10	45	8
Cerebrospinal meningitis	..	97	..	82
Totals	2,837	404	2,882	391

Jewish Hospital, Brooklyn.—This hospital is making a special appeal for funds, it having been announced that an individual has promised a gift of $25,000, conditionally upon a similar sum being raised by subscription.

Changes in the State Insane Asylums.—The State Commission in Lunacy has ordered the following transfers of superintendents, to take effect on June 1st: Dr. O. M. Dewing, from the Long Island State Hospital, Kings Park, to the Long Island State Hospital, Flatbush; Dr. W. A. Macy, from the Willard State Hospital, to the Long Island State Hospital, Kings Park, and Dr. R. M. Elliott, from the Long Island State Hospital, Flatbush, to the Willard State Hospital.

The New Women's Hospital.—The cornerstone of the new Women's Hospital in West One Hundred and Tenth Street, across the street from the Cathedral of St. John the Divine, was laid on May 17th. The new hospital will be six stories high, of steel and brick, with fancy trimmings. The building will have a frontage of 200 feet on One Hundred and Tenth Street, and will extend through to One Hundred and Ninth Street. There will be two wings in the shape of the letter U. When completed the new building will have cost a little over $1,000,000.

Manhattan Eye and Ear Hospital.—This hospital will sell its old home on Park Avenue and build a structure five times its size on Sixty-third and Sixty-fourth Streets, 155 feet east of Third Avenue. The site of the new hospital was bought May 23rd. It contains 22,500 square feet or three times the area of the present site on the southeast corner at Park Avenue and Forty-first Street. The four lots on the Sixty-third Street frontage were sold by A. Beekman and five on Sixty-fourth Street by Mrs. L. W. Boardman. The new site adjoins on the west the Baron de Hirsch Trades School. The hospital was chartered in 1869. It is supported by voluntary contributions.

New York School of Clinical Medicine.—At the meeting of the medical board of the New York School of Clinical Medicine, held April 9th, Dr. J. L. Adams was elected secretary of the school, and professorial and other distinctions were conferred upon the following in the departments specified: Mental diseases, Professor E. C. Dent, superintendent, Manhattan State Hospital West, Ward's Island; internal medicine, Professor William Brewster Clark, M. D.; gastrointestinal diseases, Professor Robert Coleman Kemp, M. D.; associate, Professor Graham Rogers, M. D.; hydrotherapeutics, Professor Alfred W. Gardner, M. D.; ophthalmology and otology, Professor George Ash Taylor, M. D.; clinical instructor and assistant, William E. West, M. D.; genitourinary diseases, chief of clinic and associate, Professor C. Stern, M. D.; dermatology, chief of clinic and instructor, L. D. Weiss, M. D.

To Aid in Fighting Cerebrospinal Meningitis.—Owing to the prevalence in the city of epidemic cerebrospinal meningitis, the department of health offers to place at the disposal of hospitals and medical practitioners the service of its laboratories to aid in the diagnosis of this extremely fatal disease. The meningococcus (*Diplococcus intracellularis meningitidis* of Weichselbaum) is found in the cerebrospinal fluid of the majority of cases and usually also in the nasal secretion. The department of health will examine free of charge specimens of cerebrospinal fluid, as well as smears of, and cultures from, the nasal secretion. Such examination will in many instances assist in the early recognition of the disease and in determining the nature of obscure cases.

Special outfits, consisting of a blood serum culture tube, a sterilized swab, and a glass slide for the smear, can be obtained at the department of health, Fifty-fifth Street and Sixth Avenue.

After obtaining the specimens, they should be sent at once to the department. Reports will be sent by telephone and mail. Specimens of cerebrospinal fluid can be readily obtained by lumbar puncture, a simple operation easily performed by the attending physician himself or any surgeon. The operation, in addition to being an aid in diagnosis, is directly beneficial because of the relief of the intraspinal pressure.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:.*

	Week end'g May 14.		Week end'g May 21.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	27	5	11	5
Diphtheria	53	9	51	13
Scarlet fever	100	7	65	3
Typhoid fever	295	25	182	30
Consumption	..	58	..	62
Cerebrospinal fever	..	1	..	1

Dr. J. P. Faure, a distinguished French surgeon, held a clinic at the Jefferson Medical College Hospital this week.

Quarantine has been raised from the League Island Navy Yard. Cerebrospinal meningitis and measles were the cause of the isolation.

The Lackawanna and Bucks County Medical Societies will assist the Philadelphia County Medical Society in prosecuting illegal physicians.

The Committee of Health and Charities, of Philadelphia councils, paid an official visit to the State Hospital for the Insane, at Norristown, Pa., last week.

New Municipal Hospital.—Work on the new Municipal Hospital buildings is progressing rapidly, especially on the building for smallpox. The structure will be far superior in every respect to the one used at present.

Contagious Diseases in Philadelphia showed a decided decrease last week. Only eleven new cases of smallpox were reported. Over one hundred less new cases of typhoid fever are also significant of the amelioration.

University of Pennsylvania.—The formal dedication of the new laboratories of pathology, physiology, and pharmacology will occur on June 10th. They will be open for inspection from 10 a. m. to 3 p. m., in the new building on the south side of Hamilton's Walk, between Thirty-sixth and Thirty-seventh Streets. A number of interesting exhibits will be displayed, and the equipment of the several departments will be shown to those interested.

An Important Decision.—Judge Ralston, of the court of common pleas No. 5 of Philadelphia, delivered an important opinion this week, to the effect that, upon grounds of public policy, the law of Pennsylvania forbids a recovery upon an insurance policy where the insured has been executed for crime, and this whether the policy contains a clause upon the subject or not, and even if it stipulates that the company shall be liable in such a contingency.

The Philadelphia Polyclinic.—At the regular meeting of the board of trustees of the Polyclinic Hospital, held May 19th, the following were elected resident physicians to fill the vacancies occurring in the resident staff during the coming year: James K. Hall, M. D., Jefferson '04; John Decker Butzner, M. D., University of Virginia. '04; Edward D. Lovejoy, M. D., University of Pennsylvania, '04; George Eaton Adams, M. D., University of Virginia, '04; and John Read. M. D., University of Pennsylvania, '04.

New Rush Hospital.—At a recent meeting it was decided to erect a new building for the Rush Hospital for Consumption, of Philadelphia, to replace the old one, on the lot at Thirty-third Street and Lancaster Avenue, at a cost of $100,000. A considerable sum has been appropriated by the State of Pennsylvania, and further amounts are expected from contributions. The buildings will be erected in conformity with accepted methods for the open air treatment of tuberculosis. Outdoor life, free access of plenty of fresh air, and large, wide porches will be some of the prominent features.

Dr. Charles A. Oliver, of Philadelphia, Pa., has been chosen by the British Medical Association as its official guest from the United States for its seventy-second annual meeting, which is to take place in Oxford, England, in July. With him are associated Professor Hirschberg, of Berlin, representing Germany, and Dr. Javal, of Paris, representing France. During his stay Dr. Oliver will reside at Keble College as the personal guest of Mr. Robert Walter Doyne, the president of the ophthalmological section of the association and lecturer on ophthalmology at Oxford University.

Bequests to Hospitals.—Bequests of $20,200 to the Methodist Hospital for the establishment of free beds and $1,000 to the Home for Destitute Children, Broad and Morris Sreets, Philadelphia. are made in the will of John N. Doak, probated May 14th. The testator was a retired hardware dealer, who died recently at 1703 South Broad Street, leaving an estate valued at $130,000. The bequest to the Methodist Hospital is for the maintenance of four free beds, to be called "Doak's Free Beds," in memory of the donor, his wife and parents. For each bed is devised $5 000, and an additional $200 for the necessary furniture.

Woman's Medical College.—The following graduated on May 18th:

Elzora Butler-Allen, Mary Margaret Armor, Cora Myrtle Bass, Mary Elizabeth Bass, Elizabeth McKinley Beecroft, Mary Louise Dixon Bickings, Maria Washburn Bliss, Emilie Bretthauer, Helen Elizabeth Brooks, Clara Melvina Casselberry, Rebecca F. Clark, Anna Evans Corlies, Rebecca Cornfield, Beatrice Magdalene Curran, Amy Diona Currin, Anna Degeuring, Sarah May Donnell, Alice Catherine Fitzsimmons, Alice Porter Ford, Ruth Addie Gay, Jane Bruice Guignard, Julia Helen Hardin, Julia Phiania Horton, Rena May Heilman, Louise Hutcheson, Clotilde C. C. Jauquet, Florence Myrtle Kline, Katherine Hays Law, Charlotte Barnard Mitchell, Rachel Tatnall Moon, Estella Loretta Mullin, Mercedes Annette Roberts, Mary Priestly Sheriff Rupert, Grace Willey Sherwood. Anne Mary Shuler, Anne Gibson Slusser, Lillian Herald South, Mary Eleanor Stephenson, Martha Tracy, Amelia Weicksel, Blanche Baker Wunderle, Louisa Juliet Zimmerman.

Jefferson Medical College.—At a meeting of the board of trustees of the Jefferson Medical College of Philadelphia, held on May 16th, several new major professorships were created. The additions to the faculty are Dr. Howard F. Hansell, professor of ophthalmology; Dr. W. Joseph Hearn, professor of clinical surgery; Dr. Henry W. Stelwagon, professor of dermatology; Dr. H. Augustus Wilson, professor of orthopædic surgery; Dr. Edwin E. Graham, professor of diseases of children; Dr. Orville Horwitz, professor of genitourinary surgery; Dr. S. MacCuen Smith, professor of otology; Dr. D. Braden Kyle, professor of laryngology; Dr. Solomon Solis-Cohen, professor of clinical medicine; Dr. Albert P. Brubaker, professor of physiology and hygiene. Dr. John H. Gibbon, surgeon at the Pennsylvania Hospital, was elected associate professor of surgery; Dr. Randle C. Rosenberger, assistant professor of bacteriology, and Dr. Aller G. Ellis, associate in pathology. The annual meeting of the Jefferson College Alumni Association was held in the Bellevue on Tuesday evening, May 26th.

GENERAL

Statement of Mortality in Chicago, Ill., for the Week Ending May 21, 1904, compared with the preceding week and with the corresponding week of 1903:

	May 21, 1904.	May 14, 1904.	May 23, 1903.
Total deaths—all causes	483	531	618
Death rate per annum, per 1,000	13.04	14.35	17.19
By sexes—			
Males	284	310	400
Females	199	221	218
By ages—			
Under 1 year	88	73	103
Between 1 and 5 years	33	35	75
Over 60 years	93	118	109
Important causes of death—			
Acute intestinal diseases	22	25	30
Apoplexy	15	21	5
Bright's disease	28	40	23
Bronchitis	15	10	16
Consumption	62	60	60
Cancer	18	20	14
Convulsions	9	10	10
Diphtheria	7	5	10
Heart diseases	36	37	56
Influenza	0	0	2
Measles	1	1	18
Nervous diseases	20	22	47
Pneumonia	82	122	145
Typhoid fever	5	6	6
Scarlet fever	0	4	13
Suicide	10	9	12
Violence—other than suicide	29	31	25
Whooping cough	1	0	12

The worst of the pneumonia season is well over—only 82 deaths reported during the week. Since November 1, 1903, and up to the close of office hours May 21, 1904, the following are the figures for New York and for this city of deaths from all causes, from consumption and from pneumonia:

	New York.	Chicago.
Total deaths, all causes	45,402	16,343
From consumption	5,065	1,758
From pneumonia	9,648	3,648
Proportion per cent. of all deaths—		
From consumption	11.15	10.75
From pneumonia	21.25	22.32

Dr. William C. P. Hazer, of Washington, D. C., has been appointed surgeon of the eastern division of the Baltimore and Ohio Railroad, with headquarters in that city.

Another Medical School for Kingston, Canada.—It is proposed to revive the Royal College of Physicians and Surgeons, which has been dormant since its incorporation in 1866.

The Oklahoma Medical Association has closed a day and a night session, after electing the following officers: President, Dr. A. K. West, of Oklahoma City; vice-president, Dr. R. H. Tullis, of Lawton; secretary and treasurer, Dr. E. O. Barker, of Guthrie.

The White River, N. H., Medical Association elected officers for the ensuing year, on May 18th, as follows: President, Dr. C. B. Drake, of West Lebanon; vice-president, Dr. C. B. Dean, of Springfield; secretary and treasurer, Dr. Marian L. Bugbee, of White River Junction.

Norfolk District, Mass., Medical Society.—At the recent annual meeting of this society, the following officers were elected: President, Dr. George W. Clemen, of Roxbury; vice-president, Dr. John A. Tanner, of Dorchester; secretary and librarian, Dr. James C. D. Pigeon, of Roxbury; treasurer, Dr. Edward G. Morse, of Roxbury.

The Southwestern Medical Association of Kentucky adjourned at Paducah, May 11th, after electing the following officers: President, Dr. J. G. Hart, of Murray; first vice-president, Dr. Willis Moss, of Clinton; second vice-president, Dr. E. B. Willingham, of Cunningham; secretary, Dr. V. A. Stilley, of Benton; treasurer, Dr C. H. Brothers, of Paducah

Savannah, Ga., City Physician Appointed.—Dr. Walter A. Norton was appointed by Mayor Myers, on April 22nd, to fill the office of city physician vacated by Dr. E. S. Osborne, who resigned to become county physician. The appointment was made April 23rd at noon and held until the meeting of council on the night of May 4th, when that body regularly elected Dr. Norton to fill the position. Dr. Norton, the present appointee, took up his new duties immediately.

The Michigan College of Medicine graduated the following on May 3rd at the annual commencement exercises, held in the opera house, Detroit:

Harry J. C. Maus, Albert J. Schmaler, Valentine W. Anderson, Andrew J. Moir, Edith May Hunsberger, D. Harvard Irwin, Orizabor Burnett Fritch, Arthur Eugene Ames, Herbert William Case, Henry Montgomery, Herbert E. Gerber, James Ernest Grace, John H. Houton, Hugh L. D. Smith, Fred J. Hohn, Charles T. Bower, Louis Norman Yerkes, George D. Kennedy, Robert Henry Leece, William J. Beery, Felix J. Przybylowski, George E. Orth, Roman J. Sadowski, Fred L. Bright, Marcus R. Van Baalen, Frank Valentine Stutzke.

Middlesex, Mass., North District Medical Society.—At the annual meeting of this society, on April 27th, at Lowell, the following officers were reelected:

President, Dr. Burnham R. Benner; vice-president, Dr. Amasa Howard; secretary, Dr. R. J. Meigs; treasurer, Dr. T. B. Smith; librarian, Dr. D. N. Patterson; commissioner of trials, Dr G. A. Harlow; councillors, Dr. W. G. Eaton, Dr. C. M. Frye, Dr. T. F. Harrington, Dr. J. B. O'Connor, Dr. C. E. Simpson, Dr. J. E. Lamoureaux, Dr. J. V. Meigs, Dr. O. P. Porter, Dr. W. P. Lawler, Dr. G. H. A. Leahey. District nominating committee: Dr. W. G. Eaton; censors, Dr. C. E. Simpson, supervisor; Dr. S. J. Johnson, Dr. G. E. Pinkham, Dr. R. E. Bell, Dr. T. G. McGannon.

The West Virginia State Medical Association closed its annual meeting on May 13th, after electing the following officers: President, Dr. T. M. Hood, of Clarksburg; first vice-president, Dr. W. C. Jamison, of Fairmont; second vice-president, Dr. E. H. Parsons, of Piedmont; third vice-president, Dr. A. A. Shawkey, of Parkersburg; secretary, Dr. W. W. Golden, of Elkins; treasurer, Dr. V. T. Churchman, of Charlestown. Wheeling was chosen as the next meeting place, the date to be announced later, and Dr. S. S. Jepson, of Wheeling, was made chairman on arrangements.

The Bristol South District, Mass., Medical Society held its annual meeting on May 11th. Officers for the ensuing year were elected as follows: President, Dr. D. E. Cone; vice-president, Dr. C. A. Pratt; secretary and treasurer, Dr. A. J. Abbe.

Carroll County, Ga., Medical Association.—The annual election of officers of the Carroll County Medical Association was held May 14th. The officers for the ensuing year are: President, Dr. J. D. Hamrick, of Carrollton; vice-president, Dr. W. H. Malone, of Mt. Zion; secretary-treasurer, Dr. J. F. Cole, of Carrollton; assistant secretary and treasurer, Dr. H. J. Goodwyn, of Roopville.

Genessee County, N. Y., Medical Association.—A meeting of the Genesee County Medical Association was held at Batavia recently, at which time Dr. Jackson, of Oakfield, was elected president, Dr. Macpherson, of Le Roy, vice-president, and Dr. C. Louise Westlake, of Le Roy, secretary and treasurer. Dr. Macpherson was elected a delegate to the annual meeting of the fourth district association.

Central District of Indian Territory.—Judge Clayton has announced the appointment of Dr. A. Griffith, of South McAlester, Dr. B. W. Caldwell, of Hugo, and Dr. J. B. Smith, of Durant, as the board of medical examiners to pass upon the qualifications of all persons desiring to practise medicine in the central district. This is in conformity with the medical act for the Indian Territory passed during the closing days of congress.

Salem Almshouse.—The following trustees have been elected for the Salem Almshouse: Salem, William J. Casper; Elsinboro, Harry Peterson; Mannington, John Keen; Quinton, J. H. Reeves, L. A. Creek, Isaac Smick; Alloway, Charles R. McCarson; Pilesgrove, George W. Watson; U. Pittsgrove, C. L. Stratton; Pittsgrove, J. B. Hewes; U. U. Neck, J. Shoemaker; L. P. Neck, J. C. Moore; Oldmans, James Sweeten.

The Worcester District, Mass., Medical Society held its annual meeting on May 11th. This morning at 10 o'clock the business session convened and officers for the coming year were elected as follows: President, Dr. O. H. Everett, of Worcester; vice-president, Dr. E. W. Norwood, of Spencer; secretary, Dr. George E. Emery, of Worcester; treasurer, Dr. G. O. Ward, of Worcester; auditor, Dr. E. H. Trowbridge, of Worcester.

Kentucky Medical Association.—The forty-ninth annual session of this association was brought to a close, May 21st, by the election of officers as follows: President, Dr. F. H. Clarke, of Lexington; vice-presidents, Dr. L. L. Robertson, of Bell county; Dr. A. S. Cooke, of Wayne county; Dr. Butler Littlepage, of Powell county; secretary, Dr. James B. Bullitt, of Louisville; treasurer, Dr. W. B. McClure, of Lexington; orator in surgery, Dr. Louis Frank, of Jefferson county; orator in medicine, Dr. J. T. McClymonds, of Fayette county; delegates to the American Medical Association, Dr. J. N. McCormack, of Bowling Green; Dr. A. D. Price, of Harrodsburg.

The Louisiana State Medical Association closed its annual meeting on May 12th. Elections were held for the officers for the coming year, resulting in the choice of Dr. Charles Chassaignac for president, Dr. Oscar Dowling for first vice-president, Dr. Leo. Tarlton for second vice-president, Dr. J. F. Buquoi for third vice-president, Dr. Isaac Ivan Lemann for secretary, Dr. H. M. McGuire for treasurer. Board of Medical Examiners: For the first congressional district, Dr. P. E. Archinard; second congressional district, Dr. A. G. Friedrichs; third congressional district, Dr. J. J. Ayo.

Licensed to Practise in Arkansas.—Below is a list of those to whom diplomas were granted as a result of the last examination.

J. D. Williams, George W. Strickland, R. M. Williams, P. E. Nelson, F. E. Christophe, Fred Jones, S. H. Hargrove, N. H. Lockhart, Z. M. Mazique, S. B. Ross, R. Hicks, G. F. H. Morris, C. M. McDavids, N. R. Parker, J. O. Hickman, H. D. Bogart, Luther H. Callan, D. A. Doughty, A. L. Houston, O. T. Ward, J. S. Hopkins, Carl Puckett, A. J. Edwards, J. Montgomery, J. A. Fergus, B. M. Stevenson, G. S. Baxter, D. C. Roberts, A. W. Coleman, J. L. Dibrell, J. B. Spires, A. L. Franklin, O. K. Judd, H. Gilbrech, Crowell, O. K. Hooper, F. J. Pittman, A. M. Mayfield, Albert Tatum, T. H. P. Duncan, F. M. Pollard, J. H. Davis, R. L. Hopkins, Joel F. John, W. M. Weir, A. J. Cox, D. Edrington, B. J. Davs, Allen E. Cox, John Paxton Sheriff. Total, 52. Twenty failed.

American Gynæcological Society.—The annual meeting of the American Gynæcological Society was held in Boston on Tuesday, Wednesday, and Thursday of this week. Dr. E. C. Dudley, of Chicago, was elected president for the ensuing year, the other officers elected being Dr. H. C. Cole, of New York, first vice-president; Dr. H. D. Fry, of Washington, second vice-president; Dr. J. M. Baldy, of Philadelphia, treasurer, and Dr. J. Riddle Goffe, of New York, secretary. The following were elected to membership: Dr. Palmer Findlay, of Chicago; Dr. F. S. Newell, of Boston; Dr. George Gellhorn, of St. Louis, and Dr. T. S. Cullen, of Baltimore. The next meeting will be held in Niagara Falls.

Louisiana State Medical Society.—At its recent meeting (May 10th, 11th, and 12th) the Louisiana State Medical Society adopted two rsolutions referring to medical legislation, the first to increase the stringency of the law relative to illegal practitioners of medicine; the second to introduce a bill into the Louisiana legislature, now in session, that the governor of the State appoint three members of the board of administrators of the Charity Hospital in New Orleans, from a list of names to be submitted by the society. This bill will doubtless be enacted into a law, in view of the powerful influence of the State association exerted through its county branches, which are now well organized throughout the State.

Albany County Medical Society.—At the annual meeting of the Medical Society of the county of Albany, held in Alumni Hall of the Albany Medical College, May 10th, these officers were elected for the ensuing year: President, Dr. James P. Boyd; vice-president, Dr. J. Montgomery Mosher; secretary, Dr. J. F. Rooney; treasurer, Dr. William H. George; censors, Dr. J. M.

Archambault, Dr. Howard E. Lomax, Dr. G. T. Moston, Dr. A. H. Traver, and Dr. Spencer L. Dawes. All the officers, save Dr. Archambault, who is a resident of Cohoes, are Albanians. One of the features of the meeting was the presentation to the society of a picture of Dr. William H. Bailey, to be added to the collection of portraits of deceased members which the society now owns. The donor was Mrs. Bailey.

The Alumni Association of the University of Maryland, School of Medicine, held its annual reunion at the Eutaw House, Baltimore, on Wednesday, May 11, 1904. The following was the order of business: Call to order and introductory remarks by the president; reading of minutes; propositions for membership, to be referred to executive committee; report of the treasurer; report of standing committees, [*a*] Necrology, [*b*] Endowment; report of special committees; report of executive committee, including nominations of candidates for membership; election of candidates to membership; welcome of new members to the association by the president; unfinished business; new business; nomination and election of officers for the ensuing year; annual address, Professor Eugene F. Cordell, class of '68; adjournment. The banquet was served immediately upon the adjournment of the literary exercises.

A Handsome Hospital for Fairmont, W. Va.—The fine new Cook Hospital, in Fairmont, has been thrown open for the inspection of visitors. Some 2,000 persons attended the opening reception. This building, which was erected at a cost of about $100,000, is not only classed among the finest in West Virginia, but is said to rank with any institution of its kind in the country. It contains 90 rooms, is finely equipped with the best furniture and the most modern devices used in hospital work. It is adorned with marble stairways and tiling floors, and is thoroughly equipped throughout. The operating room is said to be one of the most perfect in the United States. It is entirely white, both the walls and floor being constructed of white tiling, while every device used in this department is of the latest model. The roof garden is an especially attractive feature and will afford much comfort and pleasure to the patients. This garden contains a pretty sun parlor, nicely furnished, and is embellished with palms and plants. From this garden the patients will have an excellent view of the river and the surrounding country. Every room in the building is well furnished and is cheerful and comfortable. The former hospital buildings will be renovated and improved and used as a nurses' home and apartments for the help. The hospital staff is composed of Dr. J. R. Cook, Dr. A. W. Sterling, Dr. E. W. Howard, Dr. Hal Hall, Dr. J. J. Durrett, and Dr. D. P. Fitch.

Medical Graduates of St. Louis, Mo., University.—Diplomas as doctors of medicine were awarded, on April 30th, to ninety-three of the medical department of the St. Louis University, formerly the Marion-Sims-Beaumont Medical School. The commencement exercises were held at the Odeon, which was well filled with friends and relatives of the graduates. Dr. Y. H. Bond, dean of the school, presided, and the invocation was offered by Archbishop J. J. Glennon. Addresses were made by Reverend W. B. Rogers, S. J., president of the university, and Judge Shepard Barclay. The graduates are from sixteen States, and one, Jacob Baba Johanna, A. B., is a native of Persia. After the distribution of diplomas the class proceeded to the Mercantile Club, where a banquet was served. The following are the graduates:

Edgar William Amman, Fred Meade Anderson, Parkey Howard Anderson, George William Becker, Clarence Ralph Bell, Robert Carr Block, M. D.; John Thomas Bradshaw, Albert Lewis Breeding, James Barlow Bright, William Carson Bryant, D. Clifton Burnett, John Lovell Cass, Otto Christian, A. B.; Thomas Allen Clark, John Wesley Clayton, Charles Duane Cobb, Earl Crawford, Albert Henry Dollear, B. S.; Herbert David Edmonds, Gottfried Arthur Estel, Theodore Frederick Fienup, Ph. G.; Julius Theodore Freund, Winford Le Roy Fuller, George Hubbard Galbraith, Leon Connallin Garcia, Harry Clifford Goodson, Joachin Detlef Frederick Grage, Arlander Selman Graydon, Ph. B.; John Waldo Hagan, Charles Grant Harris, Grove Walton Harris, Samuel Walter Hauck, William Harrison Hemker, William Henry Heuermann, Frederick Rolland Hickey, Eugene Hultz, M. D.; Robert Myles James, Norvel William Jarvis, Jacob Baba Johanna, A. B.; Willard Judd Johnson, Louis Adolph Kempff, Charles Edward Koons, Frank Emerson Luman, Albert Lee McClanahan, Thomas Fulton McConaghie, Charles Rudolph McDonald, A. B.; Wilber Franklin McMahon, M. D.; A. R. McReynolds, M. D.; Paul S. Mabry, Frederick Philip Mann, Charles Elias Matlock, James Edgar Melton, Lewis Emory Missimore, Val E. Miltenberger, George Henry Moore, Ira Elton Neer, Julius Bernard Nelson, Frederick Colman Nichols, Harley Spencer Norton, John Nywening, James Joseph O'Keefe, M. D.; William Claude O'Neal, A. B, M. D.; Charles D. Ottosen, Charles Henry Pease, Walter Douglas Pipkin, Ebert Vander Heyden Rawlins, Charles Peter Renner, Frank Henry Rosebrough, A. B.; Frank August Schulte, James Wilbur Shankland, William Mark Sherman, Edward Holman Skinner, M. D.; Reinhold Speer, David Fort Stubblefield, Algernon Burroughs Hazard Sullivan, Guy Titsworth, George Washington Tontz, Ph. G.; Edward Julius Viedt, M. D.; Rudolph Simon Vitt, Ph. G.; Alfred Theodore Vogler, George Hillard Warren, William Robert Washburn, George Omar Webster, Irwin Arthur Weichbrod, Wayne Anthony Whitt, Walter Charles Wilhelmi. Vincent Orsino Williams, William Andrew Wilson, Ross Arlington Woolsey, Burleigh Carleton Linebaugh, and Barnett Dean Stewart Wyllie.

Barnes Medical College, St. Louis, Mo.—At the commencement exercises of this institution, held on April 27th, the following were awarded the degree of Doctor of Medicine:

George Green Agerton, Paul Armstrong, John Pearl Allen, Charles Harvi Altheid, Stonewall Jackson Alsman, William Harry Barron, Eugene Harvy Bradley, Harry Bay, Mrs. Georgia West Burk, James Francis Brooks, Albert Garfield Byers, Edward Bogard, Jesse Peck Baird, M. D.; Joel Eff Buckman, William Edgar Burke, Eugene Battail Broaddus. Elva Butts, H. E Barrett, M. D.; William Franklin Crew, Ph. G.; Edward D. Canatsey, B. S.; Mrs. Jennie Callfas, Samuel Chauncey Clinton Clark, John Harry Coats, George French Campbell, Charles J. Conrad, Hardy Prince Curry, John McDonald Darden. David Patterson Dyer, Millard F Decker, Robert Paxton Dalton, Irving Lee Denton, Henry Clay Dye, Ph. G.; August Franklin Eugas, William Henry Eckert, Aaron Dudley French, Charles Ford, Giragos Fairmanion, W. R. Fulton, M. D. (duplicate); Thomas Everett Graham, Fred S. Gay, Mrs. Nellie Inman White Gammage, Aubrey Jackson Gunn, John Achabod Hancks, Harold Colton Herrick, B. S., Ph. B.; William Brown Harned, James Franklin Hedrick, Charles E. Hardin, A. J. Hughes, Charles DeWitt Hibbetts, Richard Llewellyn Hudnall, James Paton Johnson, Miss Clarice E. Jackson, H. A. Killion, M. D.; Albert Philetus Kittle, Benjamin Harrison, John Valentine Koch, James Thomas Leslie, Miss Emma Catherine Loerch, Henry Lawrence Lowry, Lucian Herbert Lanier, Ellis Mast, Harry Hartyn Morton, M. D.; Reginald Cameron McDonald Millar, Ross Lee Moter, Otto Paul Mueller, Trentis Vercy Miller, William Theophilus Myers, Thomas Benton Mansfield, Louis John Matlock, B. S.; Jesse Taylor McDavid, B. S.; George Franklin McKinney, Frank Edward McGann, Mrs. Eppie Sabra McCrea, Miss Elizabeth Georgia McDonald, John Logan McAlister, James Elijah Neely, Ernest Adam Neidert, Bert Oscar Owens, William Elmer Orr, John Roy Pollock, Charles Henry Pope, Sherman John Pope, B. S.; W. L. Prewett, D. D. S.; Ural Albert Vest Presnell, William Asa Price, Henry L. Reed, William Huga Reim, John Henry Runde, Samuel Thomas Reese, George Willis Ruddell, B. S.; Miss Elizabeth Etta Rusk, Jordan Ellsworth Ruhl, Ernest Mesart Roseberry, M. D.; John Stewart, James Bonney Sudduth, B. S., Ph. G.; Elijah Alexander Scott, Benjamin Early Stockwell, Norman Anthony Schwald, Samuel Elias Smith, Charles Thomas Slavin, D. Everette Standard, Mrs. Susie Vincent Standard, Wallace Simonds, Edwin Keach Statler, Cletus Winfield Scott, Alvis Herman Shields, Walter E. Scarborough, Otto Moritz Schall, Thomas M. Stotts, F. S. Sandborg, M. D. (duplicate); Francis Marion Thurmon, Josiah D. Thurmon, Wade Hampton Taylor, B. S.; William Roly Threlkeld, Allie Wilber Thompson, William Adams Thompson, Charles Augustus Vosburgh, George Henry Wallace, Russell Perry Wells, Ernest W. Wilkin, Thomas Henry Welsch, David Edgar Allen P. Williams, A. B., Pe. P.; Evert Andrew Wilson, Hampton Pinckney Whatley, John Patterson Yeargain. The following graduated in pharmacy: Paul Fremont Cole, Louis Rush, Richard A. Walker.

The Baltimore, Md., Medical College has announced the names of the successful graduates of the institution, as follows:

Jasper Lee Beam, of North Carolina; Daniel Jerome Boland, of Massachusetts; Emmett Richelieu Bucklew, of West Virginia; William E. Byers, of West Virginia; Harry Francis Byrnes, of Massachusetts; Samuel Edward Bigelow, of Pennsylvania; Louis N. Blank, of New Jersey; George C. Bicknell, of Virginia; Roscoe Z. G. Cross, of Maryland; Lester Blake Cavins, of Illinois; Irving Lee Chapman, of New York; Thomas A. Carroll, of Massachusetts; Frank Bacon Cook, of New Jersey; John Joseph Cunningham, of Rhode Island; Bertram I. D'Armond, of Morocco; John Joseph Donovan, of Massachusetts; Daniel Edward Egan, of Connecticut; Calvin B. Faunce, Jr., of Massachusetts; Frank Dennis Fortney, of West Virginia; John Thomas Fleming, of Massachusetts; William George Fitzsimmons, of Ohio; Walter Childs Haviland, of Massachusetts; Herman Irwin Hasselstine, of Vermont; William H. Hahn, of Maine; Ephraim C. Hellstern, of New Jersey; Roy Verner Hauver, of Maryland; Walter P. Havens, of New Jersey; Charles J. Hanson, of Massachusetts; John Calvin Huckins, of New Hampshire; Joseph M. Hodges, of North Carolina; Clarence Elwood Imbrie, of Massachusetts; William Henry Johnson, of New York; Carl Everett Jumper, of Arkansas; Charles A. Knox, of New Jersey; Maurice D. Kefauver, of Maryland; Louis L. Lloyd, of Maryland; Leon Joseph Lacasse, of Canada; Albert Edward Charles MacCrowe, of New Jersey; George Edward McPherson, of Massachusetts; Francis Davidson MacCarriar, of Maryland; F. Manuel McCready, of Pennsylvania; M. Charles McGinley, of Vermont; John Stephen MacQuaid, of Massachusetts; John C. Manning ,of Maryland; Ephraim A. Marcoux, of Massachusetts; Carl Frederick Muller, of Massachusetts; Alva Raymond Morse, of New York; William Alexander Nelson, of Massachusetts; Emil Novak, of Maryland; Jerome Daniel O'Brien, of Connecticut; John Henry Orff, of Pennsylvania; Edward F. O'Malley, of Massachusetts; Joseph Payne, of Connecticut; J. Murray Phillips, of Maryland; Lake Polan, of West Virginia; Charles Elmer Rink, of Pennsylvania; John Gordon Rea, of New Jersey; Leonard Allen Richardson, of Maryland; Edmund A. Rogers, of Massachusetts; Howard Granson Stevens, of Connecticut; Claude Martin Sneden, of Vermont; Frederick Bigelow Stuart, of Tennessee; James Henry Stauffer, of Maryland; Matthew James Sullivan, of Massachusetts; Carl M. Sears, of Kentucky; Claude A. Stonecipher .of Maryland; Edward J. Turbert, of Connecticut; P. C Waller Templeton, of Vermont; William George Turner, of Massachusetts; Harvey H. Whitney, of Massachusetts; Patrick H. Walker, of Pennsylvania; Morris Winheld, of Pennsylvania; Frank C. Willard, of Pennsylvania; William Charles Werts, of Pennsylvania; Yoshi O. Watanabe, of Japan.

The Memphis, Tenn., Hospital College graduated the following on April 29th:

H. H. Atkinson, of Arkansas; J. R. Anders, of Mississippi; B. H. Anderson, of Texas; W. F. Akin, of Arkansas; F. A. Adkins, of Texas; D. G. Bardwell, of Texas; L. F. Bland, of Texas; A. A. Batchelor, of Mississippi; D. R. Brown, of Alabama; J. B. Black, of Alabama; J. R. Bryce, of Indian Territory; T. A. Blume, of Louisiana; G. R. Booth, of Indian Territory; J. E. Bobbitt, of Arkansas; R. E. Bradsher, of Arkansas; J. C. Butler, of Mississippi; C. W. Brandon, of Arkansas; Charney Cale, of Alabama; C. L. Cork, of Indian Territory; C. C. Conerly, of Louisiana; W. M. B. Cox, of Mississippi; J. A. Collins, of Alabama; W. W. Cox, of Mississippi; F. R. Chaffee, of Tennessee; C. A. Chaffee, of Mississippi; W. R. Cates, of Texas; M. A. Cowden, of Mississippi; C. N. Crook, of Tennessee; R. M. Donald, of Mississippi; C. D. Dale, of Texas; L. A. Edwards, of Mississippi; Granville Eastham, of Virginia; C. W. Edwards, of Kentucky; H. L. Ellison, of Tennessee; W. L. Earnest, of Alabama; E. Otis Edgerton, of Louisiana; Benjamin Friedman, of Tennessee; R. C. Ferguson, of Louisiana; A. J. Fortinberry, of Louisiana; Onis Franklin, of Oklahoma; B. T. Ferguson, of Louisiana; George Fulton, of Arkansas; W. H. Fraser, of Arkansas; O. S. Fowler, of Alabama; J. F. Guilette, of Mississippi; R. N. Greene, of Indiana; J. E. Garrison, of Arkansas; J. A. Gaar, of Louisiana; William Gibson, of Arkansas; Jasper Grimes, of Texas; E. J. Gee, of Texas; B. F. George, of Arkansas; E. M. Huckaby, of Texas; A. G. Hunt, of Mississippi; J. O. Handley, of Alabama; W. N. Huggins, of Louisiana; J. M. Howell, of Mississippi; T. S. Hare, of Arkansas; J. M. Hubert, of Texas; F. K. Hollis, of Alabama; A. S. Hagood, of Indian Territory; R. W. Hooker, of Mexico; D. R. Hunt, of Mississippi; J. A. Hook, of Arkansas; L. C. Herrington, of Mississippi; F. P. Ivy, of Mississippi; J. M. Jinkins, of Mississippi; L. F. Jackson, of Louisiana; Judge James, of Mississippi; W. A. Jones, of Texas; E. H. Jackson, of Louisiana; R. H. Johnson, of Louisiana; A. E. Johnson, of Arkansas; A. S. Keim, of Tennessee; D. W. Kirby, of Arkansas; J. A. Knight, of Louisiana; W. H. Kirk, of Mississippi; R. E. L. Lynch, of Tennessee; A. G. Love, of Tennessee; J. R. Lewis, of Tennessee; C. E. Lehmberg, of Texas; D. R. Lamb, of Mississippi; B. C. McMahon, of Tennessee; S. B. McClary, of Tennessee; A. M. McAuley, of Mississippi; J. R. McKinney, of Texas; W. H. McKie, of Arkansas; L. C. McVay, of Indian Territory; E. C. Major, of South Carolina; F. O. Maxwell, of Mississippi; J. A. Morrow, of Arkansas; T. R. Montgomery, of Mississippi; R. E. Morrow, of Texas; Robert Mann, Jr., of Tennessee; N. W. Nanney, of Mississippi; V. N. Nichols, of Mississippi; L. P. Pearce, of Mississippi; O. E. Puckett, of Arkansas; W. A. Prince, of Mississippi; G. B. Parkhill, of Texas; J. W. Pollard, of Arkansas; L. E. Pearson, of Tennessee; J. A. Packer, of Louisiana; J. H. M. Pearce, of Mississippi; S. P. Rumph, of Indian Territory; M. E. Rust, of Tennessee; J. R. Rushing, of Louisiana; Holmes Roane, of Tennessee; F. J. Roemer, of Texas; W. P. Rawlinson, of Texas; W. P. Roberts, of Alabama; J. C. Reynolds, of Mississippi; F. A. Robinson, of Arkansas; W. V. Rumph, of Texas; W. C. Sanford, of Tennessee; F. E. Sadler, of Texas; S. T. Sherman, of Arkansas; T. E. Slaughter, of Mississippi; B. J. Shaw, of Mississippi; J. H. Sheffield, of Texas; W. B. Stokes, of Texas; W. H. Sutherland, of Mississippi; Don Smith, of Arkansas; W. A. Seay, of Alabama; B. R. Sanford, of Tennessee; G. P. Sanders, of Arkansas; J. B. Stanley, of Tennessee; K. P. Thom, of Louisiana; H. W. Terry, of Arkansas; Walter Twitty, of Arkansas; S. A. Turner, of Arkansas; J. M. Townsend, of Mississippi; J. C. Tankersley, of Arkansas; J. M. Thompson, of Texas; D. O. Willis, of Louisiana; T. J. Webb, of Texas; H. F. Wolford, of Texas; J. L. Wharton, of Indian Territory; S. H. Williamson, of Indian Territory; J. L. White, of Mississippi; A. S. Witherington, of Tennesseee; R. D. Williams, of Texas; J. H. Wood, of Mississippi; W. E. Wills, of Texas; A. M. Wynne, of Tennessee; J. C. Walker, of Arkansas; S. J. Weaver, of Arkansas; J. H. Windham, of Mississippi; J. D. Westmoreland, of Mississippi; Milton Walton, of Georgia; T. E. Williams, of Mississippi; C. E. Wilson, of Mississippi.

Pith of Current Literature.

ZENTRALBLATT FUER GYNAEKOLOGIE.

April 2, 1904.

1. Vaginal Cæsarean Section for Placenta Prævia, By A. DÜHRSSEN.
2. Valerius Cordus and Ethyl Ether, By KARL BINZ.

1. **Vaginal Cæsarean Section.**—Dührssen reports another case of vaginal Cæsarean section for placenta prævia in a thirty-year old multigravida, whose uterus had to be quickly emptied on account of hæmorrhage at the fifth month. There was some bleeding afterward from uterine atony, which was controlled by uterine tamponing. Recovery followed. Dührssen contends for the usefulness of the operation, and insists upon the splitting of both the posterior and anterior uterine walls when the operation is performed at full term. He reports sixteen cases from the literature with five deaths. Speaking of the various methods of dilatation, the author advises, when the indication for intervention appears, to try the metreurynter first, and if its use is not successful, to resort to Cæsarean section by the vaginal route. He regards the operation in the hands of a modern gynæcologist as a typical and safe operation, and one free from danger.

2. **Cordus and Ethyl Ether.**—Binz gives an historical note to show that Valerius Cordus, who died in 1544, was the discoverer of ether. Its anæsthetizing quality was discovered by Jackson and Morton 300 years later. The author quotes the epitaph of Cordus and a poem of Giusti speaking against the use of ether in midwifery. He also cites the case of an English physician who called in the police because ether was used in an obstetrical case.

April 9, 1904.

1. The Result of the Struggle Against Uterine Cancer in East Prussia, By G. WINTER.
2. Intrauterine Skeletal Formation, By O. POLANO.
3. Change from Face to Occipitoanterior Presentation by External Manœuvres, By A OSTRCIL.
4. Internal Secretion of the Uterine Mucosa and the Formation of Metrotoxine, By A. SCHUECKING.

1. **Uterine Cancer.**—Winter gives the results of his many years' struggle to diminish the frequency of uterine cancer. He believes that three factors are essentially to blame for the prevalence of the disease. The first is the lack of knowledge among practising physicians, which he has combated by sending throughout the territory brochures dealing with the symptomatology and diagnosis of cancer of the uterus. The second is the conscienceless attitude of midwives, to whom he has addressed a leaflet calling attention to the main features of the disease and urging them to have their patients consult physicians if any suspicious symptoms arise. The third factor is the attitude of women themselves, which he has attempted to overcome by publishing articles in the daily papers, of a popular and not alarming character. The results have been that many more women than formerly have appeared at the clinic for examination and operation, and a greater percentage have consulted specialists.

2. **Skeleton Formation.**—Polano reports a case of a woman, four months pregnant, who had a "missed abortion." A week and a half after the membranes had ruptured, a fœtus was passed piecemeal, which had undergone skeletal changes. The patient had no fever, so the author considers the osseous formation to have been due to maceration, rather than to putrefaction

3. **Conversion of Face to Occipitoanterior Presentation.**—Ostrcil calls attention to the low mortality of children born in an occipitoanterior presentation, compared with the face presentation. Schatz's method of correction by internal manœuvre is not certain, and the author has combined it with external manipulation, which consists of pressure with the fingers of one hand from above downward upon the occiput. The method is free from danger to the mother, and converts an absolutely bad presentation into a good one. Ostrcil's results in its use have been excellent.

4. **Metrotoxine.**—Schuecking has interested himself in the relation existing between the uterus after conception and ovulation, and that between the function of the ovary and the uterine mucosa. He has attempted to find whether the absorption of tissue elements by the endometrium of the pregnant uterus exercises an influence upon ovulation. The experiments were carried out by making an emulsion of the gravid uteri of rabbits and injecting this into the abdominal cavity of other female rabbits, which did not become pregnant for some time despite their mating. Schuecking believes that he has established the fact that there is an inhibition of the ovarian function due to the specific influence of the absorption of tissue elements of the pregnant uterus, while the uterus itself is affected by increased hyperæmia. The author has also secured a cytotoxine which he thinks would be useful in cases of inoperable cancer of the uterus. [The original article should be read by those interested.]

BERLINER KLINISCHE WOCHENSCHRIFT.

April 11, 1904.

1. Hydriatic Treatment of Pulmonary Diseases, By L. BRIEGER.
2. Physiological Views of Clinical Medicine, By M. WALKOW.
3. Scopolamine in Medical Practice, By K. LIEPELT.
4. Therapeutic Attempts with Electromagnets, By T. COHN.
5. Latent Foci of Tuberculosis and the Tuberculin Reaction in the Light of Modern Research, By G. CORNET.
6. Tremor Paralysis After Accidents, By K. RUHEMANN.

1. **Hydriatic Treatment of Pulmonary Diseases.**—Brieger speaks of the expectorant action of hydriatic measures in catarrhal pneumonia. In the treatment of bronchial asthma during the attack, he advocates friction with hot cloths, followed by the application of warm, moist compresses to the chest and back. For the permanent relief of asthma he urges the use of a systematic hydriatic cure. In incipient phthisis, the author recommends for hardening purposes, the use of the Hoeglau baths, and he reports good

results from the employment of hydriatic measures in the treatment of the diarrhœa of the tuberculous by hydriatic procedures which he gives in detail. He urges the personal supervision of these manœuvres by the physician.

3. **Scopolamine.**—Liepelt warmly endorses this drug. He has seen very favorable results from its use, in doses of from four tenths to eight tenths of a milligramme, in delirium of fever and in delirium tremens. He thinks the drug superior to chloral and morphine for these conditions, and has seen no bad effects from its use.

5. **Tuberculin.**—Cornet questions the statements of those who profess to have discovered that tuberculosis among adults is much more widely spread than previously, although he does not doubt that, in general figures, the disease has not diminished among elderly persons. The greater the number of observations, the more convincing is the fact that consideration must be taken of the varying virulence of tuberculosis in different cases arising from the same source. In cases in which a tuberculous infection does not give rise to severe manifestations, it is not necessary to resort to the doubtful question of the personal equation, but it is more likely that the infection is due to less virulent bacteria. The tuberculin reaction shows positively that a tuberculous focus exists, but it gives no inkling as to the prognosis of the case, and it is but a valuable support to a differential diagnosis of the case.

6. **Tremor Paralysis.**—Ruhemann reviews the ætiology and individual symptoms of Parkinson's disease, and considers the recorded cases which had a traumatic origin. Among thirty-five cases of paralysis agitans, seven referred their illness to accident. The author reports these cases in full. In addition to accident, he finds that emotion plays a considerable rôle in the ætiology, while migraine is found to have existed in some cases. It does not appear that syphilis is in any way responsible. These cases originating from an accident do not differ in any way from those of other origin, but it is noteworthy that the tremor begins in that extremity which is alleged to be the seat of the accident. Two of the patients whose cases were reported were under forty years of age, an unusual thing in paralysis agitans.

ZENTRALBLATT FUER CHIRURGIE.

March 19, 1904.

1. Technics of Bone Suture with Silver Wire, By H. Grisson.
2. Treatment of Fractures of the Lower End of the Femur by Bardenheuer's Method, By R. Graessner.

2. **Fractures of the Femur.**—Graessner recommends Bardenheuer's method of weight extension for fractures of the lower end of the femur, especially if they are of the straight, supracondyloid variety. In these fractures, the distal end is usually displaced outward and backward, while the upper fragment is drawn inward and forward by the elastic retraction of the adductor muscles, and shortening is caused by the retraction of the other femoral muscles. The lateral extension weights must also be well carried out. If the weights are sufficiently heavy, shortening will be overcome, apposition will be well secured and a good functional result will be obtained, as the author demonstrates by the report of a case.

April 2, 1904.

1. Flap Incision for Bloody Reposition of Old Dislocations of the Hip, By L. Rydygier.
2. Technics of the Application of Venous Hyperæmia, By Henle.

1. **Dislocation of the Hip.**—Rydygier starts with the assumption that shock and infection are more frequent as a result of the use of great force in the reduction of old dislocations of the hip. This can be avoided by a suitable incision making the head of the femur and the acetabulum accessible. He recommends a flap incision, the middle portion of which extends from six to seven centimetres below the trochanter, its posterior limb curving toward the posterior superior spine of the ilium, parallel to the fibres of the gluteus maximus, its anterior portion passing upward between the tensor muscle of the fascia lata and the gluteus medius toward the anterior superior spine. The greater trochanter can thus be reached and chiseled away, if necessary, and the acetabulum and head of the femur can thus be brought into contact, even in the presence of much shortened muscles.

2. **Venous Hyperæmia.**—Henle describes an apparatus by which the " dose " of the hyperæmia can be regulated so that it may be equably maintained for any desired length of time.

ZENTRALBLATT FUER INNERE MEDIZIN

April 2, 1904.

1. A Remedy for the Solution of Renal Calculi, By Jaenicke.

1. **Solution of Renal Calculi.**—Jaenicke recommends an infusion made from the leaves of the birch tree as a remedy to dissolve renal calculi, which he has used for some years. He reports a case in which the diagnosis was confirmed by the Röntgen rays, and in which the symptoms totally disappeared. The calculi were passed in small pieces at first and later as gravel, the patient making a complete recovery. Jaenicke says the infusion must be used for about six months, the dose being a teaspoonful to a quart of water.

PRESSE MEDICALE.

April 6, 1904.

Mortality and Disease in Military Centres, By L. Bard.

Military Centres.—Bard points out that, although the soldiers are picked men, their mortality exceeds that in civil life; also that the mortality in the French army seems to exceed that in the German forces, date for date. In the various navies, the mortality seems to be about the same. Typhoid fever is six and one half times as frequent as in the Germany army, as are all diseases, except meningitis, peritonitis, accidents, and suicide. The obvious remedy lies in the increase of the number of scientific physicians and the supplying of competent hygienic assistants;

most important is the necessity of conferring equal rank upon the medical officers and not allowing those of purely military rank any command over them in their particular department. The medical officers should not confine their attentions to the wounded after a battle, but become an advance guard with full authority to determine where the army should camp; even in full fight, their orders should be paramount whenever a mere detail of sanitary and not military tactics is in question.

April 13, 1904.

1. A New Local Anæsthetic; Stovaine, By De Lapersonne.
2. Syphilitic Origin of Appendicitis, By Gaucher.
3. New Method of Diagnosis by Tuberculine, By Nattan-Larrier.

1. **Stovaine.**—De Lapersonne states that this anæsthetic is an amylene chlorhydrate, 2½ times less toxic than cocaine, disagreeable upon first application to the cornea, but valuable in eye operations, except in iridectomy and when repeated anæsthesia is required for tenontectomy. In subcutaneous and subconjunctival injections, it seems to be superior to cocaine. The writer recommends the use of one drug after the other.

2. **Appendicitis of Syphilitic Origin?**—Gaucher presents his statistics with great modesty as likely to cause surprise, but states that out of the 32 cases observed by him, 9 were over thirty years of age, 4 men and 5 women; of all the men, none was non-syphilitic; of the women, in only one could syphilis not be positively diagnosticated. Of his 23 cases under thirty years of age, 21 were undoubtedly syphilitic; two denied any specific antecedents. Out of 32 cases of appendicitis, therefore, Gaucher found 8 cases of acquired and 21 cases of hereditary syphilis. He regrets that he tried specific treatment in only one case and hopes others will be more careful.

SEMAINE MEDICALE.

April 13, 1904.

Hereditary Periodical Paralysis, By L. Cheinisse.

Hereditary Periodical Paralysis.—Cheinisse distinguishes with considerable acumen this disease from ordinary malarial paralyses to be observed in malarial districts or families, and. while showing that Goldflam's theory is not completely proved, agrees with it to the extent that an autointoxication is the most plausible theory as to its origin, which is borne out by the fact that rest has a most unfavorable influence. Atropine, in very small doses, had good effects in one case before unexpected poisoning supervened, and gymnastics, massage, and faradaization seem to have produced the best results.

LYON MEDICAL.

April 3, 1904.

1. Variations in the Outline Showing the Limit of Pleuritic Effusion, Particularly in an Oblique Direction, Determined by Radioscopy, By Barjon and Courmont.
2. Study of a First Series of Twenty-five Perineal Prostatectomies, By Rafin.
3. Osteoperiosteitis of the Superior Maxillary, Due to Late Fall of the Milk Molars, By Pont and Leclerc.

1. **Radioscopy of Pleuritic Effusion.**—Barjon and Courmont have devoted time to the study of the successive variation in the radioscopic outline of pleuritic effusion as shown in different stages of the disease, and have found that they can determine the amount of effusion, its mobility, its augmentation or diminution, and the reestablishment, more or less complete, of the pulmonary functions. These data are usually combined by ordinary physical examination, but the diagnosis by radioscopy is the more accurate, particularly after aspiration, when variations in the outline, except when there have been adhesions, are most marked.

2. **Perineal Prostatectomies.**—Rafin states that the removable results of his 25 operations varied from 2½ drachms to nearly 3 ounces in weight, one being a characteristic cancer, and two epithelioid adenomata. Rafin never sutures the urethra; he leaves the sound, and allows perineal drainage, lavage keeping all clear till the latter is closed, the sound being allowed to remain in some cases for three weeks, but being removed if there are any signs of urethritis, hæmorrhage, or orchitis. The last is not uncommon, but ligature of the vas deferens is the remedy, although not imperative. Rafin's cases of rectal fistula had spontaneous cure. The mortality in all his cases was 8 per cent. None of them had complete cessation of frequent urination, but they comprised all old and neglected patients. Emphasis is laid in Rafin's paper on the careful and proper preparation of patients for operation, due care being paid to the possibility of malignant disease of the genitourinary tract.

3. **Osteoperiosteitis of the Superior Maxillary.**—Pont and Leclaire cite a case in which the abnormal persistence of the temporary or milk bicuspids in the jaw had excited rather serious symptoms of periosteitis and osteitis. This condition was found to be due to the unusual shape of the secondary teeth which were seeking to push their way through, and which were found to have their customary circumferences as to crown and root reversed. This condition may not be unusual and dentists or doctors, who are consulted regarding the delay in the appearance of the permanent teeth, may well take it into consideration.

RIFORMA MEDICA.

March 23, 1904.

1. A Contribution to the Influence of Altitude Upon Patients with Heart Disease, By Giovanni Galli.
2. Two Cases of Wounds of Body Cavities, By Paolo Fiori.
3. A Family of Choreics, By Antonio D'Ormea.
4. The Ætiology of Suppurating Fibromyomata of the Uterus, By Nicola Giannettasio.

1. **Altitude and Heart Disease.**—Galli reports his experience with a number of patients with heart disease who, not only suffered no inconvenience at great altitudes, but were distinctly benefited. The author doubts very strongly the truth of the axiom laid down in the textbooks, that patients with heart disease should not be allowed

to live in altitudes higher than 500 metres. He saw a number of patients with organic heart disease do very well at the Springs of Masino in Valtennina, an altitude of 1168 metres; in other words, more than twice the altitude allowed by the textbooks. Two of these cases were instances of "irritable heart" (vasomotor neurasthenia of the heart); two of aortic insufficiency; one of arteriosclerosis, and one of myocarditis.

3. **A Choreic Family.**—D'Ormea recites the history and genealogy of a family in which he traces chorea for five generations. He makes some interesting deductions regarding the prevention of this disease in families in which it is hereditary. In the fourth generation of this family in which the disease was most intense, one member reached the age of fifty years without showing any symptoms. This fact assumes importance when it is considered that this man could not have been nursed by his mother, who died soon after he was born, but who already had shown signs of chorea. The author thinks this circumstance worthy of note. It is possible that by modifying the feeding of an infant, the transmission of chorea may be prevented. The child predisposed by a neuropathic heredity is rendered still more susceptible by an insufficient alimentation, such as is afforded by the milk of a choreic mother. At any rate, this hypothesis is worthy of examination, and further observations should be made with a view of determining the rôle which feeding plays in the prevention of chorea.

4. **Suppurating Fibromyomata of the Uterus.**—Giannettasio reports a case in which a fibromyoma of the uterus contained a central abscess. The patient was a woman, aged thirty-six years, who was admitted with lobar pneumonia on the right side. After the temperature had fallen by crisis it remained normal for a few days and then again began to rise intermittently and sometimes irregularly. The patient also had persistent and frequent hæmorrhages of the womb. A tumor attached to the uterus was made out in the hypogastric region. The abdomen was opened, and a total hysterectomy performed. The patient developed suppurative peritonitis and died on the eleventh day after operation. The tumor was of the size of an eight months' gravid uterus, and was divided into two lobes, one of which was attached to the fundus, the other to the anterior wall of the uterus. This tumor contained an abscess cavity, the pus in which showed the diplococcus of Fraenkel. This finding places the case in the very rare class of affections of the genital organs produced by the pneumococcus.

ROUSSKY VRATCH.

March 20, 1904.

1. In Memory of Professor Ratimoff, By V. N. Heinnatz.
2. On Coxa Vara and Valga, By G. I. Turner.
3. On the Mechanism of the Nutrition (and Blood Supply) of the Heart of Warm Blooded Animals, By J. A. Tchueffski.
4. On External Œsophagotomy as an Emergency Operation in the Removal of Foreign Bodies, By P. A. Baratynski.
5. Operations Under Immediate Control with the X Rays, By A. J. Galevski.
6. A New Mercuric Salt in the Treatment of Syphilis (Aniline Compound of Mercury), By N. P. Fedtchenko.

2. **Coxa Vara and Valga.**—Turner emphasises the frequency of traumatism as a cause of coxa vara. A fracture of the neck of the femur not infrequently occurs in childhood, and may be overlooked, but during the period of growth there follows coxa vara with difficulty in abducting the thigh, pain, and outward rotation of the limb. The last named sign is of great importance in the diagnosis of coxa vara due to fracture of the neck of the femur during childhood. The x rays are very useful in the detection of these cases. While attempts have been made to make coxa vara an independent disease, due to infection with a specific germ, yet this condition is really not a single disease, but is the result of a variety of conditions. Coxa vara is merely a collective term indicating a deformity due to the "overloading" of the neck of the femur. The term coxa valga should be applied by analogy to conditions in which there is a tendency to straighten out the natural angle of the neck of the femur. As yet, but little attention has been paid to coxa valga. The author thinks that all conditions that diminish the amount of weight placed upon the head of the femur and that tend to drag upon the lower extremity during the period of growth, act as causes of coxa valga. When a foot is amputated in early childhood, the limb hangs and by its weight straightens the neck of the femur. The same is true of infantile paralysis and also of congenital dislocation. The continual action of these causes may produce the complete straightening out of the angle.

4. **External Œsophagotomy.**—Baratynski reports a case of foreign body in the œsophagus in which œsophagotomy had to be performed, in order to remove a stone of considerable size. External œsophagotomy is very rarely performed, and there are but 248 cases on record. The present is the eighth case reported in Russia. The author thinks that this operation should be employed more widely, especially in emergency cases. In this case the foreign body was impacted at a distance of 23 cm. from the incisors, and could not be pushed into the stomach. The operation was performed eight hours after the stone had been swallowed. and the stone was removed with great difficulty through the external wound by means of strong, sharply curved, forceps. It proved to be a stone weighing 24 grammes, with a greatest diameter of 3.5 cm. and a thickness of 2 cm. The majority of foreign bodies are impacted in the cervical portion of the œsophagus, while but a small proportion remains in the thoracic portion. The treatment of foreign bodies in the œsophagus consists, first in the use of special forceps (in children under chloroform). If the object swallowed is a coin, it may be removed with a coin extractor, but it must be remembered that this instrument is apt to break and may become impacted. If the shape of the

body is favorable, it may be pushed down into the stomach by means of a sound to which a sponge is attached, but here again great caution is needed, as the œsophagus has been ruptured by this procedure. Finally, if the object cannot be removed or pushed down, an operation is indicated. If the foreign body is in the cervical portion or in the upper part of the thoracic portion, external œsophagotomy is indicated, but if it is at a distance of 32 cm. or more from the front teeth, a gastrotomy becomes necessary. An early œsophagotomy is to be preferred to expectant treatment, which may give rise to fatal injury to the walls of the canal as the result of the presence of the foreign body.

5. **X Rays Used During Surgical Operations.**—Galebski calls attention to the usefulness of the x rays in assisting the surgeon finding foreign bodies in the trachea, the stomach, intestines, bladder, etc., during operations. But few surgeons operate directly under the guiding influence of the x rays, and yet this is an extremely useful procedure. The idea is not new, but it needs wider application. The author reports the case of a child, aged two years, who swallowed a coin and in whom the coin was removed by means of forceps under the direct guidance of the x rays. The forceps could be seen grasping the coin. Numerous unsuccessful attempts had been made in this case to remove this coin by various means. The author thinks that many patients would be saved the necessity of an operation for the removal of a foreign body if the x rays were employed in time in this manner.

6. **An Aniline Compound of Mercury.**—See Therapeutical Notes.

BOSTON MEDICAL AND SURGICAL JOURNAL.

May 19, 1904.

1. Enterostomy in Peritonitis,
By ROBERT B. GREENOUGH.
2. A Comparative Study of the Death Rates for the State of Massachusetts for the Years 1850, 1875, and 1900.
By WILLIAM F. WHITNEY.

1. **Enterostomy in Peritonitis.**—Greenough considers only the advisability of performing enterostomy for that form of intestinal obstruction which occurs in diffuse peritonitis, the so-called "dynamic obstruction," or "paralytic ileus." He reviews briefly and reports forty-one cases of diffuse peritonitis from the Massachusetts General Hospital, in which the operation has been done. Of these cases there were 24 primary enterostomies with five recoveries, and 17 secondary enterostomies with only one recovery. In all these cases the Mixter glass tube was used. The paper ends with a series of seventeen formal conclusions, which lack of space prevents us from reproducing.

2. **Death Rates for Massachusetts.**—Whitney's statistics bring out the fact that it is only between the ages of one year and fifty years that the death rate for 1900 is smaller than was the death rate for the year 1850. The author believes that the increased infant mortality noticeable during the last decade is due to a decrease in the ability of mothers to nurse their young, and to the increased density of population. Other factors, of course, may enter into the problem. The increased mortality after the fiftieth year is probably due to the strenuousness of modern living.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

May 21, 1904.

1. Intestinal Perforation in Typhoid Fever,
By B. B. DAVIS.
2. The Operative Treatment of Eclampsia,
By CHARLES SUMNER BACON.
3. The Use and Abuse of Hypnotics,
By W. BLAIR STEWART.
4. Our Serotherapeutic Measures, By H. T. RICKETTS.
5. The Apostoli Treatment. The Final Results of Its Use in Some Cases of Fibroid Tumor of the Uterus,
By G. BETTON MASSEY.
6. Complications and Degenerations of Uterine Fibromyomata. A Pathologic and Statistical Study of Two Hundred and Eighty Cases,
By ELLICE M'DONALD
7. The Treatment of Fibroid Tumors of the Uterus,
By CHARLES P. NOBLE.
8. The Army Medical Department. III. A Historical Sketch (*Continued*).

1. **Intestinal Perforation in Typhoid.**—Davis quotes Taylor, to the effect that there are from fifty to seventy-five thousand deaths from typhoid fever in the United States each year. According to Osler, 16,666 of these deaths are due to perforation, and, asserts the author, if the best authorities are to be believed, one half of these deaths can be prevented by prompt surgical intervention. The author favors operation. The statistics of some of the best known surgeons are reviewed and some space is devoted to the diagnosis of perforation and to the technics of its operative treatment. The author briefly reports three cases of typhoid perforation that came under his care. Two of the patients were subjected to operation, one was not. All three died.

2. **Eclampsia.**—Bacon classifies the operative treatment of eclampsia thus: (1) The induction of labor; (2) the removal of the child by Cæsarean section. (1) Induction of labor: *(a)* Cervix completely dilated. Deliver the child at once by the best method suited to the particular presentation. *(b)* Cervix effaced, but only slightly dilated. The cervix must be dilated by one of three methods: incision, digital manipulations, or the insertion of bags. The choice of method will depend on the woman's condition and on the facilities at hand. *(c)* Cervix not yet effaced. This condition presents serious obstacles. If the woman is in a hospital the author believes that the best results will probably be obtained by resorting to vaginal Cæsarean section. (2) Cæsarean section. This operation is called for only by special cases.

5. **The Apostoli Treatment.**—Massey reviews the results obtained with the electrical treatment of fibroid tumors of the uterus. He analyzes 110 personal cases treated during the past sixteen years. His conclusions are "(1) A prolonged observation of cases of fibroid tumors of the uterus

under the Apostoli treatment teaches that three quarters of the cases subjected to the method will be practically cured, as attested by inquiries made from three to sixteen years after the cessation of treatment. (2) The cases that responded poorly, or not at all, to this treatment are not harmed by it, when properly applied, and heroic measures may then be adopted with the certainty that milder means are of no avail. (3) Hæmorrhagic and interstitial fibroids are best adapted to the Apostoli treatment, while subperitoneal or degenerative fibroids and those complicated with pyosalpinx are least adapted to be relieved by it. (4) So far as my inquiries and circulars show, there have been put seven deaths among these 110 patients during the sixteen years or less that they have been under my observation. It is an interesting fact, moreover, that but one of these deaths was due to the progress of the growth itself, proving the non-mortal character of this affection. Of the remaining six, one died, long after treatment, of an affection totally unconnected with the growth, one of septicæmia under electric treatment, and four while being operated on with the knife."

6. **Uterine Fibromyomata.**—M'Donald's analysis of two hundred and eighty cases of uterine fibromyomata leads him to the following conclusions: (1) Fibroids which are producing symptoms, and all fibroids except those designated as small (especially when subserous or intramural), should be removed, because the risk to the patient from operation is far less than that from the tumors themselves. (2) In view of the sarcomatous changes, carcinomatous associations, and complications of uterine fibromyomata, early removal is indicated when they are of sufficient size to produce symptoms. Small uncomplicated tumors not producing symptoms do not require early treatment. (3) Thorough pathological examination should be made of all fibroids for evidence of malignancy. Particular study should be devoted to those tumors which are necrotic, cystic, or both, as among these are found the largest proportion of malignant changes.

7. **Uterine Fibromyomata.**—Noble asserts that the evidence which is now available proves conclusively that over one third of the women having fibroid tumors will die unless the tumors are removed; that the risk of radical operation in uncomplicated cases is very small—probably 1 or 2 per cent.; that in the average of cases, in good hands, it is about 5 per cent., rising to 10, 20 or 30 per cent. in the gravely complicated cases; on the main proposition that fibroid tumors should be removed there is no question. The debatable ground is whether or not to remove small fibroid tumors, especially when subserous or intramural.

MEDICAL RECORD.

May 21, 1904.

1. The Treatment of Pneumonia, By José M. Ferrer.
2. Renal Redecapsulation, By George M. Edebohls.
3. Operative Surgery Applied to the Seminal Vesicles: A Demonstration of Some New Principles, By Eugene Fuller.
4. Who Is Underfed? By Heinrich Stern.
5. Tetanus Treated by Intraneural Injection of Antitoxine, By John Rogers, Jr.
6. Multiple Gonorrhœal Periarthritis in a Child, Probably Due to Inoculation Through a Wound, By Henry Heiman.

1. **Pneumonia.**—Ferrer reviews the various treatments that have been suggested for the treatment of pneumonia. He does not believe it probable that any routine treatment will ever be formulated. Pneumonia should be looked upon as a general blood infection having, however, a selective local manifestation in the lungs. Treatment should not be confined to relieving the most pressing symptoms. The general management of the case is of the utmost importance. The author details at length the general principles that guide him in the treatment of this disease.

2. **Renal Redecapsulation.**—Edebohls asserts that it was Cutler who first called attention to the possible expediency of redecapsulating the kidneys in cases where the first decapsulation was followed by a recurrence of the original symptoms. Edebohls has recently had occasion to decapsulate a second time the kidneys of a patient on whom he had two years previously performed decapsulation. The patient was practically in a dying condition at the time of the second operation and expired five hours after its completion.

3. **Surgery of the Seminal Vesicles.**—Fuller reports twenty-one cases on which he has operated for various affections of the seminal vesicles. The mode of operating is new. The patient is placed in the knee-chest position and the seminal vesicles are reached through a perineal incision. The author divides the twenty-one cases into five groups according to the pathological conditions present and reports briefly each case.

5. **Tetanus.**—Rogers asserts that the toxine of tetanus travels from the periphery to the centre of the nervous system along the motor nerves only. He believes that for tetanus antitoxine to reach the central nervous system it must travel the same way. It is for this reason that antitoxine injections, as now given, produce such disappointing results. The author proposes that motor nerve trunks shall be exposed by incision as near the spinal cord as possible, and that the injections of antitoxine shall be given directly into such trunks. In addition to this, lumbar puncture should be resorted to, the nerve roots scratched if possible, and antitoxine injected in this locality also. One case treated by this method is reported. The patient recovered.

AMERICAN MEDICINE.

May 21, 1904.

1. A Study of 91 Operations for the Relief of Various Forms of Hernia, with Their Complications, By Orville Horwitz.
2. Malposition of the Head (Torticollis, Canted or Tilted Head) with Resultant Ill Health, Spinal Curvature, Etc., Due to Eyestrain, By George M. Gould.
3. Some Facts Concerning Radium and the Use of the Intragastric Radiode, By J. A. Storck.
4. The Treatment of Pneumonia, By R. S. Thornton.
5. Preliminary Report of a Case of Splenomyelogenous

Leucæmia Showing Marked Improvement Under the Use of the Röntgen Ray, By Charles H. Weber.
6. The Therapy of Acetanilid, By J. R. Johns.
7. The Medical Inspection of Schools, By Helen MacMurchy.

1. **Hernia.**—Horwitz concludes: (1) The safety of the patient as well as the lowering of the mortality in strangulated hernia depends on gentle taxis being exerted for a short period, which if unsuccessful, should be succeeded by an immediate operation. (2) Herniotomy for the relief of strangulated hernia in the aged is not a dangerous operation, provided it is performed as soon after the constriction has taken place as possible. (3) An inflamed hernia should not be treated by taxis, but should be subjected to an operation. (4) No one method of attempted radical cure is applicable to every variety of rupture. The Bassini is suitable to the largest majority; the Bloodgood for those in whom a large abdominal ring and weak or atrophied conjoined tendons exist. The relief of special forms and conditions of hernia must be met by the ingenuity of the surgeon, selecting the operation to the indications presented. (5) The palliative operation is applicable to a large number of selected cases of reducible hernia in which the protrusion cannot be kept within the abdominal cavity by means of a truss, and also in some forms of incarcerated hernia. (6) A radical cure may be safely attempted on patients between the sixth and the sixtieth years. (7) Individuals who submit to what is known as the "palliative operation" should continue to wear trusses after recovery. (8) In cases not aplicable to a routine method of operation, the surgeon should strive to do what in his judgment would be the best means of effecting the removal of the entire neck of the sac on a level with the parietal peritonæum; he should, if possible, firmly close the opening in the peritonæum after the removal of the sac; he should obliterate the depression of the peritonæum in the vicinity of the internal abdominal ring, bring in apposition the structures, and close the apertures which form the canal through which the rupture protrudes. (9) An aseptic result following a radical operation, with primary union, is essential to obtain a permanent cure of hernia. (10) In cases of undescended testicle associated with hernia, every effort should be made to save and transplant the organ. (11) The method of operating for umbilical hernia suggested by Mayo is probably the most satisfactory for that variety hitherto suggested. (12) Absorbable sutures are preferable to those of non-absorbable material.

3. **Radium.**—Storck reviews many of the facts that have been established concerning radium. The intragastric radiode is an instrument the author has invented for treating gastric cancer. It consists of a capsule containing radium attached to a slender shaft. The instrument is passed through a rubber tube, and the capsule is made to project from one end of it. The author has used his instrument in one case. Pain is said to have been diminished. Treatment was only carried out for three weeks.

4. **Pneumonia.**—Thornton believes in the active treatment of pneumonia. He champions no new treatment. He is a firm believer in the efficacy of creosote and creosote carbonate. He asserts his belief that these drugs are capable of so modifying the natural course of the disease that its termination will be by lysis and not by crisis.

5. **Leucæmia.**—Weber reports one case of splenomyelogenous leucæmia in which, after six months' treatment with the x ray, a symptomatic recovery ensued. What the final outcome of the case is going to be time alone will show. The author does not claim a permanent cure.

MEDICAL NEWS.

May 21, 1904.

1. Lesions Peculiar to the Pancreas and Their Clinical Aspect, By Eugene L. Opie.
2. The Prophylaxis and Medical Treatment of Diseases of the Pancreas, By Glentworth R. Butler.
3. The Classification and Symptomatology of Diseases of the Pancreas, By Charles G. Stockton.
4. Renal Decapsulation from the Pathologist's Point of View, By Joshua M. Van Cott.
5. Cancer of the Intestine, By J. G. Sherrill.
6. Fracture of the Base of the Skull as a Cause of Epilepsy; Report of Case, . By Charles J. Aldrich.

1. **Lesions of the Pancreas.**—Opie calls attention to the unsatisfactory condition of our knowledge regarding diseases of the pancreas. He reviews, in a general way, the anatomy of the pancreas and its physiology, before discussing the various lesions that have been met with. The paper is made up of such a mass of disconnected facts that it is not possible to give a short and satisfactory abstract of it.

2. **Treatment of Pancreatic Diseases.**—Butler does not think that much can be done toward the prophylactic treatment of pancreatic disease, the chief difficulty in the way being that its ætiology is very imperfectly understood. If syphilis or gallstones are thought to be at the bottom of the trouble, of course they should be attended to by the usual methods. The medicinal treatment of pancreatic diseases is purely symptomatic. The chief symptoms that demand relief are pain and jaundice. Diagnosis of pancreatic disease is rarely made during the patient's life. For the present, therefore, the need of specific medication is not of great importance.

4. **Renal Decapsulation.**—Van Cott gives a number of theoretical reasons why renal decapsulation cannot result in any benefit in cases of Bright's disease. He then proceeds to give a sketch of some experimental work performed by Murray and himself, on cats, in order to determine exactly what happens when the kidney or its capsule is subjected to various insults. These experiments confirm the author in his belief of the futility of renal decapsulation. "In conclusion, the writer desires to express his sense of high appreciation of the earnest work and brilliant conception which led Dr. Edebohls to devise this operation and put it into practice;

for, while he cannot approve of it as a procedure, it is nevertheless a tribute to the energy and faithfulness with which our American surgeons are pressing forward for the mark of the prize of their high calling, in their ceaseless efforts to relieve a suffering humanity."

6. **Epilepsy.**—Aldrich reports the following case: A man in good health and of good family and personal history fell some distance and landed on his feet. He sustained a fracture of the base of the skull. Eight months after his injury he was able to return to work. One year after his injury he had a "spell," epileptic in character. Eleven years after his injury he developed typical major epilepsy. The author has been able to find only one other case recorded where epilepsy was caused by a fracture of the base of the skull.

LANCET.

May 7, 1904.

1. Some Disorders of the Blood and Blood-forming Organs in Early Life (Goulstonian Lectures: I), By R. Hutchison.
2. Recent Studies on the Tissue-lymph Circulation. (Oliver-Sharpey Lectures: II), By G. Oliver.
3. Abnormal Muscular Contractions, By E. N. Smith.
4. Mesenteric Cysts, By E. P. Baumann.
5. Amaas, or Kaffir Milkpox, By W. E. De Korté.
6. A Case for Diagnosis, By W. J. Smyth.

1. **Infantile Blood Disorders.**—Hutchison begins his first Goulstonian lecture by reviewing the characters of the blood in infancy. At birth the infant has an excess of red corpuscles, the average for the first day being about 5,500,000 per c. mm. This excess is due to desiccation of the blood by evaporation after birth, to aspiration of blood out of the placenta by the first acts of respiration, and to the sudden increase in activity of the bloodmaking organs. This excess soon passes off, and by the second week the adult figure of 5,000,000 per c. mm. is reached, and persists with remarkable uniformity throughout life. The percentage of hæmoglobin at birth is proportional to the number of red corpuscles and amounts usually to 110 per cent.; it falls rapidly in the first week, and the products of its destruction have probably much to do with the causation of icterus neonatorum. After the second week, while, as above stated, the red corpuscles remain stationary, the hæmoglobin continues to fall and reaches a minimum of 70 per cent. after the sixth month of life. This comparative poverty in hæmoglobin is one of the most striking characteristics of the blood of the young child. Nucleated red corpuscles are common during the first few days of life. As regards the leucocytes, there is a multinuclear leucocytosis most marked just after birth, and gradually falling off during the first week, followed by a slow rise in the non-granular cells, which reaches its maximum about the sixth month, but which persists more or less throughout infancy. As regards blood formation in infancy the author summarizes his views as follows: 1. The red marrow in infancy is engaged almost to the limit of its functional capacity in the production of red cells, which are, however, less rich in hæmoglobin than adult cells. 2. The production of the granular forms of white cell goes on as in the adult as in the marrow and at the same rate. 3. The non-granular cells, on the other hand, are present in the blood of infants in markedly larger absolute numbers than in the adult, and correspondingly the adenoid tissue concerned in their production is very abundant, active, and widely diffused. 4. The combination of a high absolute number of non-granular cells with a relatively low percentage of hæmoglobin is what constitutes the infantile type of blood. There is a less sharp degree of specialization on the part of the marrow and adenoid tissue. The author divides the infantile disorders of the blood into the following great groups: (1) congenital abnormities of the blood; (2) primary anæmias; (3) secondary anæmias; (4) blood disorders associated with enlargement of the spleen; (5) leucæmias; and (6) affections of adenoid tissue.

2. **Tissue Lymph.**—Oliver in his second Oliver-Sharpey lecture, considers the effect producted upon the tissue lymph circulation by fatigue, exercise, rest, sleep, respiration of gases, internal secretion, temperature, and gravitation. Exercise increases the exudation of tissue-lymph, but such increase rapidly disappears, as fatigue sets in. The arterial pressure falls, and the muscles become "lymph-logged" as it were, and will not contract normally until the lymph is removed, either by rest, or by massage. Hence the value of rubbing after exercise. During rest after exercise there is a steady and persistent rise of all the blood pressures and a corresponding effusion of tissue-lymph to repair and recharge the muscular fibres. During sleep a large volume of lymph is exuded into the somatic tissues, for the purpose of tissue restoration. Various gases produce a marked effect upon the lymph circulation. Oxygen raises the pressure, and its effects continue for some time after inhalation. Sewer gas is a stimulant of the circulation, and those constantly exposed to it become in early life rheumatic or quasi-gouty. A few provisional conclusions are summarized as follows: 1. Tissue lymph is intermittently effused, for example, after the ingestion of food, during exercise, rest after exercise, and sleep. 2. The rapid effusion and removal of it in states of rest suggest the probability of a circulation between the blood and tissue spaces—a circulation independent of the lymphatic circulation. 3. The apparent physiological intent of the effusion is reparative and that of its absorption is the removal of tissue waste. 4. The normal intermittency of the fluid exchange becomes in many pathological conditions less and less complete.

3. **Abnormal Muscular Contractions.**—Noble Smith classifies abnormal muscular contractions broadly as to their cause: (1) Originating in the nervous system; and (2) originating in the muscles themselves. Class 1 may be divided as follows: A. Conditions inducing active spasms of the muscles. These may be congenital or acquired. In the acquired class we have: *(a)* permanent spasm from disease of the brain (late

rigidity of hemiplegia); *(b)* permanent spasm from disease of the spinal cord (spastic paraplegia, lateral sclerosis, Pott's disease); *(c)* permanent spasm due to lesions of the trunks of nerves (facial paralysis); *(d)* hysterical spasm; *(e)* tetanic contraction; *(f)* permanent spasm from reflex causes; and *(g)* permanent tonic spasm from other causes of nervous origin (spasmodic torticollis). B. Conditions leading to passive contraction of muscles without spasm. These may be either congenital or acquired. Of the latter we have *(a)* cases due to unbalanced action of groups of muscles where the antagonistic groups are paralyzed (infantile paralysis); and *(b)* those due to the maintenance of a paralyzed limb in a shortened position for a considerable time by spasm (acquired club foot).

5. **Amaas.**—De Korté defines amaas, or Kaffir milkpox, as a specific, contagious eruptive fever, closely resembling smallpox in appearance, yet differing from it in some respects. It is distinct from the infectious disease occurring in Lascars or from varioloid varicella, and is probably smallpox mitigated by some unknown factors.

BRITISH MEDICAL JOURNAL.

May 17, 1904.

1. A Case of Strangulated Femoral Hernia, By A. CLARK.
2. An Operation for the Radical Cure of Hernia, By J. H. PRINGLE.
3. On Gastrojejunostomy for Pyloric Stenosis, Gastric Ulcer, and Some Other Non-Malignant Conditions, By G. BARLING.
4. Acute Intestinal Obstruction Caused by Syphilitic Ulceration in the Ileum, By J. M. ELDER.
5. Some Cases of Intestinal Obstruction Successfully Treated, By W. TAYLOR.
6. On Congenital Hour Glass Stomach, By W. F. BROOK.
7. Case of Congenital Hypertrophic Stenosis of the Pylorus, By A. J. CLEVELAND.
8. A Foreign Body Impacted for Seven Months in the Œsophagus, By A. FULLERTON.
9. A Case of Malignant Obstruction of Œsophagus: Gastrostomy, By E. SOLLY, and H. I. DAGGETT.
10. On the Treatment of Acne, Furunculosis, and Sycosis, by Therapeutic Inoculations of Staphylococcus Vaccine, By A. E. WRIGHT.

3. **Gastrojejunostomy.** — Barling performs gastrojejunostomy in the following classes of cases: 1. For stenosis of the pylorus, for hour glass contraction of the stomach, or for a stenosis of the duodenum, in each case to allow the contents of the stomach to pass freely into the intestinal tract and thus provide relief to gastric stasis, with its distressing symptoms and the incapacity for work which it brings. 2. For the purpose of putting the stomach at rest, to stop hæmorrhage from ulcers, whether situated in the stomach or in the duodenum, with the intention also of relieving pain and procuring the healing of the ulcers. 3. For atonic dilation of the stomach with marked proptosis, the substitution of a more passive and more dependent opening for the pylorus, relieving the organ of overfullness and the consequent pain and vomiting. In the first group of cases relief has almost always been complete; the more marked the symptoms, the greater the benefit. In the second class of cases the pain and hæmorrhage are usually relieved, but sometimes this is not permanent. In the third group the results have been discouraging. Pyloric stenosis is the reason for surgical intervention in the great majority of the cases, the condition found being usually a pylorus which will admit only the tip of the little finger, a condition brought on by constant spasm. The early recognition of gastric stasis leading to early surgical relief is what should be aimed at. Pyloroplasty, or incision and suturing, is a better means of relieving pyloric stricture than pylorodiosis, or stretching. In conclusion, the author reports six cases illustrative of the operation of gastrojejunostomy and of his method for its performance.

4, 5. **Intestinal Obstruction.**—Elder reports a case of acute intestinal obstruction caused by syphilitic ulceration, occurring in a man aged twenty-three years. There was no history of venereal infection, but previously a typical tertiary ulcer had developed on the eyelid. At the operation the ulcer was found to be some two feet and a half above the ileocæcal valve. The omentum, firmly adherent, grasped the bowel like a band. The patient made an uninterrupted recovery from the operation, at which the affected portion of the bowel was resected.

Taylor reports thirteen cases of successful operation for intestinal obstruction. Cases due to bands are the most satisfactory, owing to the diagnosis being comparatively easy and the patients being usually in good condition. Acute obstruction due to adhesions, if extensive, is the most unsatisfactory form to treat, the separation of the adhesions being difficult and tedious, and the patient being usually in poor condition. Obstruction due to stricture is best treated by temporary drainage, the diseased part being subsequently removed, and an end-to-end anastomosis performed.

8. **Foreign Body in the Œsophagus.**—Fullerton's case presented the following points of interest: 1. The length of time since impaction, seven months. 2. The absence of symptoms until three weeks before operation, ulceration having then begun. 3. The situation of the coin close to the arch of the aorta, into which ulceration would possibly have taken place. 4. The œsophageal wound was closed by a row of sutures in mucous membrane. 5. No tube was passed down the œsophagus to feed the patient. 6. Rectal feeding was of doubtful effect.

10. **Treatment of Acne, Etc.**—Wright reports eighteen cases of acne, furunculosis, and sycosis treated by inoculations of a staphylococcus vaccine. No attempt is made to supply to the patient protective substances produced in the organism of an animal vicariously inoculated, but the chemical machinery of the patient is induced to elaborate by its own efforts the protective secretion which is required for the destruction of the invading bacteria. In obstinate cases a specific vaccine must be used.

Letter to the Editor.

RIGHT-SIDED HEART DISEASE, AND PROLONGED EXPIRATION.

1829 Spruce Street,
Philadelphia, *May* 6, 1904.

To the Editor,

Sir: In the *International Clinics,* Vol. IV, Twelfth Series, appears an article, which has just reached me in printed form, by Dr. Laurence F. Flick, director of the Phipps Institute for the Study and Prevention of Tuberculosis, of this city, on the Differential Diagnosis Between Tuberculosis of the Lungs and Diseases Which Resemble It, which seems to be as remarkable in the enunciation of some fundamental principles of disease as it is novel and disappointing in the exploitation of physical diagnosis. I think an analysis of a few of its principal assertions will bear out this statement.

In the first place, the author says: "Right-sided heart disease, with the complications which usually accompany it, may resemble tuberculosis so closely that it is practically impossible to distinguish between the two." There is nothing in the whole realm of cardiac and pulmonary pathology to justify such a proposition. One wonders in reading this whether it has ever occurred to Dr. Flick that in right-sided heart disease the pulmonary circulation is diminished in pressure and in amount, and that for this reason pulmonary potency is rather conserved than disturbed, that it is the left heart which is excessively prone to generate pulmonary disease of all sorts, and that his picture of right-sided heart disease, in which he says, "we always have engorgement of the lung tissue with various degrees of œdema, with bronchorrhœa, thickening of the bronchial mucous membrane, etc.," fits in with the belief that it depends on left and not on right-sided heart disease. This surmise becomes a certainty from the evidence of the two illustrative cases of right heart disease which he relates. The principal points in these cases are the following: Both were in females, thirty-five years old, one with a chronic cough, profuse expectoration, hæmoptysis, finally dropsy and death. Neither physical signs of the heart nor autopsy are given. The symptoms of the other case were similar, with the addition that physical examination revealed a "murmur with first sound of heart heard at apex." Now where is the general practitioner who does not recognize in at least the first case a fairly good clinical account of a case of mitral regurgitation with its attendants, chronic bronchitis, hæmoptysis, final implication of the aortic valves, and supervention of dropsy and death. This diagnosis is, on the other hand, confirmed by the fact that the second case possessed an apical murmur during systole, and if, as Dr. Flick says, both cases are similar in their right-sided cardiac lesion, and if according to him they "illustrate how difficult it may be to make a differential diagnosis between" right-sided heart disease and tuberculosis, what else than a mitral regurgitation can an apical systolic murmur indicate? Surely a right-sided heart murmur is never found in that area!

In the second place he states that "this symptomatology," the salient points of which are given in the paragraph above, shows a striking picture of chronic tuberculosis, with the difference that in right-sided heart disease "we usually have prolongation of expiratory murmur over both lungs and over all parts of them in the same degree and with a striking evenness." Such an extensive distribution of this sign I must confess I never heard, and never saw such a description of it before. The prolonged expiration, as I take it, is always a localized sign, blowing in character, always associated with impaired percussion resonance, with the pitch of expiration higher and longer than that of inspiration, and is indicative of consolidation. That the expiratory sound may be lengthened evenly over the upper part of the lungs is well known, but this is not prolonged expiration. It is indicative of emphysema, it is not blowing, it is lower in pitch and less intense than in inspiration, and as a rule it is marked by a tympanitic percussion tone. It is quite probable that he confounds his prolonged expiration with such an emphysematous breathing, which is in harmony with what he says when he describes (page 6) the former as being caused by chronic bronchitis, and also in accord with our knowledge that neither dulness nor impaired percussion resonance—the fundamental elements of prolonged expiration—is ever present in bronchitis.

In conclusion, it is in place to ask the meaning of such curious phrases as "fair resonance above both apices," "disease is in one apex without complication of a cold," and "when the tuberculous process is complicated with a cold there is prolonged expiratory murmur on the healthy side." These are all meaningless to the writer, and are we to infer from the last one that prolonged expiration is a sign of health?

Thomas J. Mays.

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Book Notices.

Graves's Disease. With and Without Exophthalmic Goître. By William Hanna Thomson, M. D., LL. D., Physician to the Roosevelt Hospital, New York, etc. New York: William Wood & Company, 1904.

The author states that the object of this contribution to the extensive literature of Graves's disease is to emphasize the fact that the constitutional and general derangements that are characteristic of the morbid process constitute the disease, and not the condition of the thyreoid gland or of its accessories; and he takes issue with those who define it as "an infection of the body through the morbid activity of the thyreoid gland."

The symptomatology of the disease is considered, and at some length the histories of twenty-eight patients, who with general constitutional symptoms at no time showed any signs of exophthalmic goître, are compared with the clinical records of forty-two patients who had goître and exophthalmia. It is of great importance that physicians should know generally that a large percentage of patients may have this disease, and that it will develop and run its course, even to the fatal end, without any recognizable connection with the thyreoid. Exophthalmia and an enlarged thyreoid suggest a diagnosis without the other symptoms. And the congeries of these latter indicate to the author, and it seems to us truly, the existence of the disease even in the absence of those two salient symptoms that form a synonym to designate the malady.

The author gives a brief but illuminating review of the pathology of the disease, and his conclusions are that it is largely a toxæmia of gastrointestinal origin. The section on treatment is of great interest.

The book deserves wide study as a scholarly contribution to the literature of this important disease.

Die ersten Zeichen der Nervosität des Kindesalters, Von Professor H. OPPENHEIM in Berlin. Nach einem im Verein für Kinderforschung gehaltenen Vortrage. Berlin: S. Karger, 1904. Pp. 38.

Oppenheim's address on the first symptoms of nervousness in childhood is a remarkably clear and instructive exposition. It is written with the double purpose of interesting the educator and parent on the one hand, and the physician on the other. It is, in fact, a guide by which those who have charge of children may be enabled to discriminate between the mere naughtiness or self-will of childhood and the more serious signs of beginning nervousness, and thus aid, by calling the notice of a physician to them, in avoiding, if possible, or in lessening the development of a neurotic state.

The author treats the subject under the large heads of neurasthenia, hysteria, and their combined forms. He does not deal with organic brain diseases. He does, however, discuss the phobias, delirious states, hallucinations, and psychic disturbances due to digestive disorders.

Oppenheim warns against mistaking the rapidly changing moods of the child as always symptoms of disease. For the child is more or less a creature of reflexes in which the higher reasoning powers have not yet been fully developed. As evidence of abnormity, take the case of a child who is displeased by something. In the normal child the displeasure lasts but a short time, while in the one nervously disposed the signs of displeasure would be more plainly marked or of much longer duration or their intensity out of proportion to the cause. The child might brood and fret, while the ordinary child would forget or be easily distracted. The impression made on the mind of the nervous child is apt to be very deep and lasting, and some early impressions may be potent factors in the development of abnormal psychic states in after life.

The mood of the nervous child is apt to be very variable. Without a really sufficient cause the child is apt to go from crying to laughing and vice versa. Stimuli which call up pleasurable feelings in most children may cause unpleasant sensations and feelings in the nervous child. Of course, in such a case, one must be sure that the child has not on some previous occasion been frightened by the same or similar stimulus, which calls up the abnormal sensation.

Oppenheim next treats of dreams, manifested by restlessness, sweating, singing or crying out in sleep; somnambulism; also a long lying awake without any physical ground; a fear of the dark, a monophobia. Among the phobias he mentions a dislike that some children have for certain animals and for certain classes of them.

In conclusion, Oppenheim pleads for an early recognition of nervous states and earnestly asks for cooperation between parent, teacher, and physician in caring for those inflicted with nervous tendencies.

Physical Training for Women by Japanese Methods. By H. IRVING HANCOCK, Author of *Japanese Physical Training, Life at West Point,* etc. With 32 illustrations. New York and London: J. P. Putnam's Sons, 1904. Pp. 152.

We are rapidly outgrowing the idea that woman's natural state is one of debility and weakness, and the excellent physical condition of Japanese women, which Mr. Hancock attributes largely to their training, is proof that under certain conditions she may become the physical peer of man.

Japanese methods of training are founded on resistant work, either pitting one set of muscles against their antagonists, somewhat in the fashion of the Swoboda school, which may have followed some ideas from the Japanese, or overcoming or yielding to the strong resistance of a competitor, as in the eccentric and concentric resistant movements of the Swedes. The work is particularly rich in movements, requiring strong, coordinated action of most of the larger muscles, and is an excellent foundation for wrestling, which requires considerable all around development. While the popular interest of Jiu Jitzu naturally centres about its sensational feats of attack and defense, and the tricks that come into play in such feats, the physician and physical trainer see in the preliminary, exercises much that may be usefully employed to enrich conventional methods even in the training of women and children. The author lays great stress on slow progression along the series of exercises and on short sessions with the avoidance of panting, palpitation, and undue fatigue. It should be remembered that Jiu Jitzu is founded on the principle of strenuous exertion for short periods, and where this principle is undesirable Jiu Jitzu fails. With these reservations Jiu Jitzu is undoubtedly a rational, practical, and interesting form of physical training.

Die Gallensteinkrankheit, ihre Häufigkeit, ihre Entstehung, Verhütung und Heilung durch innere Behandlung. Von Dr. WALTHER NIC. CLEMM, Specialarzt für Magen, Darm und Stoffwechsel-Krankheiten, Darmstadt. Berlin: Georg Klemm, 1903. (Preis, 1 Mark.)

The author believes that the diagnosis of cholelithiasis should be made earlier and more frequently than it usually is. Recognized sooner and the recognition followed by efficient internal treatment, fewer cases would require surgical intervention. The frequency of its occurrence—for men one in ten and for parous women one in four—will seem high in this country. The disposition to the formation of gallstones increases with advancing age, a fact which Clemm ascribes in part to the greater proportion of carbohydrates consumed by elderly people, a diet which diminishes the quantity of bile and favors the formation of calculi. Treatment of habitual constipation, deep breathing exercises, massage of the abdomen, and a diet relatively rich in proteids and fats, are useful preventive measures. The unqualified assertion that alcoholic drinks have no unfavorable effect on the disease will be doubted by many. The careful regulation of the mode of life insisted upon at such resorts as Carlsbad and Neuenahr is useful. Most reputed cholagogues and internal solvents are of little value. Sodium salicylate, which has been much employed, causes an actual diminution in the secretion of bile. Sodium oleate is an exception which is declared to be a really useful drug, increasing the flow of bile and having an undoubted solvent action. This may be given in fifteen grain doses three times a day. If the liver area is tender and painful, inunctions of soft soap are advised.

The mortality of operations for the relief of gallstones is reported by the writer to be 15.5 per cent., the statement being based upon German statistics. In this connection the statistics of Mayo, of Rochester, Minnesota, are of interest. He has reported 518 cases of operation, with a mortality of but 3.5 per cent. In considering the question of operation due weight should be given to the fact that not infrequently attacks recur after the operation—the most skilful surgeon may not be able to locate the stones or they may not all be removed.

Elettricita medica. Elettroterapia, Raggi Röntgen, radioterapia, fototerapia, ozono, elettrodiagnostica. Dr. A. D. Bocciardo, Assistente ordinario all' Istituto di Clinica medica della R. Università di Pisa. Con 54 incisioni e 9 tavole. Milano, Ulrico Hoepli, 1904. 12mo, pp. x-201.

Italian physicians in this country who still prefer to use books in their own tongue will find in this latest addition to the well known series of Hoepli manuals all that the general practitioner needs to know of electricity, the Röntgen rays, phototherapy, etc., in order to employ these methods intelligently and accurately in practice. The book is written in a simple, direct style, and covers the elementary principles as well as the therapeutic applications of the subjects treated of. It is simply but sufficiently illustrated, and its price is very moderate.

Le Malattie dei paesi caldi. Loro profilassi ed igieni. Con un'appendice; La Vita nel Brasile. Dott. Carlo Muzio, Medico di la 1ª classe nella Regia Marina. Regolamenti di sanità pubblica contro le infezioni esotiche. Con 154 incisioni e 11 tavole. Milano, Ulrico Hoepli, 1904. Pp. xi-560.

This convenient and practical little book is an epitome of the modern teachings concerning tropical diseases. Aside from the purely medical topics, it contains a great deal of useful information concerning life in the tropics and the flora and fauna of hot climates. It therefore should strongly appeal to all physicians who practise in the tropics, or who treat patients who come from tropical countries. The book is very well put together, condensed, concise, and easy of reference. A very extensive bibliography of the subject is appended to it, which considerably enhances its value.

La Rachitide e le deformita da essa prodotte. Dr. Paolo Mancini. Con 116 figure intercalate nel testo. Milano, Ulrico Hoepli, 1904. 12mo, pp. xxviii-300.

Dr. Mancini's monograph on rickets and the deformities resulting therefrom is a very complete and comprehensive treatise on this theme, offered in a convenient duodecimo of 300 pages as one of the Hoepli manuals.

Every phase of rickets is considered in detail from the viewpoint of modern teachings, and the chapters on treatment include a consideration of medical, surgical, hydrotherapeutic, gymnastic, orthopædic, and hygienic measures in all their aspects. The chapter on ætiology contains an exposé of all the doctrines advanced in explanation of the enigmatic origin of rhachitis, and concludes with a very frank acknowledgment of our ignorance as to the true cause of this malady. In the chapter on pathology, the latest researches have been included, and a copious and apparently accurate bibliography in footnotes adds to the usefulness of the book.

The Prevention of Consumption. By Alfred Hillier, M. D., C. M., B. A., Secretary to the National Association for the Prevention of Consumption (London), etc. Revised by Professor R. Koch. With Illustrations. London, New York, and Bombay: Longmans, Green, & Co., 1903.

This is a carefully written work by an authority, revised by a great authority. Tuberculous subjects, by one of Nature's compensations, are usually of more than average intelligence and will realize without difficulty the value of the instruction given. Details that would be dry reading to a healthy layman will bristle with interest for the consumptive. The subject is fully covered in 226 pages by avoiding the usual mistake of telling the layman too much.

Manual of Materia Medica and Pharmacy. Specially designed for the Use of Practitioners and Medical, Pharmaceutical, Dental, and Veterinary Students. By E. Stanton Muir, Ph. G., V. M. D., Instructor in Comparative Materia Medica and Pharmacy in the University of Pennsylvania. Third Edition, Revised and Enlarged. Interleaved. Philadelphia: F. A. Davis Company. Pp. 192. (Price, $2.00.)

The author stated that he intended to give to practitioners and students of medicine a work that would present in as clear and concise manner as possible those points relating to materia medica and pharmacy that were of essential value, and the appearance of the third edition of his work seems to indicate that he has accomplished his purpose.

No system of classification of drugs has been attempted; their description is arranged in alphabetical order, and the facts are recited with the brevity of a quiz compend. The work is not exhaustive, the author having intentionally omitted mention of many old and new therapeutical agents.

The book is interleaved with blank sheets, a convenient arrangement for recording additional matter and one likely to make it popular for class room use.

Reference Handbook of the Medical Sciences. Vol. VII.

Although the seventh volume of this excellent work is perhaps not so striking in some respects as several of its predecessors, it is, nevertheless, fully up to their standard of merit, and as this production approaches its completion we are more than ever conscious how well sustained has been its merit and how valuable to us all the finished work will be.

The contributions to this volume which treat on the stomach and its diseases are especially to be commended, and while they of necessity lack in completeness because of the space allowable, they nevertheless present what is essential for the medical reader in general, and do it most satisfactorily. Apart from these sections, those on the spinal cord are noticeable for their quality, but this is true of the entire volume. We know of no one work of moderate size that can approach this as a reference book for the general practitioner.

Kissingen für Herzkranke. von Dr. J. Leusser, Prakt. Arzt. Dritte Auflage. Bad Kissingen; F. Weinberger, 1904.

Much of the literature emanating from bath resorts and mineral springs is so tinctured with commercialism and so extravagant in the pretensions set up that it is looked over with a smile of incredulity, or after a glance at the dreary analytical tables showing the minute fractions of indifferent salts from which such wonderful results are obtained, is consigned to the waste basket unread. The present example is an exception, and the writer is to be commended for the moderation of his views. A really excellent outline of the modern treatment of heart disease by other means than drugs is given, including, besides balneological methods, resistance exercises, passive gymnastics, massage, and the graduated hill climbing system of Oertel. Excellent facilities exist at Kissingen for the thorough application of all these methods, especially for the effervescent baths. Attention is directed to the fact that the waters of Kissingen contain a larger amount of free carbonic acid than those of Nauheim. There are appended brief reports of cases of the different forms of cardiac disease treated. For the comfort of patients who are unable to go to Kissingen, it may be remarked that the results do not differ strikingly from those obtained by ordinary methods at home.

BOOK AND MAGAZINE NOTES.

Lacrosse, by Dr. William H. Maddren, occupies the latter portion of the book, entitled *Lawn Tennis,* to be published shortly by Macmillan & Co., as the next volume in The American Sportsman's Library.

The same publishers offer in the Temple Classics, Mr. Trotter's translation of The Thoughts of Blaise Pascal, always of interest to the educated physician.

The Darrow Enigma (Dodd, Mead, & Co.), by Melvin L. Levery, is a capital detective story, the narrator of which is supposed to be a physician. The interest is well sustained and the dénouement cleverly concealed till the very last. The women of the story are perfectly charming and the men unexceptionable, but we wish that the otherwise acceptable Mr. Maitland would not persist in calling the historian "Doc." Medical men will enjoy this excellent book, written evidently by a college man, and are in danger of neglecting their own weighty problems in order to follow that of Mr. Levery's to its unravelling.

The *Century* for June continues the remarkable *tour de force* of Dr. S. Weir Mitchell in reproducing the style and manner of the late eighteenth century in The Youth of Washington, a supposed autobiography. Early Virginia was unlike modern America, if this passage has verisimilitude: "The question of whether I should become a surveyor by profession was much debated among us. My youth was against it, but I was in strength and seriousness older than my years. My mother opposed it, as she did every change, being of those who are defeated beforehand by obstacles. Without any better plan of life to offer, she insisted that it was not an occupation for a gentleman. This was, in a measure, true in Virginia. The bounds of estates were often vague or contested, and there was a strong prejudice against the persons employed to settle these disputes, or who were engaged in laying out new plantations beyond the Alleghanies, and who took daily wages, like mechanics." We wot of physicians who would be glad to collect their honoraria daily, or at any regular interval.

The Literary World, the editor of which is the talented Bliss Carman, in its May number contains a translation of A Burmese Love Song, by Dr. Kenneth W. Millican. whose remarkable talent for minor poetry is known to many of our readers.

BOOKS, PAMPHLETS, ETC., RECEIVED.

Patent Foods and Patent Medicines; Two Lectures. By Robert Hutchison, M. D., F. R. C. P., Assistant Physician to the London Hospital and to the Hospital for Sick Children, Great Ormond Street. London: John Bale, Sons and Danielsson, Ltd., 1904. [Price, One Shilling net.]

A System of Practical Surgery. By Professor E. von Bergmann, M. D., of Berlin; Professor P. von Bruns, M. D., of Tübingen; and Professor J. von Mikulicz M. D., of Breslau. Volume ii. Translated and Edited by William T. Bull, M. D., Professor of Surgery, College of Physicians and Surgeons, Columbia University, New York; and Carlton P. Flint, M. D., Instructor in Minor Surgery, College of Physicians and Surgeons, New York. Surgery of the Neck, Thorax and Spinal Column. Lea Brothers & Co., New York and Philadelphia, 1904. [Price, Cloth, $6.00; Leather, $7.00; Half Morocco, $8.50, net.]

The Chronic Diseases. Their Peculiar Nature and Their Homœopathic Cure. (Theoretical part only.) By Dr. Samuel Hahnemann. Translated from the Second Enlarged German Edition of 1835, by Professor Louis H. Tafel. 269 Pages. Postage, 10 cents. Philadelphia: Boericke and Tafel, 1904. [Price, Cloth, $1.25.]

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pædiatrics, Obstetrics, Gynæcology, Orthopædics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and Other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by A. O. J. Kelly, A. M., M. D., Philadelphia, U. S. A., with the Collaboration of William Osler, M. D., Baltimore; John H. Musser, M. D., Philadelphia; James Stewart, M. D., Montreal; J. B. Murphy, M. D., Chicago; A. McPhedran, M. D., Toronto; Thomas M. Rotch, M. D., Boston; John G. Clark, M. D., Philadelphia; James J. Walsh, M. D., New York; J. W. Ballantyne, M. D., Edinburgh; John Harold, M. D., London; Edmund Landolt, M. D., Paris; Richard Kretz, M. D., Vienna, with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Volume i. Fourteenth Series, 1904. Philadelphia: J. B. Lippincott Company, 1904.

Beiträge zur experimentellen Therapie. Herausgegeben von Professor Dr. E. V. Behring, wirklicher geheimer Rath. Director des Instituts für Hygiene und experimentelle Therapie der Universität Marburg. Heft 8. Tuberculoseentstehung, Tuberculosebekampfung und Säuglingsernahrung. Von E. V. Behring. Berlin: August Hirschwald, 1904. Ausgegeben 10.IV.04.

Vorlesungen über den Bau der nervösen Zentralorgane des Menschen und der Tiere. Für Aerzte und Studierende. Von Professor Dr. Ludwig Edinger, Arzt-Direktor des

Dr. Senckenbergischen neurologischen Institutes in Frankfurt-am-Main. Erster Band. Das Zentralnervensystem des Menschen und der Saugetiere. Siebente, umgearbeitete und vermehrte Auflage. Mit 268 Abbildungen. Leipzig: F. C. W. Vogel, 1904. [Preis, 17 M.]

A Compendium of Chemistry, Including General, Inorganic, and Organic Chemistry. By Dr. CARL ARNOLD, Professor of Chemistry in the Royal Veterinary School of Hanover. Authorized Translation from the Eleventh Enlarged and Revised German Edition, by JOHN A. MANDEL, Sc. D., Professor of Chemistry, Physics, and Physiological Chemistry in the University and Bellevue Hospital Medical College. Small 8vo. 627 Pages. New York: John Wiley & Sons. London: Chapman & Hall, Limited, 1904. [Price, $3.50.]

Medical Diagnosis. A Practical Treatise on Medical Diagnosis for Students and Practitioners, by JOHN H. MUSSER, M. D., Professor of Clinical Medicine in the University of Pennsylvania; Physician to the Philadelphia and Presbyterian Hospitals, etc. New (Fifth) Edition, Revised and Enlarged. In One Octavo Volume of 1,213 Pages, with 395 Engravings and 63 Colored Plates. Philadelphia and New York: Lea Brothers & Co. [Price, cloth, $6.50; leather. $7.50; half morocco, $8.00 net.]

Materia Medica, Pharmacology, and Therapeutics. Inorganic Substances, by CHARLES D. F. PHILLIPS, M. D., LL. D. (Abdn. and Edin.), F. R. S. and F. R. C. S. (Edin.), Honorable Fellow, Medicochirurgical College, Pennsylvania, Member of the Academy of Medicine of America, etc. Third Edition. London, New York, and Bombay: Longmans, Green & Co., 1904.

Die Buchführung im Apothekenbetriebe nach einfachem System, angewendet auf mittlere und kleine Apotheken. Ein Leitfaden zur Erlernung der Apothekenbuchführung für Apotheker und Studierende der Pharmazie. Von Dr. JOSEF BARBER, Apotheker und Gremialvorsteher in Czernowitz, und VALERIAN SCHESTAUBER, Lehrer der kommerziellen Facher an der k.k. Staatsgewerbeschule in Czernowitz und standig beeideter Sachverständiger für das Buch und Rechnungsfash beim k.k. Landesgerichte daselbst. [Preis, M. 3.]

Miscellany.

The Relation of Delusions of the Insane to Pathological Conditions.—At a recent meeting of the New York Obstetrical Society, Dr. Le Roy Broun presented a vermiform appendix that he had removed from an insane patient in the Manhattan State Hospital, West. The woman's chief symptom had been a delusion of evil spirits dwelling in the abdomen. The removal of the appendix, however, had not cleared up this delusion, although it had been transferred from the region of the appendix to the epigastric region. He referred to the conclusions of Manton, of St. Louis, that these delusions were oftener founded on pathological conditions than was generally supposed. Some of his patients had been improved. Dr. Broun also referred to another case of his own, in which an operation for an acute appendicular abscess had improved the mental condition so much that the woman had every appearance of being cured.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General. Public Health and Marine Hospital Service, during the week ending May 21, 1904:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
California—Los Angeles	Apr. 30-May 7	1	
California—San Francisco	Apr. 24-May 1	1	
Dist. Columbia—Washington	Apr. 30-May 14	8	
Florida—Jacksonville	May 7-14	1	
Illinois—Chicago	May 7-14	11	
Illinois—Danville	Apr. 30-May 7	2	
Indiana—South Bend	May 7-14	8	
Kentucky—Covington	May 7-14	3	
Louisiana—New Orleans	May 7-14	16 8 Imported.	
Maine—Jonesport	May 16	Present.	
Maryland—Baltimore	May 7-14	1	1
Michigan—Detroit	May 7-14	5	
Michigan—Grand Rapids	May 7-14	5	
Missouri—St. Louis	May 7-14	14	4
Nebraska—Omaha	May 7-14	3	
New Hampshire—Manchester	May 7-14	4	
New York—Buffalo	May 7-14	2	
New York—New York	May 7-14	2	
Ohio—Cincinnati	May 6-13	7	
Ohio—Cleveland	May 6-13	2	1
Ohio—Dayton	May 7-14	12	
Pennsylvania—Norristown	May 7-14	1	
Pennsylvania—Philadelphia	May 7-14	27	5
Pennsylvania—Pittsburgh	May 7-14		2
South Carolina—Charleston	May 7-14	1	
Tennessee—Memphis	May 7-14	16	
Tennessee—Nashville	May 7-14	4	
Wisconsin—Milwaukee	May 7-14	8	

Smallpox—Insular.

Place.	Date.	Cases.	Deaths.
Philippine Islands—Manila	Apr. 2-9	2	2

Smallpox—Foreign.

Place.	Date.	Cases.	Deaths.
Austria—Prague	Apr. 23-30	7	
Belgium—Antwerp	Apr. 23-30	13	8
Brazil—Bahia	Apr. 8-23	6	
Canada—Sydney	May 7-14	17 To date 61	
Canada—Winnipeg	May 7-14	1	
Colombia—Barranquilla	Apr. 24-30		2
France—Paris	Apr. 16-30	27	2
France—Rheims	Apr. 24-May 1		1
Germany—Barmen	Apr. 22-29	4 On S. S. *Wittikind.*	
Great Britain—Birmingham	Apr. 30-May 7	1	
Great Britain—Glasgow	Apr. 29-May 6	22	3
Great Britain—Hull	Apr. 23-30	3	
Great Britain—Liverpool	Apr. 23-30	7	
Great Britain—London	Apr. 16-30	35	4
Great Britain—Manchester	Apr. 16-30	10	3
Gt. Britain—Newcastle-on-Tyne	Apr. 16-30	18	1
Great Britain—Nottingham	Apr. 16-30	9	1
Great Britain—Sheffield	Apr. 16-30	10	
Great Britain—South Shields	Apr. 16-30	14	
India—Bombay	Apr. 5-19		34
India—Calcutta	Apr. 3-10		4
India—Karachi	Apr. 10-17	11	3
Italy—Catania	Apr. 8-May 5	2	1
Japan—Kobe	Apr. 2-16	3	
Japan—Nagasaki	Apr. 10-20	249	43
Java—Batavia	Mar. 26-Apr. 9	20	2
Mexico—City of Mexico	Mar. 27-Apr. 3	4	9
Mexico—City of Mexico	*Apr. 16-May 5	14	2
Mexico—Tampico	Apr. 23-30		1
Mexico—Torreon	Apr. 24-May 7	27	15
Mexico—Vera Cruz	Apr. 23-30	1	
Netherlands—Rotterdam	Apr. 23-May 7	9	1
Russia—Moscow	Apr. 8-23	9	1
Russia—Odessa	Apr. 23-30	1	
Russia—St. Petersburg	Apr. 16-23	7	4
Spain—Barcelona	Apr. 1-30		9
Turkey—Beirut	Apr. 21-28	Present.	

Yellow Fever.

Place.	Date.	Cases.	Deaths.
Ecuador—Guayaquil	Apr. 16-23		6
Mexico—Talleres	May 11	1	
Mexico—Tehuantepec	May 11	1	

Cholera.

Place.	Date.	Cases.	Deaths.
India—Madras	Apr. 9-15		1
Turkey—Baara	Apr. 1-10	37	28

Plague—Insular.

Place.	Date.	Cases.	Deaths.
Philippine Islands—Manila	Apr. 2-9	3	2

Plague—Foreign.

Place.	Date.	Cases.	Deaths.
Africa—Cape Colony	Apr. 8-16	1	1
Egypt	Apr. 8-16	59	36
Egypt—Port Said	Apr. 8-16	1	1
India—Bombay	Apr. 12-19		633
India—Karachi	Apr. 10-17	365	285
India—Madras	Apr. 9-15		1
Formosa	Mar. 31-Apr. 9	229	167
New Zealand—Auckland	Apr. 29	2	1
Peru—Callao	Apr. 10-24	2	2
Peru—Lima	Apr. 16-23	9	11

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* Report April 3-10 returned for correction. Report from April 10-17 will be found in Health Reports sent May 7.

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending May 19, 1904:

CARTER, H. R., Surgeon. To report at Washington, D. C., for special temporary duty. May 13, 1904.

Alexander, E., Acting Assistant Surgeon. Granted leave of absence for seven days from May 19th.

Bierman, C. H., Pharmacist. Granted leave of absence, on account of sickness, for one day (May 9th).

Burkhalter, J. T., Assistant Surgeon. Ten days' extension of leave of absence, granted by Bureau telegram of May 9, 1904, revoked.

Carlton, C. G., Pharmacist. Granted leave of absence for thirty days from June 1st.

Eager, J. M., Passed Assistant Surgeon. Reassigned to duty at the port of Naples, Italy, effective March 25, 1904.

Francis, Edward, Assistant Surgeon. To proceed to Martinsburg, W. Va., for special temporary duty. May 11, 1904.

Kennard, K. S., Acting Assistant Surgeon. Granted leave of absence for fourteen days from May 22nd.

Rodman, J. C., Acting Assistant Surgeon. Granted leave of absence for four days from May 24th.

Van Ness, G. I., Jr., Pharmacist. Granted leave of absence for thirty days from June 1st.

Walker, R. T., Acting Assistant Surgeon. Granted leave of absence for four days from May 31st.

Walkley, W. S., Acting Assistant Surgeon. Granted leave of absence for nine days from May 24th.

Woodward, R. M., Surgeon. Granted leave of absence for three months from June 14th.

Boards Convened.

Board convened to meet at Baltimore, Md., May 18, 1904, for the physical examination of cadets in the Revenue Cutter Service. Detail for the board—Surgeon H. R. Carter, chairman; Assistant Surgeon C. W. Wille, recorder.

Board convened to meet at Stapleton, N. Y., May 18, 1904, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Surgeon Preston H. Bailhache, chairman; Passed Assistant Surgeon A. C. Smith, recorder.

Board convened to meet at Washington, D. C., May 18, 1904, for the physical examination of applicants for appointment in the Revenue Cutter Service. Detail for the board—Assistant Surgeon General L. L. Williams, chairman; Assistant Surgeon General W. J. Pettus, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending May 21, 1904:

Lynch, Charles, First Lieutenant and Assistant Surgeon. Detailed a member of the general staff corps, and ordered to report in person to the Chief of Staff, Washington, D. C., for duty.

Miller, Reuben B., First Lieutenant and Assistant Surgeon. Leave of absence extended one month.

Munson, Edward L., Captain and Assistant Surgeon. Relieved from further duty in the Philippines and ordered to the United States General Hospital, Fort Bayard, N. M., for duty.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending May 21, 1904:

Bucher, W. H., Surgeon. Detached from the naval station, Cavite, P. I., and ordered to the Naval Hospital, Yokohama, Japan.

Butler, C. St. J., Passed Assisant Surgeon. Commissioned passed assistant surgeon with the rank of lieutenant, from October 26, 1903.

Furlong, F. M., Passed Assistant Surgeon. Detached from duty with the marine battalion on the *Dixie,* and ordered home to await orders.

Marcour, R. O., Assistant Surgeon. Detached from duty with the marine battalion on the *Dixie,* and ordered to the *Hancock.*

Owens, W. D., Assistant Surgeon. Appointed assistant surgeon, with the rank of lieutenant, junior grade, from May 17, 1904.

Rossiter, P. S., Assistant Surgeon. Detached from duty at the naval recruiting station, Baltimore, Md., and ordered to the naval station, Honolulu, Hawaii, sailing from San Francisco, Cal., via steamer *Alameda,* June 4th.

Sellers, F. E., Acting Assistant Surgeon. Appointed acting assistant surgeon, from May 17, 1904.

Snyder, J. J., Passed Assistant Surgeon. Detached from the *Kearsarge* and ordered to the *Maine.*

Thompson, E., Surgeon. Commissioned surgeon, with the rank of lieutenant-commander, from March 3, 1903.

Births, Marriages, and Deaths.

Married.

Cochran—Glueck.—In Newark, New Jersey, on Saturday, May 14th, Dr. Alfred W. Cochran and Miss Margaret Glueck.

McCleary—Duker.—In Baltimore, Maryland, on Thursday, May 12th, Dr. Standish McCleary and Miss Rose Ida Duker.

Morrison—Brown.—In Ann Arbor, Michigan, on Wednesday, May 11th, Dr. Edgar L. Morrison and Miss Josephine Brown.

Peters—Kerner.—In New York, on Wednesday, May 18th, Dr. J. Dodge Peters and Miss Ethel Kerner.

Vandegrift—Kenny.—In Brooklyn, N. Y., on Thursday, May 12th, Dr. George Vandegrift and Miss May Kenny.

Died.

Conly.—In Elk Point, South Dakota, on Sunday, May 8th, Dr. James Griffin Conly, in the sixty-seventh year of his age.

Coleman.—In Monarch, Missouri, on Thursday, May 12th, Dr. R. G. Coleman, in the sixty-first year of his age.

Dodge.—In Rosedale, Mississippi, on Tuesday, May 10th, Dr. John L. Dodge, in the thirty-sixth year of his age.

Duff.—In Pittsburgh, Pennsylvania, on Saturday, May 14th, Dr. John Milton Duff, in the fifty-fifth year of his age.

Fanning.—In Catskill, N. Y., on Tuesday, May 17th, Dr. Nelson Fanning, in the sixty-fourth year of his age.

Fitzmaurice.—In Paterson, New Jersey, on Friday, May 20th, Dr. Thomas J. Fitzmaurice, in the thirty-sixth year of his age.

Johnston.—In Milford, Michigan, on Saturday, May 14th, Dr. Robert Johnston, in the sixty-sixth year of his age.

Leber.—In Louisville, Kentucky, on Wednesday, May 18th, Dr. F. C. Leber, in the seventy-first year of his age.

Leroux.—In Montreal, Canada, on Sunday, May 15th, Dr. Joseph Leroux.

Linderman.—In Philadelphia, Pennsylvania, on Sunday, May 15th, Dr. Herbert Linderman, in the thirty-eighth year of his age.

Miller.—In Louisville, Kentucky, on Tuesday, May 10th, Dr. William F. Miller, in the eighty-fourth year of his age.

Mudge.—In Phelps, N. Y., on Monday, May 9th, Dr. Charles Mudge, in the seventy-third year of his age.

Peters.—In Jenkintown, Pennsylvania, on Monday, May 16th, Dr. J. Elwood Peters, in the fiftieth year of his age.

Priestley.—In Des Moines, Iowa, on Friday, May 13th, Dr. Crayke S. Priestley.

Robinson.—In Turtle Creek, Pennsylvania, on Saturday, May 14th, Dr. Thomas C. Robinson, in the sixty-ninth year of his age.

Schmitz.—In Brooklyn, N. Y., on Wednesday, May 11th, Dr. Henry Caspar Schmitz, in the seventy-third year of his age.

Thomas.—In Mobile, Alabama, on Friday, May 13th, Dr. James Grey Thomas, in the seventieth year of his age.

Walker.—In Ilion, N. Y., on Wednesday, May 18th, Dr. Delevan E. Walker, in the fiftieth year of his age.

Wheat.—In Caro, Michigan, on Friday, May 6th, Dr. William K. Wheat, in the seventy-fifth year of his age.

Woodward.—In New York, on Friday, May 20th, Dr. Alvin Morris Woodward, in the sixty-ninth year of his age.

New York Medical Journal
AND
Philadelphia Medical Journal.
CONSOLIDATED.

A Weekly Review of Medicine

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Original Communications.

FRACTURES OF THE LOWER END OF THE RADIUS.*

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The many difficuties in obtaining good results in the treatment of this fracture, and the almost certainty of having *some* deformity in every case when treated by the general practitioner, and in fact when treated by the profession at large, is my excuse for presenting a paper somewhat full of details and a careful study of the parts involved. To every physician who is conscientious, and has sufficient interest in the practice of his profession to aim at high ideals and to try to secure perfect results, so far as they can be obtained, this fracture, with its sequelæ, is a most perplexing subject.

For a general description of the fracture it is sufficient to say that it is the fracture of the lower end of the radius, with a dislodgment of the lower end of the ulna, with or without a fracture of the styloid process of the ulna. Usually there is no fracture of the ulna. Two small drawings of the lower end of the radius and ulna are presented herewith (Figs. 1 and 2) without most of the muscles which have their origin or insertion in the forearm. The radius and ulna and the muscles and ligaments, parts that have been under discussion for upwards of one hundred years, are shown and the details of their distribution are interesting.

In the description of the lower end of the ulna it is stated that the lower end is of small size and is *excluded* from the articulation of the wrist joint.

It presents two eminences, the outer and larger of which is a rounded articular eminence, termed the head of the ulna: the inner, narrower and more projecting, is a non-articular eminence, the styloid process.

This end of the ulna is not included in the articulation of the wrist joint, but is separated from the wrist joint by the triangular fibrous cartilage which is placed transversely beneath the head of the ulna, binding the lower end of this bone and the radius firmly together. Its circumference is thicker than its centre and is occasionally perforated, and it then communicates with, but does not form a part of, the wrist joint. It is attached by its apex to a depression which separates the styloid process of the ulna from the head of that bone; and by its base, which is thin, to the prominent edge of the radius. This edge is the one that separates the sigmoid cavity from the carpal articulating surface. The lateral margins of the cartilage are attached to the ligaments of the wrist joint. Its upper surface, smooth and concave, articulates with the head of the ulna, forming an arthrodial joint—that is, one in which the surfaces glide smoothly over each other. Its under surface forms a part of the wrist joint. This triangular fibrocartilage is an important factor in the production of part of the deformity which will be referred to in this paper in discussing what may be considered "a good result."

It is interesting to note, in passing, the development of the ulna, and that in the ossification the lower epiphysis is not usually joined to the shaft until about the twentieth year. This fact is often overlooked by the those who are making a diagnosis by means of skiagraphs.

Dr. John Roberts, in a discussion before a surgical society, belittled the general knowledge of the profession, because in a paper some professional brother had affirmed that a fracture of the lower end of the ulna usually accompanied all fractures of the radius. However, the man who had made the statement furnished the evidence on which he based his assertion, in the shape of some skiagraphs, and it was at once seen that he had met with a fracture of the lower end of the radius in a person under twenty years old, and that the lower epiphysis had not at the time of the fracture yet completed its ossification and union with the shaft. Fig. 7 is a skiagraph taken a few days ago in my office, the subject being a young man, sixteen years old, who never has suffered from any fracture at the wrist. The lower end of the radius and ulna are separated by a distinct line, but one that is very much more even in contour than would be found in a skiagraph from a fracture, although it is well known that, in the adult and in the aged there may be a fracture of the lower end of the radius that will follow very closely the line of the epiphyseal union. However, in such cases it will be found that there is seldom a fracture through the same line in the ulna.

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* Read before the Erie County Section of the New York State Medical Association, Buffalo, N. Y., March 14, 1904.

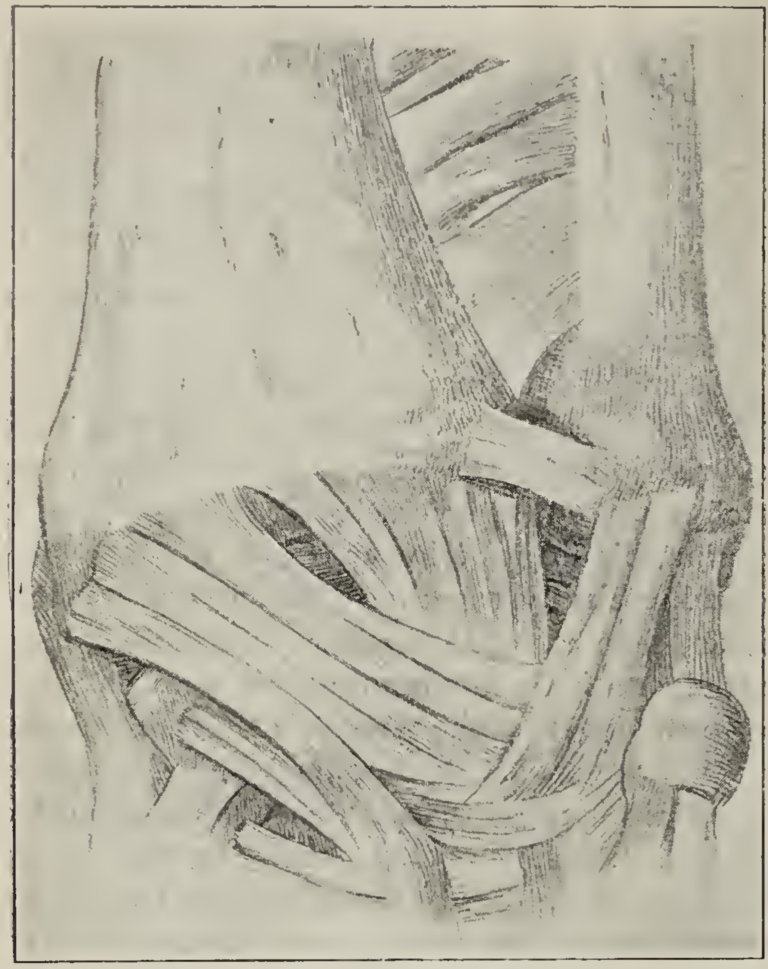

FIG. 1.—The ligaments of the wrist, which are never ruptured, the bone breaking at the usual place before these ligaments rupture.

Now the lower end of the bone that is fractured, and usually the *only* one that is fractured at the wrist, the *radius*, is large, of quadrilateral form, with two articular surfaces, one at the extremity for articulation with the wrist, or carpus, and one at the inner side of the bone, for articulation with the lower end of the ulna. The anterior surface of the carpal articulation is rough and irregular and affords attachment for the anterior ligaments of the wrist joint.

This ligament is attached to the edge of the articular surface of the lower end of the radius, and has no attachment to any point above a line which is parallel to the smooth surface and three lines removed from the lower end of the radius. This ligament is attached, then, to the lower quarter of an inch of the radius, and is firmly attached; but is, nevertheless, at such a disadvantage and with such insufficient leverage that it would inevitably separate, at least theoretically, at its point of attachment, rather than cause the fracture of the lower end of the radius, which is so familiar to us all.

Several writers have argued that the cause of the fracture at the lower end of the radius is the unyielding character of this ligament, coupled with the fragility of the bone at the lower end of the radius. The anterior carpal ligament is described as being " stronger than the cancellous bone at the end of the radius." It is a broad membranous band (Fig. 1) consisting of three bundles of fibres atached above to the anterior margin of the lower end of the radius, to its styloid process, and to the ulna. Its fibres pass downward to be inserted in to the palmar surface of the scaphoid, semilunar, and cuneiform bones, some of the fibres being continued to the os magnum. Above the anterior ligament can be seen the interosseous membrane or ligament (Fig. 1).

There are muscles which undoubtedly have somewhat to do with the production, if not of the fracture at least of the resulting deformity, which in *this* case is of great interest. These two muscles are the pronator radii teres, and the pronator quadratus. These are the two muscles that pass diagonally from the ulna to the radius and which are, as their name implies, the muscles with which the arm is pronated or turned over.

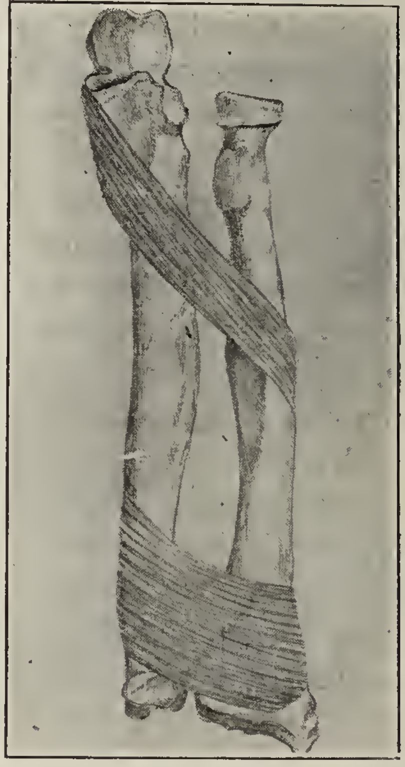

FIG. 2.—Radius and ulna, denuded of all the muscles except the pronator radii teres and the pronator quadratus. These are the two muscles that assist the external violence in causing the fracture, and then keep the proximal fragment, and to a lesser degree the distal fragment, as it is impacted, displaced toward the ulna.

The pronator radii teres arises from two heads at the elbow, one of which has its origin at the inner condyle, and its attachments at the lower end of the humerus; the other arises directly from the coronoid process of the ulna, and it is to be remembered that the median nerve lies between the two heads of the pronator radii teres, at the inner side of the elbow. The muscle passes obliquely across the arm and is inserted by means of a flat tendinous aponeurosis extending for about two inches over the outer edge of the radius at about the middle of the shaft.

The pronator quadratus is a small, flat, quadrilateral muscle, extending across the front of the radius and ulna above their carpal extremities.

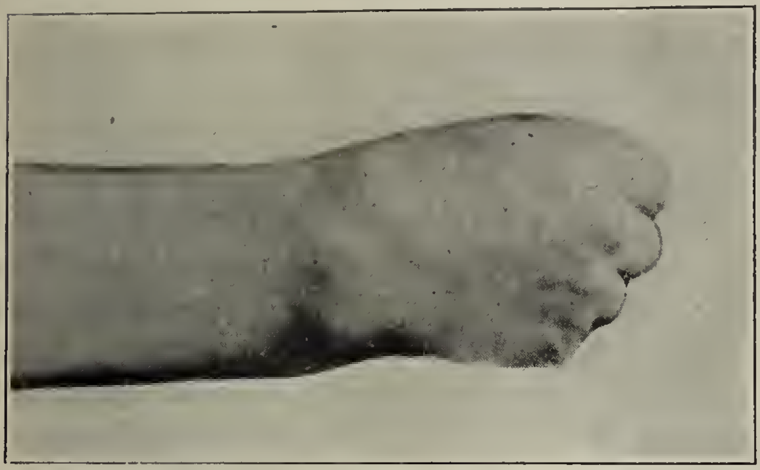

Fig. 3.—Photograph of a typical "Colles's fracture" (fracture of the lower end of the radius). Looked at from above, the hand resting on a table; before any attempt at reduction.

This muscle arises from the oblique line on the lower fourth of the anterior surface of the shaft of the ulna and from the surface of the bone immediately below it, from the border of the ulna, and from a strong aponeurosis which covers the inner third of the muscle. The fibres pass horizontally outward, to be inserted into the lower fourth of the anterior surface of the shaft of the radius. These are well represented by the drawing in Fig. 2.

In general, speculation and experiments, in the hands of different observers from Sir Astley Cooper down to the most recent experimenter and observer, have shown: First, that the fracture is almost invariably caused by a fall on the hand, and usually from an inconsiderable distance.

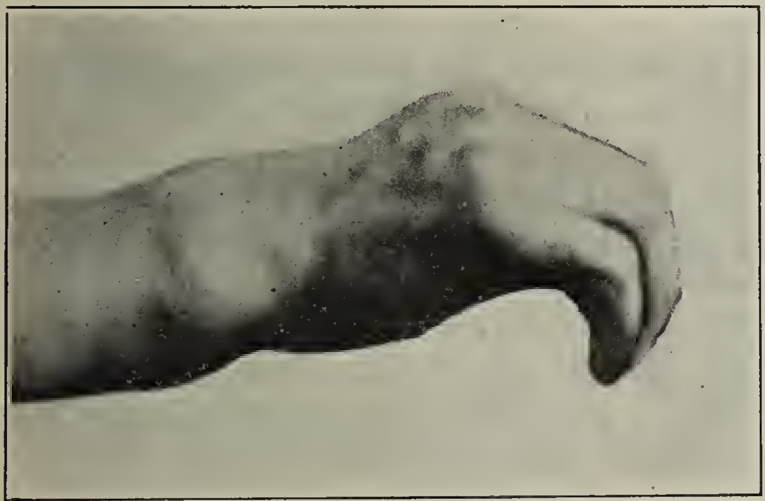

Fig. 4.—Photograph of typical "Colles's fracture," viewed from the ulnar side, tipped a little, to show more plainly the displacement of the ulna.

Secondly, that the force is transmitted to the radius by the body, via the humerus; that the counter force, as far as this accident is concerned, is furnished by the carpus, and that the fracture occurs in the lower twelve lines, or one inch, of the radius and, in a very large majority of the cases, in the lower eight lines, or three quarters of an inch.

The fracture occurs at this point rather than at any other point when sufficient force is applied so that a break must occur somewhere—because: (1) Theoretically, this anterior ligament, which is described as stronger than bone, is very *much more* strong than the cancellous tissue of the lower epiphysis of the radius, especially in the patients of advanced years in whom the cancellous tissue is gaining in proportion and in whom the accident is most frequently found.

(2) Theoretically, by the firmness of this anterior ligament and the violent but involuntary contraction of the two pronator muscles, causing a break in the radius rather than in the radius and ulna; because the hand is involuntarily turned *toward* the radial side, to assist the person so that, in falling, he shall fall on the hand with palmar side down, rather than on the back of the hand, as there is a cushion on the palmar surface. And experience from infancy up shows that it is easier, and therefore natural, to fall on the hand with the palm down than to fall on the hand back down or turned under. This act is natural or instinctive and requires no mental direction.

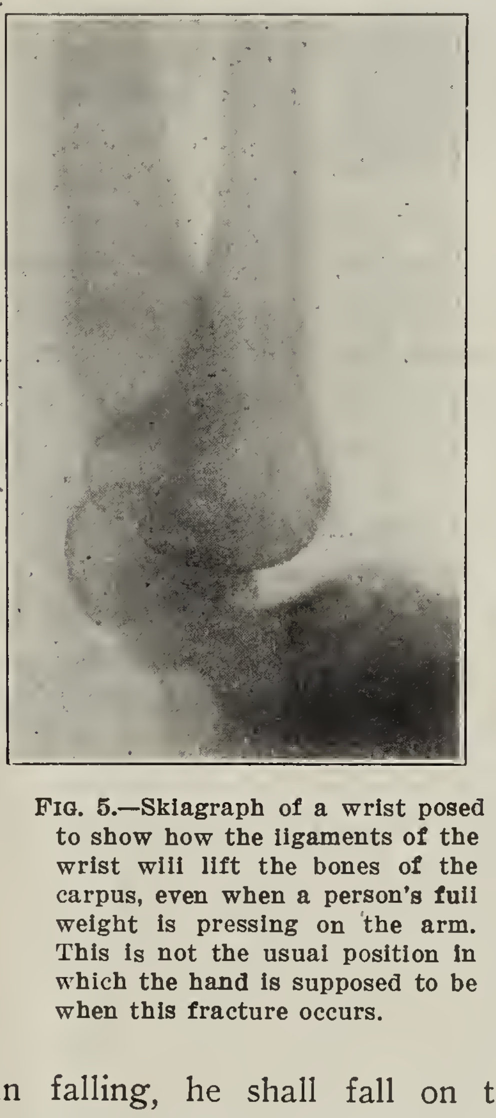

Fig. 5.—Skiagraph of a wrist posed to show how the ligaments of the wrist will lift the bones of the carpus, even when a person's full weight is pressing on the arm. This is not the usual position in which the hand is supposed to be when this fracture occurs.

Ponteau, who was the first to give an accurate description of the pathology of this, now so commonly recognized, fracture, said that it was undoubtedly caused by the violent contraction of the pronators (radii teres, and quadratus) violently pronating the arm, and the sudden and unyielding counter force of the bones of the hand in meeting the shock. It can be easily seen by examining the accompanying drawings of the

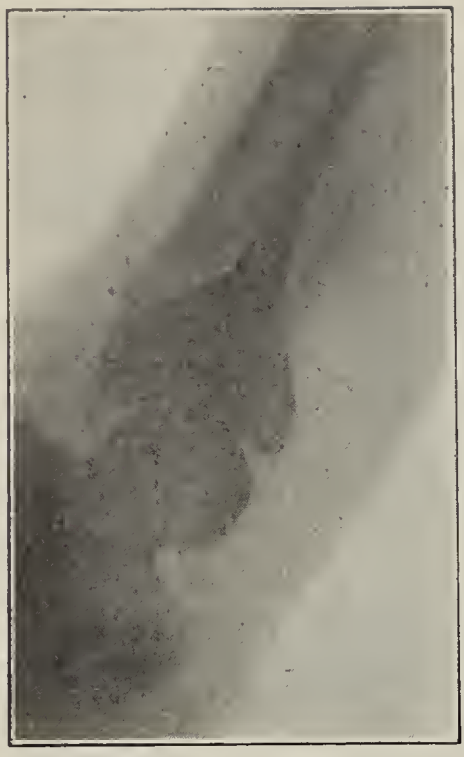

FIG. 6.—Skiagraph of wrist of young man, sixteen years old, posed to show the usual position of the wrist when this fracture occurs. Angle of about 45°. There is no fracture present, but the line is the epiphyseal line (not usually united until the patient reaches the age of twenty years).

radius and ulna, denuded of all the other muscles except these two, that they both might, at least theoretically, have a powerful torsion effect on the shaft of the radius. But as the pronator radii teres is situated well above the point where the fracture usually takes place, this torsion would not be sufficient to cause a break at the lower extremity of the radius unless the wrist, with its firm and unyielding anterior ligament, should prove a sufficient and adequate counter force to effect the break in the immediate vicinity of its attachment. And then, if the pronators were a deciding factor in the causation, we should see a *splintered* shaft, with line of separation extending from the interosseous space below, upward and outward to the lower margin of the insertion of the teres, occasionally, as well as the well known line across the lower extremity practically in the midst of the quadratus; but this we never see. Again the fracture occurs at the lower end as described, because (3) theoretically, and to a small degree experimentally, it appears that when a sufficient force is applied—and that force experimentally is much more than would be represented by the fall of a short, and perhaps slight, person to the ground, with the arm so directed as to be at the time of the contact of the hand with the ground at an angle of 45° or thereabouts—then the force of the fall is received from the carpus in such a slanting way that the cancellous tissue gives way and the fracture occurs, not from torsion either from the pronators or the ligaments, but from direct crushing violence. This position of the bones at the time of fracture is illustrated by the skiagraph shown in Fig. 6, in which there appears to be a fracture through the epiphyseal line. If, however, this theory of direct violence to the bone itself is analyzed, it would seem that an oblique fracture would result, with the break in continuity on the *anterior* surface of the radius appearing at a point nearer the articular surface than the break which appears on the *posterior* side of the radius. But in actual experience this very seldom occurs, and when it does occur is usually interarticular and should be called a Barton fracture.

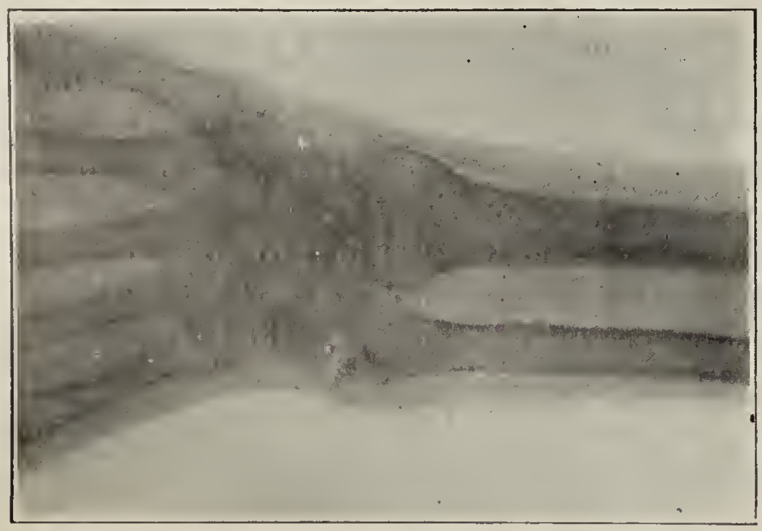

FIG. 7.—Shows the ununited epiphyseal line, which might be mistaken for a fracture, but which is usually present in all subjects under twenty years of age.

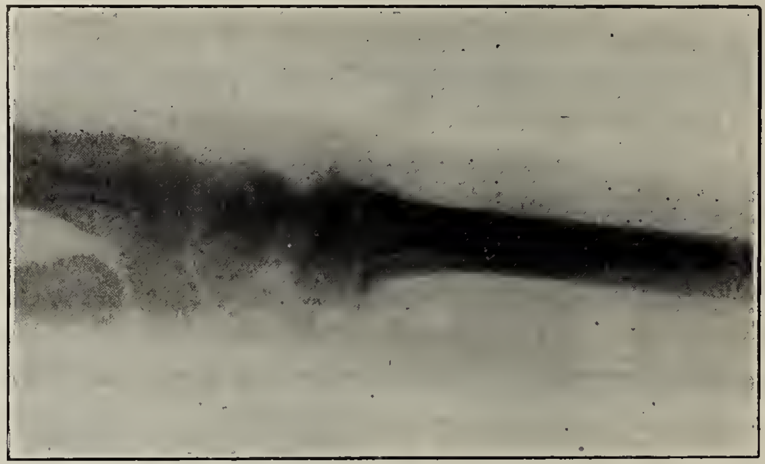

FIG. 8.—Shows the skiagraphic appearance of a bone freshly reduced.

The skiagraph presented showing the position of the bones, posed to correspond with the usual history elicited in these cases, is that of a person sixteen years old, and there was no fracture present, the line shown being the epiphyseal line, between the ununited epiphysis and the shaft. It, furthermore, shows that the anterior ligament is so unyielding that, at least when only moderate pressure is made, the ligament will not give, until at least the ligaments of the wrist have been stretched. It is evident from the skiagraph that the wrist bones are bent back, so that the articular surface of the carpus is lifted to meet that of the radius.

In case the hand is so flexed on the forearm that the plane of the hand forms an angle of 90° with the forearm, then the force is at least experimentally sufficient to rupture the anterior ligament of the carpus or to break with comminution the small bones of the wrist, but not to cause the typical fracture of the lower end of the radius (see Fig. 5).

In Fig. 5, which is not the position in which the hand is supposed to be when the usual fracture occurs, but which shows the hand more flexed, then it would seem that the direction of the force as indicated by the radius, would be sufficient to *crush* the bones of the carpus, or to chip the posterior part of the articular surface of the lower end of the radius.

Here, however, even more than in Fig. 6, it is seen how much the strong anterior wrist ligament lifts the carpus.

Again, the fracture occurs at the lower end, as described, because (4) this fracture, where the bones were extremely brittle, could occur simply by the *crushing* and impaction of the fragments of the lower end of the radius and the tearing away of the triangular fibrous cartilage of the ulna and the pushing of the styloid process to the front of the wrist.

As the bones in other parts of the body are broken by a force too great for the texture of the bones to stand, so this particular bone must give way, and that without special reason only that the weakest point gives, and it is maintained that this cancellous portion of the lower end of the radius is weaker than the shaft of the bone, on account of the very cancellous condition. On the other hand, of course, it is well known that the other enlarged ends of the bones, except the lower end of the tibia, do not suffer in a similar way.

These four theories are interesting and a great amount of literature is available on each one, and when the final analysis of theories and experimental work has been tested, there is no one that bears a critical examination and it must be conceded that all of these forces are, in different cases, factors in its production.

(To be concluded.)

A Tuberculosis Hospital for Denver.—The Lutherans of Denver are agitating a proposition to build a sanitarium there for consumptive sufferers of that denomination. The idea to erect a tent city on the outskirts of Denver originated with the Reverend J. F. S. Her, pastor of St. John's German Lutheran Church, West Fifth and South Evans Streets. Mr. Her has been given a four months' leave of absence to work up his plan. He is now travelling in the East to raise funds among the Lutherans there. He will go to Buffalo, N. Y., and get the permission of the synod in session there to collect the money for the enterprise. Mr. Her's idea is to have the sanitarium directly under the auspices of the Missouri synod, with a board of directors appointed by that body. The new institution is to be incorporated under the name of the Lutheran Sanitarium Association, and it is probable Mr. Her will be placed at the head of the organization.

THE FEVER OF THE PUERPERIUM (PUERPERAL INFECTION);

A CHRONOLOGICAL REVIEW OF THE DOCTRINES OF ITS ÆTIOLOGY AND OF THE METHODS OF TREATMENT FROM EARLY TIMES TO THE PRESENT.

By JAMES HAWLEY BURTENSHAW, M. D.,

NEW YORK,

ADJUNCT PROFESSOR OF GYNÆCOLOGY IN THE NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

To the student of medical history few subjects possess greater interest than that relating to the practice of midwifery. The records that have come down to us from ancient times are necessarily fragmentary, but sufficiently clear, nevertheless, to indicate that knowledge and practice were founded on certain definite principles, the result of thoughtful deductions by men learned in the healing art. At just what period the practice of medicine was recognized as a distinct profession, it is impossible to determine. While all honor is due to Hippocrates, the fact cannot be questioned that for many centuries before his time medicine had had a history. As one commentator has said, "In the state of society pictured by Homer we find a distinct and organized profession; we find a system of treatment, especially in regard to injuries, which it must have been the work of long experience to frame; we meet with a nomenclature of parts of the body substantially the same as that employed long afterward in the writings of Hippocrates: in short, we find a science and an organization which, however imperfect as compared with those of later times, are yet very far from being in their beginning."

But, without question, the title of Father of Midwifery justly belongs to this illustrious Greek. To his teachings the world was indebted for nearly twenty centuries for the foundation upon which the structure of obstetrical science and art finally arose. This fact is the more remarkable, viewed from the present day standpoint, when it is remembered that his knowledge of anatomy, physiology, and pathology was limited to a degree but little appreciated by medical students of the present, a limitation due to the respect in which the dead human body was held by the ancients. His dissections were of lower animals, his doctrines the result of deductions therefrom. Not until the conquests of Alexander the Great and his successors disseminated Greek learning throughout the world were great centres of medical learning established, at which the study of anatomy was assiduously pursued by means of human dissections.

Hippocrates, according to the most authentic records, was born on the island of Cos, in the Aegean Sea, about 460 B. C. and died at Larissa, Thessaly, about 377. The school of which he was the founder attached great importance to diet in the treatment of disease, varying it carefully in accordance with the patient's symptoms. Medicines were considered of secondary importance, although as 265 different drugs are mentioned in the Hippocratic writings, it is evident that their uses were well understood. Bloodletting was practised, but not as a routine measure. An effort was made to apply all remedies at the right moment, and the general principle was enforced of making all influences, both internal and external, cooperate for the relief of the patient. " The dominating theory of disease was the humoral. . . . According to this theory, the body contained four humors—blood, phlegm, yellow bile, and black bile, a right proportion and mixture of which constituted health; improper proportions or irregular distribution, disease. . . . The actual science of the Hippocratic school was of course very limited. In anatomy and physiology little advance had been made, and so of pathology, in the sense of an explanation of morbid processes or knowledge of diseased structures, there could be very little." (1).

Hippocrates taught that fever during the first days of the puerperium was due to suppression of the lochia; that this suppression occurred as the result of an accumulation or lack of balance of the " humors "; and that free evacuation of the patient's bowels subsequent to delivery was of the utmost importance in order to rid the body of the noxious element. In his *De mulierum morbis* he expresses himself as follows:

" If, however, the purgation of the puerperium does not take place the next thing is likely to be a fever, with a chill, while the abdomen becomes swollen. If you touch the patient the whole body feels the pain of it, and especially if any one should touch the abdomen. At the same time also a burning sensation in the abdomen is noted and there are apt to be pains in the loins. The patient's appetite becomes fastidious, and wakefulness and irritability occur. After this, on the fifth or seventh day, there may be an evacuation of the bowels and the material passed is black and is sometimes of a very bad odor. The urine is not unlike that of an ass. If this movement of the bowels takes place it appears better for the patient, and with proper treatment she may be restored to health. If not, however, there will be danger of a severe diarrhœa condition asserting itself, during which the excretion of postpuerperal material within the system may be suppressed.

" The arterial pulse is always weak, at times also quick, more rarely strong, but thin. This occurs at the beginning of the disease and is apt to continue. After an interval the hollow parts of the face become red. Whenever this is noted light food should be given, and if it is well retained a cathartic remedy must be administered. If the patient is of a bilious habit the cathartic selected should be one that causes biliary purgation, but if of a pituitary diathesis, a cathartic that causes the flow of mucus. Then fomentations should be applied to the external genitals, made of sweet-smelling herbs, which, if applied every day, will bring about an improvement in the conditions. If, however, the matter that should be purged after the puerperium be carried forcibly to the head or to the thorax and lungs, which sometimes happens, death may rapidly take place if it is detained there."

The century following the death of Hippocrates is almost a blank as regards medical history, although authentic evidences are not wanting that his disciples actively disseminated his teachings. During the first half of the first century a Roman patrician, Aurelius Cornelius Celsus,—" the classical Celsus," as he has been called,—wrote with distinguished ability on agriculture, on war, on eloquence, and on medical subjects, in the latter upholding the Hippocratic doctrines; but not until the time of the great physician, Claudius Galenus, or Galen, about A. D. 200, was the practice of medicine given an impetus which was to leave its impress upon succeeding centuries. Of the many voluminous medical treatises attributed to Galen, 83 which are considered genuine are still in existence. To him is due the credit for having adduced what was considered incontrovertible proof of the soundness of the master's teaching.

About the year 500, according to tradition, Aetius, of Mesopotamia, gained considerable renown in medicine and wrote more or less extensively on midwifery subjects, but comparatively little is known of him except that he followed closely the teachings and practice of Galen.

Long intervals elapsed before the horizon was again illumined by men illustrious in the annals of medicine. In the year 1000 the Arabian school had attained great prominence, and its ablest exponent was Paulus Avicenna, a man of such brilliant attainments that, we are told, he publicly lectured on various branches of medical knowledge at the early age of sixteen. He added the weight of his experience to the Hippocratic teaching, and in 1085 his example was followed by Abul-Kasim el Zahraive, or Albucasis, also an Arabian.

In 1570 Mercatus appears to have written several treatises on the subject of puerperal fever and to have radically changed his views within a short period of time. First, he declared that the development of fever was due to the lochia retained in the uterus becoming putrid. As far as I have been able to discover, this was the first time putrefactive processes were mentioned in connection with the origin of puerperal fever. In 1668, ninety-eight years later, Raymond Fort expressed the same opinion, and was followed, in 1690, by Hervé. In the same year (1570) Mercatus seems to have abandoned the lochial suppression doctrine, for he affirmed that all acute maladies of the puerperal woman were caused by inflammation of the womb, and the latter condition by a difficult labor.

In 1575 Ambroise Paré attributed to a "cold of the uterus" or to the introduction of cold air into the organ, the suppression of the natural discharges, which, in its turn, produced "suffocation or choking of the womb, griping pains in the bowels, and the fevers and other accidents which were often followed by death."

The state of mind of the patient appears to have played an important rôle in the production of the fever, according to accepted theories from the time of Hippocrates to the beginning of the nineteenth century. Roderic à Castro, in 1602, laid particular stress upon "sad affections of the soul" as a cause, and it is worth while also to mention that Thomas Willis, in 1676, asserted that "milk fever" might degenerate into a malignant type as a result of anxiety of spirit; that, in 1766, nearly one hundred years later, Cooper considered puerperal fever as "a dangerous and very obscure malady, which proceeded, among other causes, from violent disturbances of the spirit"; and that Denman (1768), Hulme (1772), Johnson (1779), and Delaroche (1783) regarded pain of the spirit, violent passion, and sudden terror as strongly predisposing causes.

Authorities differ as to the year in which Felix Plater declined to accept the doctrines of lochial suppression or of admission of air into the cavity of the uterus as causes of the fever. Hervieux (2) states that it was in 1537, while Hulme and other writers give the date as 1602. It would appear that the latter are correct. In *De ventris dolore,* published in 1656, Plater says (book II, chapter XIII):

"First of all, however, because of the difficulty of labor, the great pain and effort involved, the uterus frequently becomes inflamed. Then, either because the fœtus or some of the secundines remain, or even after these have been expelled, pain and fever may assert themselves because of the inflammation that had begun before their expulsion. This is not the least cause why women in labor, either during labor itself or after it, suffer much and are in great danger. The retention of the secundines alone would not affect them so rapidly as this inflammation, which is likely to follow and which constitutes the chief cause of death except in those cases in which there is a large loss of blood, either during labor outside the uterus, or after labor into its cavity. The pain, then, which women feel after labor is not so much because of air that has found its way into the uterus, though this has often been said, but because inflammation frequently occurs. The admission of air causes only pain, but inflammation always brings with it more serious accidents and greater danger."

In 1634, Daniel Sennertus asserted that puerperal fevers arose "either from a suppression of the lochial discharge, or from an accumulation of noxious humors during the time of gestation, which are put in motion by the succeeding labor." This opinion was reiterated in his *De febribus et morbis acutis puerperarum,* published in 1656.

In 1640, Lazare Rivière, commonly called Riverius, agreed with the theory of suppression of the lochia and recorded the fact that "the happy success of childbearing doth principally depend upon a proper flow thereof." He agreed with Sennert in attributing the occurrence of fever to the impurities of the blood "collected in the veins of the uterus and other parts of the body during the nine months going with child," and in supposing these impurities to be carried off by the lochial discharge.

"Hence," he says,[1] "if it be suppressed or diminished, infinite dangers and calamities are said to arise; such as, acute fevers, phrensies, madness, melancholy, quinsies, pleurisies, peripneumonies, inflammations of the uterus, and malignant tumors. The causes of this suppression are a too great thickness of the blood, a narrowness or obstruction of the vessels, cold air, inadvertently received into the uterus, which closes the orifices of the vessels; taking cold at the feet, drinking of cold water, fear, terrour, grief, and other passions of the mind, which withdraw the course of the blood from the uterus" (Hulme) (3).

In 1662 Thomas Willis believed, with Sennert and Riverius, that the fever was due to a depraved condition of the blood following the long suppression of the menstrual flow during pregnancy, or to "some evil affection of the uterus after childbirth." In *De puerperarum febribus,* published at Amsterdam in 1682, he expressed himself as follows:

"The sulphurous parts of the blood are exalted, rendered inflammatory, and imbued with fermentative particles, so as to dispose it towards putrefaction, and to imprison, as it were, the nervous fluid and render it hurtful to the brain and to the whole nervous system. Those kinds of evil being impressed on the blood ought to be purged off by the flux of the lochia; but if, after delivery, this discharge should be suppressed, a purification is prevented, a general corruption takes place and infects the whole mass. Convulsive affections, also, arise about the uterus, which are communicated to other parts; inordinate motions are stirred up in the juices, which frequently conspire either to the production or to the exacerbation of the fever. The evident causes which tend to induce this change upon the body are a painful labour, a solution of continuity about the uterus, a bruise, a retention of something which ought to be evacuated, an ulcerous disposition, and many other accidents of the like kind."

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[1] In this quotation, as well as in many which follow, I have retained the peculiar punctuation of the original.

It was Willis who first made use of the term "*febris puerperarum*," in 1676, but its English equivalent, "puerperal fever," was employed for the first time by Strother, of London, in his *Critical Essay on Fevers,* published in 1716. Although in very general use to-day, like many other medical terms this one should be relegated to the storeroom of obsolete nomenclature, signifying, as it does, merely a symptom, rather than an ætiological factor of the disease.

In 1667, Sylvius (or Franciscus de le Boë, by which name he was also known), a German physician, taught that total suppression of the lochia could not occur without greatly endangering the life of the woman. His *Praxis medica,* brought out at Amsterdam in 1674, contains a very interesting chapter on *De lochiorum vitiis,* from which the following extract is taken:

"If there has been a large discharge of blood at the time of delivery and a stoppage afterward it should not be termed a suppression, because, in this case, what ought to have come away in the course of nature after delivery is preternaturally discharged immediately after childbirth. . . . Cold imprudently received into the cavity of the uterus at the time of labor, or applied externally to the skin, is chiefly conducive to total suppression."

The following year, 1668, a French physician, François Mauriceau, asserted that pains after childbirth were frequently occasioned by the sudden suppression of the lochia. He goes on to say:

"This sudden suppression of the lochia, the matter of which choking up, as it were, the whole substance of the uterus, and there stagnating, causes a great distention of the part, and an inflammation, which communicates itself, by means of the peritonæum, to the whole hypogastric region; which hence becomes inflated, distended, and extremely hard, and, if the complaint is not soon removed, it frequently proves fatal in a very short time."

The work of this author, entitled, *Traité des maladies des femmes grosses,* published at Paris in 1721, was translated into English by one of the sons of Dr. Chamberlayne, the inventor of the vectis, and became very popular.

Next on the list comes Thomas Sydenham, the noted London physician, 1624-1689. According to Nathaniel Hulme:

"The faithful Sydenham hath nowhere expressly treated of the puerperal fever, unless the posthumous work, under the title of *Processus integri in morbis fere omnibus curandis,* may be ascribed to him. . . . In his epistolary dissertation, to Dr. Cole (1682), he observes, that some women of delicate constitutions, by rising too early after childbirth, will be seized with the hysteric disorder which, in that case, brings on a total suppression of the lochia, succeeded by a numerous train of symptoms which soon prove fatal, unless prevented by great skill and diligence. He likewise takes notice, that a suppression of the lochia is sometimes followed by a fever, which either partakes of the then reigning epidemic, or proceeds immediately from it. And adds, that the same hysteric disorders which first occasioned the suppression of the lochia rage now more violently, and, as it were, generate themselves afresh."

Hulme adds naïvely, "Here that excellent physician (I speak with reverence) seems to have lost his usual sagacity, and not rightly to have distinguished symptoms of the puerperal fever, from those of the hysteric disease, but to have confounded them together."

The earliest trace in medical literature of the doctrine of milk metastasis as a cause of puerperal fever is to be found in the teachings of Sennert, in 1631, but it was not until 1686 that Puzos elaborated the theory and placed it on a footing equal to that of lochial suppression, which it was destined to maintain for more than a century. He taught that "milk, circulating in the blood, is attracted to the uterus during pregnancy and to the breasts after confinement, but that milk metastases might form in other parts and produce the symptoms of malignant or intermittent fever."

This theory made very considerable headway and obtained many adherents during the succeeding few years. In 1708 Hermann Boerhaave expressed his opinion, as follows:

"The cause of the puerperal fever, is a retention of the lochia, about the time that the serous milky nourishment is making its way, from the newly contracted vessels of the uterus, towards the breasts; whence numberless symptoms arise, and of the worst nature, according as the lochia are carried, and thrown upon different viscera; such as, phrensies, peripneumonies, quinsies, inflammations of the diaphragm, breasts, liver, stomach, caul, mesentery, spleen, kidnies, and intestines; as also, dysenteries, colics, iliac passions, apoplexies, palsies, and a great many other dangerous evils." (Hulme).

In 1746 the milk-metastasis theory was given additional strength by A. de Jussieu, Col de Villars.

and Fontaine, who published a lengthy report on their investigations of an epidemic of puerperal fever at the Hôtel Dieu, Paris. They stated that, on opening the abdomens of women dead from the disease, they had found "a free lactescent fluid in the lower portion of the abdominal cavity and clotted milk adherent to the intestines" (4). In 1787, however, Cruikshank refuted the doctrine by proving that "the phenomena which one observes in the lower belly are properly the result of inflammation of the peritonæum; they are found equally in men, whose breasts do not contain secretion, and in non-puerperal women." These facts were confirmed by Bichat in 1801.

Meanwhile, in 1720, Frederick Hoffman, a German, was uncertain whether to class the puerperal fever under the head of an inflammation of the uterus, or the hysteric disease.

"An inflammation of the uterus," he stated, "is owing to an unequal circulation of the blood through the uterine vessels; namely, the capillaries being filled, and obstructed, by a spasmodic constriction, the blood is carried with great velocity through the contiguous minute vessels, and their lateral branches, which in common do not admit the red part of the blood; whence arises, tumour, redness, and sense of heat, with a compression and irritation of the nervous coat" (Hulme).

In 1722 the Sieur de la Motte, of Paris, published an elaborate treatise on *Des accouchemens naturels, non-naturels, et contre nature*. The chapter entitled *Des vuidanges qui coulent durant les couches de la femme, et de celles qui sont supprimées* is exceedingly interesting reading. He believed puerperal fever to be due to suppression of the lochia, and the suppression to "a furious transport, extreme fear, extreme joy, and other such passions arising from an inadvertent word, or from the receipt of good or bad news, by the odor of a flower, by catching cold, by an unexpected cry in the house or in the street, and finally, by a reflex action which intercepts the course of the humors and instantly causes a change in direction to the lower abdomen and to other parts of the body."

In 1742 Mead taught that fever in the puerperal woman was due to inflammation of the omentum and intestines. At many autopsies of such he claimed to have found the uterus healthy, but the intestines and omentum inflamed, and fœtid effusion present in the abdominal cavity. These observations were confirmed by Hulme, in 1772, and by Leake, in 1781, the latter after having carefully studied epidemics of puerperal fever which had occurred at Westminster Hospital and elsewhere in the city of London, during the years 1769, 1770, and 1771 (5).

This theory in its original form or slightly modified was accepted for many years, indeed, practically until the preponderance of evidence in favor of the germ origin relegated it to the background. It is of interest to quote Hulme's opinion as to the origin of the inflammation. He says:

"The fæces being long pent up, by the pressure of the gravid uterus, become putrid, and, in the large intestines, often so hard as to be concreted into a sort of balls. This evil extending, more or less, through the whole intestinal circumvolution, that is, six times the length of the person's body, affords an ample source of putrefaction to irritate, and corrupt the intestines, and, at length, to infect the whole fabrick; but particularly the stomach and omentum, parts which are injured by the same causes, and clearly connected. Those viscera, being once diseased, will act reciprocally upon each other: the bowels will affect the stomach, and injured omentum; these, in return, will reflect back the disorder upon the intestines; by which means the complaints will sometimes become so general over the whole abdomen, that neither the physician nor the patient can hardly describe the true situation of the disorder. . . . A fever will succeed, accompanied with great thirst, violent pain of the head, and frequently with a sickness at the stomach, or vomiting."

During the next few years a number of treatises on midwifery were brought out in England and France by well known practitioners, each of which became popular. While the chapters relating to puerperal fever impress a present day reader curiously, the gradual trend toward a proper understanding of the true cause of the affection is noticeable. What has recently been said in connection with Harvey, Sydenham, Boerhaave, and Locke applies equally well to these earnest students of the middle and end of the eighteenth century:

"Those men were struggling out of an Egyptian darkness. There was no applause from colleagues and an admiring world. Painfully, often in secret, against prejudice and passion, against conservatism and the traditions of ages, mostly, these pioneers worked; so that, to one reading the ancient records, the wonder is not the smallness but the greatness of their deeds" (6).

John Burton, of London, in 1751, published *An Essay Towards a Complete New System of Midwifery*, in which he upheld the theory that the fever was caused by inflammation of the uterus, and the inflammation either by suppression of the lochia, or by carelessness of the midwife or other attendant.

In *A Treatise on the Theory and Practice of Midwifery*, London, 1762, W. Smellie upheld Burton's views, as did Thomas Cooper in his *Compendium of Midwifery*, published at London in 1766. This author thought that puerperal fever might also arise from "violent affections of the mind, as grief, despondency, and the like; from drinking of strong liquors, or of caudle too highly spiced; or from obstructed perspiration and evacuations." *Essays on the Puerperal Fever, and on Puerperal Convulsions,* by Thomas Denman, 1768, laid the blame on inflammation of the uterus. This author's views were upheld, in 1769, by Robert Wallace Johnson, who published *A New System of Midwifery* in that year; in 1770 by John Millar, whose *Observations on the Prevailing Diseases in Great Britain* contained a chapter devoted to puerperal fever; and in 1770, also, to a more limited extent, by Tissot, of Paris, whose *Avis au peuple sur sa santé* attained wide celebrity.

In 1771 Henry Manning, of London, published *A Treatise on Female Diseases,* in which he held that puerperal fever had its origin in putridity of the uterine contents. The same opinion was expressed in 1775 by Butter, in 1784 by Tissot, and in 1785 by White (7). Some of the medical treatises of that period containing dissertations on puerperal fever interesting to the student are the following: *A Treatise on Child-bed Fevers, and on the Methods of Preventing Them,* by Thomas Kirkland, London, 1774; *Observations sur la pratique des accouchemens,* Viardel, Paris, 1774; *The Practice of Midwifery,* William Moor, London, 1777; *The Puerperal Fever,* by Joseph Clarke, Edinburgh, 1791.

William Hunter, in 1776, (8) and Johnston, in 1779, thought that the fever was due to inflammation of the peritonæum. Delaroche, in 1783, attempted to prove that it was due to erysipelatous inflammation of the intestines (9). This claim is of passing interest at the present time in view of the similarity which is now known to exist between the specific germs of erysipelas and of septicæmia. This view was also held by Pouteau, Home, Lowder, Abercrombie, and many others.

In 1785 Nolte affirmed that puerperal fever was of the nature of so-called bilious fever, but that it was easily complicated by putridity. Contemporaneous writers, such as Finch, Stoll, and Doulcet, agreed with him.

John Clarke, a noted London practitioner, in 1793 summed up the prevailing opinions, as follows:

"Other writers think the puerperal fever has evident marks of putrescency, the cause of which has been traced to misconduct in the early part of pregnancy, such as tight stays and petticoat bindings, which, together with the weight of the uterus, detain the fæces in the intestines, the thin putrid parts of which are taken up into the blood. This is followed by loss of appetite, in consequence of which bile is collected and becomes putrid, and is absorbed" (10).

In 1807 Edward Goodman Clarke, also of London, asserted that "indulgence in highly seasoned dishes and spirituous liquors during pregnancy and immediately after delivery" were strong predisposing factors in the production of the disease (11).

During the early part of the nineteenth century, and concurrently with the advance in knowledge of pathological anatomy, the opinion was held by many that the inflammatory processes which caused fever did not originate in the tissues of the uterus itself, but in its veins and lymphatics. In 1828 Dance attributed to uterine phlebitis the primary rôle in the production *des accidents puerpéraux,* and in 1836 Duplay published many observations upholding this view. Cruveilhier, at about this period, ignored the part attributed to the uterine veins and insisted that the trouble invariably began in the lymphatics of the organ. Some ten years later Ritger held that the fever was due to "a metastasis to the peritonæum, not of the milk, but of the blood destined to form the secretion," and in 1846 Samuel Kneeland stated that "it could be produced by the inoculation of a woman with fluid from a sick woman or from the body of one who had died after labor, as well as from air vitiated by sick persons, especially when several women were together in a hospital ward, ill with puerperal fever." He also asserted that infection could be carried by the physician, by clothes, or by anything that had been in contact with a woman already infected (12).

(To be continued.)

THE MEDICAL ASPECTS OF DECAPSULATION OF THE KIDNEYS FOR THE CURE OF CHRONIC BRIGHT'S DISEASE.*

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The organic lesions of the kidney, grouped under the generic name of "chronic Bright's disease," have always been considered by the profession as incurable. A diagnosis of chronic Bright's disease carries with it to the mind of the laity the verdict of a hopeless prognosis. Broadly speaking, neither of these views is warranted by practical experience. Considered strictly from the histological viewpoint, the lesions of Bright's disease cannot be cured. It is true, nevertheless, that the existence of the disease does not prevent the attainment of even an advanced age and the enjoyment of a fair share of physical activity for long periods of time. The ultimate prognosis is unquestionably bad, just as it is in all other progressive organic lesions, and it is undoubtedly true that if the patient survives the other ills of the flesh, he will eventually die of his nephritis. Yet the statement may be made, notwithstanding, that in a large proportion of cases which come under observation before the terminal stage of the disease has been reached, careful attention to the details of diet, hygiene, and symptomatic therapy will be rewarded with results which are unsurpassed in any of the degenerative lesions of other organs. Even when the disease has entered the terminal stage, much can be done to prolong life and add to the sufferer's comfort by well advised medical treatment. This assertion is advisedly made as prefatory statement to the consideration of the medical aspects of what surgery offers in the way of relief to the nephritic invalid, in order that we may combat one idea which is apt to obscure the question, viz., that the disease is an unmanageable one by medical treatment—that decapsulation is the *dernier ressort,* the one avenue of escape. Unfortunately we cannot avail ourselves of statistics setting forth the results of medical treatment in chronic Bright's disease. Until the present time no necessity existed for statistical vindication of medical treatment, since the question was never before raised, calling in doubt the supremacy of medical treatment in this class of diseases. In the following discussion from the medical standpoint of the surgical treatment of Bright's disease, the writer would disclaim all intention or desire to prepare a brief for the defense of medical proprietary rights in nephritis. The sole endeavor of this paper is to examine the evidence in hand, in order to determine, if possible, the *status præsens* of the question.

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Guiteras *(New York Medical Journal and Philadelphia Medical Journal,* November 14, 1903) has laid the medical world under a decided obligation to him for the extensive tabulation of cases operated on in this country, which he has collected from the literature and by correspondence. I have carefully analyzed his statistics with the view of classifying as definitely as possible the results secured in the various types of nephritis. The difficulties of classification are greatly increased by the incompleteness of the clinical details in many of the cases reported, it often being extremely difficult to place the case in its proper diagnostic category. It is customary in submitting any new and important therapeutic innovation to the profession, to enrich the reports with all obtainable clinical data, in order to emphasize the results obtained. This rule is conspicuously neglected in the case of renal decapsulation. Particularly meagre and unconvincing are the clinical findings accompanying the published results of Edebohls, the most ardent advocate of decapsulation for nephritis.

Guiteras's statistics comprise 120 cases. I have been able pretty definitely to classify 104 of these cases. Where possible the diagnosis given by the reporter is accepted. The 16 cases rejectd (Nos. 3, 31, 46, 54, 55, 63, 84, 85, 86, 87, 99, 100, 101, 102, 103, 104) are excluded, because the accompanying information is insufficient to admit of a diagnosis being made or the results interpreted. From the statistics gathered by Dr. George F. Suker, of Chicago, (*Journal of the Medical Association,* 1904, vol. i), comprising 15 cases operated on that displayed albuminuric retinitis, I have taken 7 cases (Nos. 6, 7, 8, 9, 10, 12, 13), the remainder being already included in the statistics of Guiteras. One additional case reported by J. Norman Henry (*American Journal of the Medical Sciences,* September, 1903), is included, making the total number of cases in this analysis 112.

These cases are divided and classified according to the clinical accounts given as follows:

1. Floating kidney with albuminuria and cylindruria	29.
2. Renal calculus with infected kidney	1.
3. Pyelonephritis	2.
4. Renal sarcoma	1.
5. Subacute glomerulonephritis	2.
6. Arteriosclerotic renal atrophy	1.
7. Chronic interstitial nephritis	43.
8. Chronic parenchymatous nephritis	33.
Total	112.

The results secured by operation, when reported, are as follows:

1. In the entire series of 29 cases (Guiteras, cases Nos. 1, 16, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 50, 51, 52, 53, 56, 57, 59, 60, 61, 66, 69, 70, 71, 77, 78, 79, 92) of floating kidney with albuminuria and casts in the urine, the operation of fixation (nephropexy) of one or both kidneys, either with or without decapsulation, was followed by excellent results, the urine undergoing rapid improvement or entirely clearing of its morbid products, and corresponding symptomatic relief being effected in the majority of cases.

2 and 3. Of three cases (Guiteras, cases 15, 33, 58) of pyelonephritis, one with, and two without, renal calculus. Two were relieved by operation and one died.

4. Case of renal sarcoma, died. (Guiteras, case No. 108).

5. Two cases of subacute glomerulonephritis (Guiteras, cases Nos. 48, 49) one following scarlatina, were both apparently benefited by operation, information as to outcome of operation being very scant.

6. One case of arteriosclerotic renal atrophy (Guiteras, case No. 74) was submitted to a double decapsulation of the kidney for some obscure reason. The patient was a man, seventy-nine years of age, who complained of dizziness, headaches, and infraorbital œdema. Albumin and casts were present in the urine. He recovered from the operation and left hospital at the end of two months, but steadily failed and died one year after being operated on, his life being certainly not prolonged, but probably shortened by the operation.

7. Chronic interstitial nephritis:

Cases of this form of nephritis included in the statistics may be subdivided for surgical classification into those of early, and those of advanced, development. The former cases are characterized clinically by unimpaired cardiac hypertrophy, polyuria, slight albuminuria, functional disturbances, but no advancing œdema, active uræmia, or other terminal symptoms. Cases of advanced interstitial nephritis manifest cardiac dilatation, with extensive œdema or anasarca, increasing uræmia, albuminuric retinitis—evidences that the disease has entered on its terminal stage.

(A). Of early interstitial nephritis there are 14 cases—9 males and 5 females; average age, thirty-eight years; average duration undeterminable (Guiteras, cases Nos. 2, 17, 30, 67, 76, 88, 93, 94, 105, 110, 111, 114, 115, 116). Of these 14 cases one died (Guiteras, case No. 67). This patient was a man, fifty years of age, whose single complaint was dyspnœa, especially at night time. The urine aggregated 52 ounces in the twenty-four hours; had a specific gravity of 1.012, and contained albumin and casts. The patient died from "exhaustion," presumably as the result of the operation. One may ask was this justifiable surgery? Of the remaining 13 cases there were:

Symptomatically improved	10
Unimproved	2
Rendered worse by operation	1
Total	13

What periods of time elapsed between the dates of operation and report we are not informed in the great majority of cases.

With one exception in this series of cases the quantity of urine underwent no augmentation as the result of the operation. In this single exception (Guiteras, case No. 88) an infective element existed, the urine containing blood and pus. This may have influenced the result. In a number of instances a postoperative diminution of urine is recorded.

(B) Cases of advanced chronic interstitial nephritis number 29—20 males and 9 females; sex not given in 3 cases; average age, forty years. (Guiteras, cases Nos. 4, 10, 34, 36, 38, 39, 40, 41, 42, 43, 44, 47, 65, 73, 90, 91, 95, 109, 112, 117, 118. Suker, cases Nos. 6, 7, 8, 10, 12, 13. J. N. Henry's case). Results:

Died	22
Improved	4
Unimproved	2
Rendered worse	1
Total	29

The lapse of time between operation and death in the fatal cases is given as follows:

1 died 12 hours after operation.
1 died 18 hours after operation.
1 died 24 hours after operation.
1 died 36 hours after operation.
1 died 48 hours after operation.
2 died on 3rd day after operation.
2 died on 4th day after operation.
1 died on 8th day after operation.
1 died on 14th day after operation.
1 died on 15th day after operation.
1 died 7 weeks after operation.
1 died 3 months after operation.
2 died 4 months after operation.
2 died 5 months after operation.
1 died 6 months after operation.
1 died 7½ months after operation.
1 died 9 months after operation.
1 died 12 months after operation.

Thus, 12 died during first month following operation.

The causes of death are as follows:

Pulmonary œdema	1
Uræmia	7
General dropsy	1
Total suppression of urine	1
Cardiac dilatation	3
Cardiac failure	4
The development of the disease	5

The mortality rate of this series is 76 per cent.

8. Included in the group of cases operated on and designated chronic parenchymatous nephritis, are cases so diagnosticated, and also those recorded as chronic diffuse nephritis. These cases are very similar in their clinical manifestations, being alike characterized in the records as manifestly anasarca, frequently ascites, reduced urinary flow, severe albuminuria, and copious renal casts and exfoliative products.

This group comprises 33 cases—20 males and 13 females; average age, twenty-eight years; average duration undeterminable (Guiteras, cases Nos. 5, 6, 7, 8, 9, 11, 12, 13, 14, 18, 29, 32, 35, 37, 45, 62, 64, 68, 72, 75, 80, 81, 82, 83, 89, 96, 97, 98, 106 107, 113, 119, 120). Results:

Died	13
Improved	12
Unimproved	8
Total	33

Lapse of time between operation and the fatal issue is given as follows:

During operation	1
4 days after operation	1
5 days after operation	1
6 days after operation	1
9 days after operation	1
14 days after operation	1
19 days after operation	1
5 weeks after operation	1
4 months after operation	2
6 months after operation	2
9 months after operation	1
Total	13

Thus, 7 died during first month after operation.

The causes of death assigned are myocardial thrombosis, exhaustion, uræmia, general purpural extravasation, anuria, pulmonary œdema, tuberculosis of lung, rectum, and kidney. Cause of death not given in one case. Excluding the death assigned to tuberculosis of lung, rectum, and kidney, the mortality rate of this series is 36.36 per cent. It is interesting to note that in four of the fatal cases a marked increase in urinary excretion and a considerable improvement in the severity of the symptoms immediately followed the operation. Notwithstanding this apparently favorable trend of affairs, these patients succumbed on the fourteenth day, nineteenth day, fourth month, and sixth month, respectively.

This illusory improvement in urinary and physical conditions for a period, was also observed in three of the cases which eventually relapsed to their former dropsical condition. The patients in the cases where marked and steady improvement followed the operation, were apparently greatly benefited by the procedure, the urine in every instance undergoing great improvement in quantity, frequently doubling, and even trebling in amount within a few days following the operation. Concurrently the albuminuria became lessened and the anasarca and ascites underwent abatement. It may be noted that the average age of the patients who, it may be claimed, were favorably influnced by the operation, was 24.64 years. In nine of the improved cases we are able to give the dates of the reports as related to the time of operation. They are twenty-four days, forty days, six weeks, three months, four months, five months, seven months, and nine months. In only two of these reports is the probationary period of six months prescribed by Edebohls observed. It is to be regretted that a longer perspective is not available in which to view these cases. Recapitulation:

Total cases operated for chronic nephritis.......76

			Per cent.
Died	36	Mortality ratio	47.36
Improved	26	Improved ratio	34.21
Unimproved	12	Unimproved ratio	15.78
Rendered worse	2	Worse ratio	2.66

Of the 36 fatal cases, death occurred in 13 within the first week and in a total of 20 during the first month following operation.

We are justified in combining the mortality, unimproved, and rendered-worse ratios, and thereby computing that 65.80 per cent. of cases operated on in the various forms of Bright's disease failed to be favorably influenced.

The early statistical literature of decapsulation contains numerous cases which do not properly belong in the category of nephritis in the medical sense. Edebohls, especially, comes under reproof for the meagre evidence adduced to show that his original cases were anything more than local obstructive or infective processes properly belonging in the surgical category. It has well been said "that so long as the term nephritis is loosely used to cover various local and unilateral kidney diseases as well as cases of Bright's disease proper, no satisfactory opinion can ever be arrived at as to the scope of surgery in the treatment of true nephritis" (Horden, *Practitioner*, November, 1903).

The mistake is made of interpreting certain cases as Bright's disease, which are merely albuminuria associated with movable kidney. The cases designated "unilateral chronic interstitial nephritis" contained in Edebohls's list of cases, published December 21, 1901 (*Medical Record*), were undoubtedly of this character. It is a suggestive fact that all these cases of unilateral nephritis were in women, and that in nearly every case a suspiciously prompt symptomatic cure took place by means of single or double nephropexy! There is but one case of unilateral chronic nephritis contained in the operative records of other surgeons. This was a case (Guiteras, case No. 105) in which the right kidney was discovered to be congenitally absent at the time of operation. It may be affirmed that true chronic nephritis of systemic, not local, origin, when it has become clinically recognizable, can be unilateral under only one circumstance, i. e., absence of the other kidney. It is freely conceded that the kidneys may be very unequally involved, and upon examination, present very different gross and microscopical appearances. Unequal involvement is, however, not unilateral nephritis.

Cases of floating kidney with albuminuria are the ones which have been most signally benefited by operation. In a few cases where movable kidney has been associated with organic changes in both organs, nephropexy on one kidney has relieved the condition in both kidneys. This result may, as Guiteras suggests, be explained on the hypothesis of Pousson, who believes that there exists a sympathetic relation between the kidneys, as there is between the eyes, and that an operation on one may relieve the disturbance existing in the other.

There is no doubt that Guiteras's statistics contain some cases of genuine chronic nephritis in which improvement followed the operation. The element of relief to the kidney is, according to Edebohls, afforded by the formation of anastomotic ramifications between the renal blood vessels and those of the abdominal wall and fatty capsule of the kidney. This idea, attractive as it is, has been abundantly disproved by the experimental studies of Albarran and Bernard (*Semaine médicale*, Vol. XXII, page 215), Emerson (*Transactions of the American Association of Physicians*, 1903) and Johnson (*Annals of Surgery*, April, 1903). These investigations demonstrate the absence of any considerable anastomosis between the renal and perirenal blood channels, and moreover show that, following decapsulation, a new fibrous capsule rapidly takes the place of the original one, and is, in most cases, more dense and less vascular than the old one. Neither has Edebohls's anastomotic theory been confirmed by evidence from the autopsy table. Ries and Zeit (Suker) have made slides of the human kidney after decapsulation, and have failed to discover any anastomosis. This theory being thus disproved, we must fall back upon the ideas of Harrison, Israel, and Pousson, or be at a loss to explain the occasional increase of function following decapsulation. These authorities explain this benefit as a result of relief of tension within the kidney following liberation from capsular restraint. The tension theory is in accord with the physiological fact that the rate of blood flow through the kidney is of more importance than the actual blood pressure in determining the amount of urine. It is easy to conceive that by splitting and releasing the capsule from the surface of the kidney, the rate of blood flow through the organ might be increased, improvement of function would result, and under conditions of increased circulatory activity, even some regeneration of the renal epithelium ensue. To render such effects possible, it is essential, according to this theory, to have a condition of excessive intracapsular tension present. Are this theory and the results secured consistent with the pathological facts? In chronic parenchymatous nephritis we have an enlarged organ with thickened cortex, disintegration of tubular epithelium, and distention and obstruction of the tubes. The Malpighian capsules are enlarged and choked with nuclear formation within the cells.

The morbid anatomy of chronic interstitial nephritis is essentially different. The characteristic lesion in typical cases is a morbid overgrowth of the interstitial fibroid tissue, with subsequent contraction of this material, to the gradual atrophy and extinction of the tubes and glomerules by compression. The whole organ becomes eventually reduced in size, the cortex thin, and the deeper structures also diminished in thickness.

The parenchymatous kidney is thus seen to be an organ choked from cellular proliferation, with tubes compressed and blocked but not obliterated, the connective tissue not entering largely into the process until the late secondary or contracting stage is reached. In interstitial nephritis the kidney is in proportion to the development of the disease, a cicatrized organ. In one, the capsule is distended and easily stripped; in the other, the organ is shrunken and atrophic. Yet we must make the tension theory fit both cases—an obvious impossibility. It would seem that it is only in parenchymatous nephritis before the secondary contracting stage is reached, that a condition of intracapsular tension can exist; and the more acute the process, the higher the degree of tension is apt to be. The results of operation seem to bear out these ideas. In cases operated on of fully developed chronic interstitial nephritis, the results have been most disappointing, no improvement in elimination or relief of the toxæmia following. Instead of increase of urine excreted, we find more often diminution, as might be expected, for no tension demanding relief exists, and the operation merely serves to irritate the organs. In parenchymatous nephritis, on the contrary, increase in quantity and improvement in quality of the urine was the rule, not the exception, and when the cardiac condition and general systemic resistance was sufficient to withstand the shock and strain of operation, the improvement was sustained. Postoperative polyuria was the invariable rule and apparently essential to improvement in cases operated on, and this fact serves as strong clinical evidence in favor of the tension theory. On grounds furnished by the foregoing statistics and considerations, the entire class of chronic interstitial nephritis is not adapted for surgical treatment. The only exception to this rule is the comparatively rare circumstance of an acute nephritis engrafted upon a chronic interstitial lesion, in which event the acute inflammatory attack may introduce the necessary element of intracapsular tension. It is true that in certain cases of chronic interstitial nephritis in the earlier stages, the patients have survived the operation and are still alive. It may, with as much justice, be affirmed that these patients have lived in spite of the operation, as that they survive because of it. Clinical experience abundantly demonstrates that patients, in the early and middle stages of chronic interstitial nephritis, under appropriate conditions of diet and hygiene, are even long lived. Indeed Osler has written On the Advantage of a Trace of Albumin and a Few Tube Casts in the Urine of Certain Men Above Fifty Years of Age (*New York Medical Journal,* November 23, 1901). The abstemious regimen and strict personal hygiene instituted in the face of such conditions in many cases serves to prolong life beyond the period that would be attained, were the individual in good health. The question of the admissibility of operation in cases of advanced chronic interstitial nephritis is answered by the foregoing statistics. The mortality (76 per cent.) is almost a prohibitive one, and the chances of prolongation of life much less promising than those which medical treatment holds out.

The entire class of chronic interstitial nephritis being, on theoretical and statistical grounds, eliminated from the surgical category, we must perforce turn to parenchymatous nephritis for cases appropriate for surgical treatment, or forego the attempt to introduce surgical measures into the therapy of Bright's disease. Experience to date would seem to indicate that cases of chronic parenchymatous nephritis in young subjects, and especially those cases following acute infective nephritis, offer the most favorable material for operation. A study of the statistics of operations in parenchymatous nephritis, indicates that a competent heart is the most important consideration influencing the decision to operate. Care must be taken to determine that the dropsy and developing anuria, if such exist, are renal in origin, and not due to a failing circulation; for in the presence of cardiac dilatation the risks of operation become greatly enhanced. In view of the unfavorable showing of statistics, the personal inclination of the writer, for the present at least, is to reserve decapsulation in nephritis for cases bearing indications for mechanical relief. Such indications are furnished by cases of chronic nephritis associated with movable kidney, by nonobstructive suppression of urine, such as develops in certain very acute cases of nephritis, and after trauma, and by cases of severe idiopathic renal hæmaturia and nephralgia complicating nephritis. In cases of acute nephritis, which display a tendency toward chronicity, incision of the capsule, by relieving tension and establishing drainage, may prevent an acute nephritis from becoming chronic.

For the rest, the writer will content himself with medical treatment in cases of chronic Bright's disease until such time as surgery can present a stronger recommendation than is furnished by the statistical evidence at this date available.

In conclusion, the writer would take the liberty of accentuating a few facts which are of interest, as vitally affecting the subject under discussion.

I. Chronic Bright's disease in its development constitutes a diseased condtion of the entire system.

II. It is a disease of very gradual development, and in the great majority of cases, has existed for months and years before the patient comes under observation.

III. It is produced by a chronic toxæmia, either systemic or infective in origin, which produces coincidently as a result, widespread arterial and cardiac degenerative changes, which, being once established, are permanent, and which in their development eventually constitute the most threatening element of the disease.

IV. General œdema or anasarca in chronic renal disease is in many instances in great measure a cardiac dropsy, brought about by advancing myocardial degeneration. It is occasionally so in chronic parenchymatous nephritis, and almost invariably so in chronic interstitial nephritis.

V. It may be stated that, in like manner, developing anuria and uræmia in chronic nephritis may be largely cardiac in production, the functional inadequacy of the kidneys having its inception in the fall of blood pressure incident to circulatory failure.

VI. In the later stages of chronic nephritis, of whatever character, the case is apt to take on these cardiac aspects, which virtually convert the therapeutic problem into a question of sustaining a failing heart.

VII. Albuminuric retinitis must be looked upon as one of the terminal symptoms of chronic nephritis. The concordance of opinion places a limit of two years upon the prognosis after development of this complication. The statistics gathered by Suker of cases operated on, show that, in place of prolonging this limit of expectancy, operation has a decidedly contrary effect.

VIII. It is to be borne in mind that chronic nephritis is a disease of slow and spasmodic development. It is well to realize its exacerbations and remissions, so as to avoid the error of mistaking remissions for cures.

IX. The mere fact that the general condition of the patient improves somewhat after decapsulation does not establish the validity of the operation, for hygiene and rest will do the same for the patient to a remarkable degree in many cases. As the factors of hygiene and rest are invariably associated with the surgical procedure, it is possible that the resulting benefit may, to some extent, accrue from those sources.

X. The results of experimentation demonstrate that, within a period of three months and a half after decapsulation, a new, and in most cases, a tougher fibrous envelope has taken the place of the original capsule. This fact may account for the many relapses and deaths after that period in cases operated on, and in chronic cases, at least, it narrows the prospect of improvement to a period of months.

A CONSIDERATION OF THE SURGICAL TREATMENT OF CHRONIC BRIGHT'S DISEASE FROM THE OPHTHALMIC STANDPOINT.*

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It is indeed not often that an internist, a surgeon, and an ophthalmologist can meet upon so called common grounds of mutual interest and express their individual convictions, either pro or con, for a certain remedial measure. However, the decapsulation of the kidney for chronic Bright's disease furnishes ample means and opportunities in this regard.

In discussing this question of decapsulation from an ophthalmic viewpoint, it is quite essential that the lines be closely hewn and drawn as to the variety of nephritis for which we intend to decorticate—in other words, is it a simple or a complicated case of chronic Bright's disease? It is obvious, therefore, that the remarks about to be made are strictly confined to that variety of Bright's disease which presents certain characteristic fundus lesions of the eye. The surgical kidney with an engrafted nephritis, in this connection, then, is practically of purely secondary consideration. And, in conformity to the subject of the symposium, whatever bearing the surgical kidney has to chronic Bright's disease is not within the scope of the discussion. Yet, it may be advisedly stated that the remarks concerning the ocular fundus condition will hold true for the surgical kidney, should the background of the eye become involved, and decapsulation be proposed as the remedial measure for the cure.

It is not the reader's purpose, nor does it come within the confines of this symposium, to give a minute clinical description of the fundus lesions manifested in the various types of Bright's disease. It matters not, however, what form of Bright's disease you may consider, the preceding, concomitant, or succeeding fundus lesions which are of paramount clinical significance, are albuminuric retinitis and neuroretinitis, with or without hæmorrhages. This albuminuric retinitis is of the gravest prognostic import, and that in an inverse proportion to the age of the patient. When present, irrespective of the stage or type of the Bright's disease (excluding the puerperal and scarlatinal types), the operation of decapsulation is absolutely contraindicated. Furthermore, in the light of pertinent statistics of the present day, under these existing circumstances it is, to say the very least, exceedingly bad surgery. The facts to substantiate fully this rather terse remark, are culled from the recent statistics of Guiteras (*New York Medical Journal and Philadelphia Medical Journal,* November 7 and 14, 1903); the writings of Edebohls (*Transactions Medical Association Greater City of New York,* February 9, 1903) and Ferguson, and the reader's own personal observations (through the kindness of Dr. Ries, Dr. Ochsner, and Dr. Gradle, of Chicago), in addition to the reader's own paper presented at the meeting of the American Medical Association, at New Orleans.

It can be stated that these afore mentioned retinal lesions frequently accompany chronic interstitial nephritis; next in point of frequency is the parenchymatous type; and, finally, the diffuse variety of Bright's disease. Very seldom in a purely acute nephritis can a retinitis albuminurica be positively established (not including the puerperal or scarlatinal). In the majority of these latter instances it is only an acute attack of nephritis on top of perhaps an old unrecognized chronic nephritis. Fully 20 to 30 per cent. of all cases of chronic Bright's disease develop fundus lesions during some stage of the disease. The statistics of Lecorche, Galezowski, Miles, and Bull, which are accepted the world over, because of their accuracy, and which cover many hundred cases, definitely prove this point beyond the shadow of a doubt.

The tenure of life of these patients, under the very best medical care, is but about two years after the recognition of this complication—no matter when the retinitis manifests itself. In corroboration of this, Bull (*Transactions American Ophthalmological Society,* 1886) cites a series of 103 cases in which 87 per cent. died within the first two years, 6 within three years, 4 within four years, and 1 within six years; Miles (*Ophthalmological Society, U. K.*, 188) reports 51 cases in which 53 per cent. died within six months after the establishment of the retinitis; Haehnle (Dissertation, Tübingen, 1897) reports 98 cases in which 56 per cent. died within the first year and 68 per cent. within the second. Furthermore, in a series of 258 cases (statistics of Belt and Bull) 153 patients died within the first year, 88 died within the second year, leaving only 17 patients to live a trifle longer. In hospital practice the percentage of death rate, for like cases, is by far higher than in the better private practice. In all the cases in these statistics the patients were treated upon scientific medical and hygienic principles, and yet the mortality rate was so amazingly high. However, even this mode of treatment is far superior to the decapsulation of the kidney in this very class of cases. When decapsulation was performed we have the insignificant mortality rate of only 100 per cent. This is for a series of 16 authentic cases. In not a single case in the latter group did the patient ever live even a year after the operation. Though the number of cases is rather small, is not this mortality rate going to persuade the surgeon to become skeptical as to the justification of the operation? Certainly, it will have a decided tendency to do so. These 16 cases represent the entire number of chronic Bright's disease with retinal complications that have been submitted to the operation in America up to the present day, so far as the writer is aware. Only upon these, then, can definitive and convincing conclusions be formulated, as in only them were true ophthalmoscopic examinations made and recorded.

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* Read at the joint meeting of the Chicago Surgical and Chicago Medical societies, January 13, 1904.

The neuroretinitis (broadly speaking), with or without retinal hæmorrhages, represents the very acme of the development of the concomitant nephritis. These fundus findings are but an expression of irreparable degenerative inflammatory changes. Not only is this true for the eye, but it applies just as well to the kidney. Both the eye and the kidney are practically accepted as end organs, supplied by end arteries—the retina in one, and the glomerulus in the other. This is one reason, therefore, why both organs are prone to participate in a lesion which is dependent upon some general systemic toxine, even though this toxine for the nephritis is as yet an unknown quantity. In both organs the functionating structures are the ones to suffer the greatest irreparable changes. The connecting link for the changes in the two organs is the cardiovascular system. This remark can be accepted with a great degree of certainty. Every case of albuminuric retinitis is one of nephritis with an impending or an established heart complication, with or without arteriosclerosis. Still, it is a well known fact that these lesions in the fundus may antedate by months any recognizable urinary evidences of nephritis. In these early retinal disturbances the heart is likewise subjected to early changes. In a measure, we can assume these remarks to lend material weight to the toxic theory of chronic nephritis.

The pathological changes which occur in both organs are not only grossly analogous, but in many instances rather intimately so, as clinicians tell us. The retinal lesion is always to be looked upon as a decidedly dangerous terminal symptom in any nephritis here under discussion. It matters not whether the retinitis is prodromal, concomitant, or succeeding; it is always a danger signal for the surgeon to be aware of, and to accord full value to the relation it sustains to the advisability of ever operating under such existing conditions. Indeed, so far as making any effort to ascertain the true retinal condition in these cases for decapsulation, the surgeon has been, in a large percentage of them, decidedly remiss and negligent. Albumin and casts in the urine were apparently sufficient cause for his operating, never minding what the mortality rate in this class of cases might be. A rather extensive correspondence on the writer's part in this direction proves this assertion (article in the *Journal of the American Medical Association*, 1904, vol. i). Such clinical notes in the statistics as "blurred vision," "reduced or disturbed vision," "defective or impaired vision," "ocular headaches or loss of vision," and many similar ones which the surgeon seems to accept, are absolutely incongruous data and devoid of any real clinical significance; especially so, when the patients frequently happen to be beyond the age of forty-five years, as many of them are, thereby being presbyopic. The conditions of vision just cited can often be ascribed to refractive errors, defective refractive media, corneal opacities of various degrees, incipient cataract, and many other allied states of the eye, and not necessarily, therefore, to a neuroretinitis. These retinal lesions, as already alluded to, may exist and the patient never be aware of them, for some length of time. The ophthalmoscope, therefore, is the only means by which you can positively determine whether the loss of vision is due to a nephritic complication.

An arbitrary elapse of time of six months after the operation, during which period the urine must be free from albumin and casts, in order to pronounce the case a practical cure, has been set down by Edebohls and his followers. This apparently dogmatic period of time is certainly devoid of any practical significance when you apply it to cases of albuminuric retinitis complicating a chronic Bright's disease. In the routine hospital practice, in 85 per cent. of such cases the patients die within the first year, and in 95 per cent. of them in the second year, I SERIES.

No.	Age, Sex.	Condition of Eye.	Heart and Vascular System.	Kidney Lesion.	Dates of: 1. Diagnosis, and 2. Operation.	Result.	Remarks.
1	M. 67	Retinitis albuminurica.	Arteriosclerosis, mitral regurgitation.	Chr. interst. nephritis.	1. June, 1901. 2. June 14, 1902.	Death within 48 hours.	Cause of death, uræmia. Edebohls's case No. 39, in his statistics of 51 cases.
2	M. 62	Retinitis albuminurica.	Moderate card. hyp., aortic murmur.	Idem.	1. January, 1902, 2. May 26, 1902.	Death within 12 hours.	Cause of death, acute dilatation of heart. Edebohls's case No. 34.
3	M. 56	Albumin. neuroretinitis.	Cardiac hypertrophy, arteriosclerosis.	Idem.	1. May, 1901. 2. May 26, 1902.	Death Nov. 6, '02, lived 5½ months.	Both eye and kidney first improved—then rapid relapse. Edebohls's case No. 35.
4	M. 21	Retinitis albumin. $V={}^{1}/_{200}$ each eye.	Aortic stenosis, cardiac hypertrophy.	Chron. diffuse nephritis.	1. December, 1900. 2. April 16, 1902.	Death Jan. 18, 1903.	Improved first, especially for five months. Died four months later. Edebohls's case No. 27.
5	M. 50	Optic neuritis, temporary blindness.	Cardiac hypertrophy, dilatation.	Chr. interst. nephritis.	1. April, 1901, 2. May 26, 1902.	Death within 12 hours.	Very desperate case from the beginning. Edebohls's case No. 36.
6	F. 22	Neuroretinitis hæmorrhages. $V={}^{20}/_{60}$.	Cardiac hypertrophy.	Idem.	1. March, 1901. 2. March 30, 1902.	Death Aug. 10, 1902.	Both eye and kidneys improved first. Then relapse of kidney condition. Ries (personal communication).
7	M. 36	Idem. $V={}^{5}/_{200}$.	Idem.	Idem.	1. August, 1902. 2. September 1, 1902.	Death Dec., 1902	Died of uræmia. Eyes improved after operation (Gradle). Segregator used in Nos. 6 and 7. Ries and Gradle (personal communication).
8	F. 30	Idem. More marked in one.	Idem.	Subacute attack (on top of chronic?)	1. April, 1900. 2. Sept., 1902, and Oct, 1902.	Death Jan., 1903	Choked disc developed after first operation. Ochsner and Dodd (personal communication).
9	?	Idem.	Not given.	Chr. interst. nephritis.	1. Prior to April, 1902. 1. About April 10, 1902.	Death July, 1902.	General condition improved at first—relapse and death. Oliver (personal communication).
10	M. 50	Retinitis albuminurica.	Not given.	Idem.	1. Prior to April, 1902, 2. April, 1902, exact day not given.	Death Nov. 1, 1902.	Desperate case from beginning. Bernays (personal communication).
11	M. 20	Mild optic neuritis; hæmorrhages.	Cardiac involvement not given.	Chron. interst. nephritis.	1, November, 1901 (about). 2. November 10, 1902.	Death Nov. 17, 1902.	Death from acute suppression of urine. Ochsner (personal communication).
12	?	Albumin. retinitis, glistening spots.	Cardiac hypertrophy.	Idem.	1. Not given. 2. Not given.	Death within 4 days.	Was a desperate case when operated on. Munro (personal communication)
13	M. 29	Silvery spots in macular area, ret. alb.	Not given.	Idem.	1. January 15, 1903. 2. January 27, 1903.	Death June, 1903.	General condition first improved. Eyes did not improve. Munro (personal communication).
14	M. 51	Retinitis albumin. Failing sight?	Varying amount of œdema.	Chronic diffuse nephritis.	1. In 1885. Very questionable. 2. June 2, 1902 ?	Still living. (Question the case).	The writer doubts the existence of the retinitis for some 17 years in this case. (Not considered, no conclusions). Edebohls's case No. 37.
15	M. 23	Sudden blindness. Retinitis.	Mitral regurgitation, cardiac hypertrophy.	Chron. interst nephritis.	1. December, 1901. 2. April 11, 1902.	Death Apr. 19, 1902.	Death from exhaustion and uræmia. Edebohls's case No. 24.
16	M. ?	Retinitis albumin.	Cardiac involvement.	Chron. interst nephritis.	1. Not given. 2.		Desperate case. Fisher (personal communication).
17	M. 40	Albumin. retinitis, hæmorrhages.	Idem.	Chron. interst. nephritis.	1. December, 1901 (about). 2. March, 1902.	Death in Aug., 1902.	Typical case—condition of eye did not improve. Remsen (personal communication), Chicago.

NOTE.—The first fifteen cases were considered in a paper read before the Opthalmic Section of the American Medical Association meeting at New Orleans, 1903.

II SERIES.

No.	Age, Sex.	Condition of the Eye.	Heart and Cardio-Vascular Changes.	Kidney Lesion.	Date of: 1. Operation, and 2. Diagnosis.	Result.	No. in Guiteras. Statist.	Remarks.
1	M. 55	Vision failed.	Cardiac dyspnœa, hypertrophy.	Chronic interstitial nephritis.	1. Convulsions 2 mos. before operation. 2. Not given.	Death within 18 hours	65	Eye condition may be due to age or beginning fundus or interocular lesion. L. Furman, Denver.
2	M. 50	Loss of vision,	Cardiac hypertrophy, dyspnœa.	Chronic interstitial nephritis.	1. Made about 8 years before operation. 2. Not given	Death within 24 hours.	90	May have been severe retinal hæmorrhages or rapid neuoretinitis. A. S. McKenzie, Portland, Oregon.
3	F. 26	Disturbed vision.	Idem.	Glomerulo-nephritis.	1. Made about 8 mos. prior operation. 2. Not given.	Death within 48 hours.	112	Difficult to say exactly what the eye lesion is here. Refractive error, or what not. Yet death would suggest deep seated fundus lesion. P. Thorndike, Boston.
4	M. 52	Diminished vision.	Cardiac dyspnœa.	Chronic interstitial nephritis.	1. Not given. 2. Not given.	Death within 72 hours.	118	Here, again, age may have been the cause, or such conditions as mentioned in case 1 of this series. T. P. Whaley, Charleston.

NOTE.—Apparently the operation somewhat hastened the death. None of the patients was reported as being in a desperate condition when operated upon. The cardiovascular lesions in the aged are suggestive that perhaps an arteriosclerosis was present.

III SERIES.

No.	Age, Sex.	Condition of the Eye.	Heart and Vascular System.	Kidney Lesion.	Dates of: 1. Diagnosis, and 2. Operation.	Result.	No. in Guiteras Stat.	Remarks.
1	F. 58	Loss of vision.	Not given.	Chronic interstitial nephritis.	1. Three years ago. 2. Not given.	Improved rapidly, relapse.	91	Eye condition a trifle suspicious, considering the relapse. Not likely to be a refractive error. F. E. Markoe, N. Y.
2	F. 19	Spots before the eyes.	Not given.	Idem.	1. Made 2 years ago. 2. Not given.	Improved.	75	May have been unusual or some refractive error. Does not sound like fundus implication. R. Guiteras.
3	F. 26	Defective vision.	Cardiac dyspnœa.	Chronic parenchymatous nephritis.	1. Orig. made 2 years before operation. 2. Not given.	Recovery.	12	Likewise no fundus lesion refractive error. The recovery seems to preclude any serious eye harm, judging from series I. B. S. Coates, Cleveland.
4	M. 19	Weak sight.	Not given.	Chronic interstitial nephritis.	1. Made 2 years prior operation. 2. Not given.	Improved.	13	Perhaps a refractive error. Eye symptom can scarcely indicate a fundus lesion. G. W. Crile, Cleveland.
5	M. 50	Disturbed vision.	Not given.	Idem.	1. Condition existed for 3 years. 2. Not given.	Doing well.	117	Amblyopia or some other refractive error. T. P. Whaley, Charleston.

NOTE.—Guiteras's article, from which cases in series II and III are taken, was published in the *New York Medical and Philadelphia Medical Journal*, November 7 and 14, 1903.

without even being operated upon. And, as you will presently see from the table of cases about to be referred to, not a single case had even a fair chance to outlive this probationary period. The vast majority lived but six months and a goodly quota less —not a very encouraging outlook for accepting this operation as even a mere palliative measure. In justice, though, let it be stated that temporary improvements in the eye condition followed the operation in a few cases (see writer's paper above referred to). However, the patient in one case in this group (No. 14 in series I) had albuminuric retinitis for some seventeen years, was operated on, and is supposed to be still living. The case belongs to the Edebohls's group, but has not been considered by the writer, because such a condition is beyond any clinical possibility, as he seriously doubts the existing retinitis. Please to bear in mind that after the recognition of the neuroretinitis, in the cases operated on the patients did barely outlive the probationary period, while the majority of similar cases, medically treated, outlived the two year expectancy or more. Which, then, is the more feasible plan of treatment to pursue? The answer must certainly be very obvious to any conservative or rational practitioner. It does seem quite probable, therefore, that the surgeon fails to appreciate the real significance of the retinal lesion if he persists in operating in this class of cases. Even the obligatory period of six months, which the surgeon deems necessary to elapse, is of itself, if nothing more, a contraindication for decapsulation when once a neuroretinitis has been established (extreme emergency cases not considered).

The cases in series I, which are the basis of this paper, need scarcely any explanation (case 14 is excluded for reasons assigned). They conclusively prove the utter futility of the operation. The eye findings are very definite and suggestive. The series substantiates remarks previously made. To say the least, this series is quite unique in its mortality rate of 100 per cent.

In series II the rather indefinite eye conditions point rather strongly to an involvement of the fundus. The mortality rate, too, is nothing to be desired, being also 100 per cent. The few hours that the patients survived is indeed suggestive that perhaps the operation may have hastened their exitus. The cases are cited so as not to appear prejudiced in making up the final conclusions.

In series III, the eye findings are likewise very deficient in accuracy. Yet the age in two of them may be reasonably held responsible for the poor vision, and not the Bright's disease. A possible chance of a refractive error existing in the others can be assumed with considerable certainty. Two of the patients had an early relapse. From an ophthalmic standpoint these five cases are worthy of but little consideration, either for or against the value of decapsulation. Surgery, surely, will not allege that in these few cases it accomplished more than the approved modern medical treatment would have achieved. That full credit has been accorded these few cases cannot be denied.

The statistics compiled for this discussion on the writer's part comprise 84 cases of chronic Bright's disease. Among this number are 21 cases (series I and II) in which there were evident complications in the retina. This makes a percentage of 25, thereby upholding the remark previously made on this score. Of these 21 cases, there were 16 with undisputed neuroretinitis or retinitis (series I); 4 cases (series II) with suspicions strongly indicating retinal implications. In all these 20 cases, or a percentage of 100, death occurred well within the prescribed two year limit of life expectancy. Again is another remark on this point upheld. In the 84 cases one or both kidneys were decapsulated, with no lasting improvement, or even temporary improvement worth while mentioning, as being directly due to surgery. The statistics conclusively demonstrate that the surgeon should, at the very least, make a thorough fundus examination when such cases are brought to him for this particular operation. Furtherhmore, this series of cases likewise demonstrates that the general mortality rate is altogether too high for rational and conservative surgery. Finally, the statistics clearly set forth the fact that, as yet, no surgical or medical treatment has been of any great avail in either ameliorating or improving cases complicated with a retinitis. In brief, the statistics evidently indicate the operation of decapsulation to be a very questionable procedure in the class of cases just cited.

The writer wishes to conclude as follows:

First: As, at the very least, 25 per cent. of cases of all grades and variety of chronic Bright's disease present evidences of retinal or other serious fundus complications, and

Second: As these various fundus complications are usually of the degenerative inflammatory type, attended by like changes in the kidneys, and

Third: As the cardiovascular system is, or shortly will be, seriously involved, and

Fourth: As such changes may develop without any subjective symptoms on the patient's part, and

Fifth: As these retinal complications have been accepted as indicative proof of a general circulating systemic toxine, and designating the acme of the development of the Bright's disease, and

Sixth: As the death rate of this class of cases under the best medical treatment (both hospital and private practice) is about 75 per cent. for the first year, and at least 85 per cent. for the second, scarcely any subjects surviving three or four years; while, in cases operated on it is 100 per cent. for the first years, and

Seventh: As these fundus findings are of paramount prognostic import in an inverse proportion to the age of the patient, and

Eighth: As the medical aspect of this question, as presented by Dr. Elliott, offers as good, if not far better, results than the decapsulation in like cases —therefore, must this climactic array of positive clinical data, which is so palpably evident as well as available, not be disregarded on the part of the surgeon in endeavoring to establish the validity of this operation under discussion. This is at least true for the complicated cases; especially so, when it can be said that the patients in some cases (series II) verily died because of the operation and others in spite of it, while all complicated ones operated on fell within the pale of the classic two year limit.

Finally, the writer has ample reasons to believe conservatively, from facts above detailed, that he has conclusively proved decapsulation of the kidney for chronic Bright's disease to be absolutely contraindicated in such cases as present a retinitis or a neuroretinitis, with or without hæmorrhages. It is needless to say, therefore, that one must heartily endorse the medical standpoint in this discussion, as Dr. Elliott's array of incontrovertible facts uniquely substantiates both his and the writer's position.

This paper is written from a purely ophthalmic point of view and does not purport to cover anything else—only wishing to show the surgeon that now and then the ophthalmologist can throw out prohibitory warnings in reference to some contemplated operations which are in their formative periods.

103 State Street.

A NEW OPERATION FOR PUERPERAL SEPSIS.*

By SWITHIN CHANDLER, M. D.,
PHILADELPHIA,
SURGEON TO THE GARRETSON HOSPITAL.

One of the great questions of the day is the struggle to live, and this brings many evil results upon humanity. One of the indirect results is abortion and its manifold dangers, the chief of which is sepsis and its complications and sequelæ. It is estimated by Peterson that at times the mortality by abortion is over 60 per cent., and there can be no quesion but that many of the deaths are due to sepsis. As the operators become more skilful this death rate will become less.

While it is our earnest duty to condemn in a merciful, yet firm and determined, manner this practice among women, and severely to condemn those unscrupulous persons, shame be to them, bearing a physician's diploma, who practise this operation, it is next our duty to save as many of the unfortunate victims of the operation as possible.

Again, in the case of those women suffering from sepsis due to other causes, be it the fault of physician, nurse, midwife, husband, or friend, or of some cause not easily determined in an individual case, our best endeavors and skill are required to aid and cure such unfortunates.

It is needless to give a picture to medical men of this disease. The mental impression is remembered only too well, and we can recall when we have stood at the bedside, a protector between death and the family, have known our helplessness and have felt it keenly, have seen a life fade away with all its hopes of the future, have seen all ties about to be severed, and yet have been powerless to prevent it.

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* Read before the Philadelphia Obstetrical Society, April 7, 1904.

This was the stimulus that led my thoughts to this trouble, and I believe I can present to you to-night an operation which will save many, and which has, so far in my practice, been the cause in my judgment of saving the lives of women.

We should first educate the physician and his associates to guard the patient, condemning all measures that tend to produce sepsis, particularly the conscienceless practice of abortion. When the patient, however, has contracted sepsis, then I believe the following operation in severe cases is the advisable procedure, an operation that I have been performing during the past six years.

Make an incision posteriorly to the cervix in the posterior vaginal wall; then pass a pair of long blunt-pointed forceps, slightly curved, in the cervical canal, up into the cavity of the uterus; then puncture the posterior wall of the uterus in the centre, near the top of the uterus. Then introduce with two fingers a piece or strip of iodoform gauze through the posterior vaginal opening previously made, clasp the gauze with the forceps, and drag the same through the uterine wall and out through the vagina. Repeat this by puncturing the uterus on each side, but posteriorly and just about the middle of the body of the same, drawing the gauze through the same as in the first attempt.

Thus, one will see, we treat the uterus as a thoroughly infected organ deserving heroic treatment. We feel that we have been, and are, justified in this procedure.

Prior states that "any method of treatment which is adopted must assume the existence of a general invasion," and in this I believe we must all agree; yet we must confess that there are cases so mild in character that they recover without heroic treatment. In such cases one would probably not be justified in performing this operation. We must, however, realize that a mild infection may become a severe infection, and thus necessitate prompt measures.

Again Prior states, "From these examinations I am forced to the conclusion that in streptococcic puerperal sepsis, pelvic lymphangeitis, and phlebitis are early complications," and for this condition we should be prepared. The operation which I suggest, I believe is particularly adapted for this condition, especially the lymphangeitis, as it is the best manner of draining these structures, which it unquestionably does. The injury is little more to add to curettage, and "if injury is so severe, why curette, as this leaves open channels?" (Prior); but, if curettage is advisable, this operation can add but little danger, while, as in a few cases reported below, it can effect so much good. This drainage locally, with other treatment, shows by the rapid fall of the temperature that often the infection is still local in character.

So much stress is placed upon drainage and treatment of the uterus as a thoroughly infected organ, because statistics bear one out in the statemen that this organ, its bloodvessels, and lymphatics, constitute a general infected part, and should be treated accordingly.

Jacoby's cases are similar to other records, and his alone, therefore, are cited. He states that in 54 deaths from sepsis, 51 were subjected to a post mortem examination. Of 51 cases, in 14 there was pure thrombophlebitis; in 24, lymphangeitis; and in 13, a combination of both. The cases with lymphangeitis were the most severe cases. The thrombophlebitis cases lasted weeks or months, but in 16 out of 24 lymphangeitis cases death occurred in a few days. In cases of mixed infection death frequently took place earlier.

This makes it clear to me that an operation, after curetting and general treatment, which treats these complication is a logical one.

That some operation other than the older ones must be advised is certain, as the following mortality statistics will demonstrate:

Curettage	22 per cent.
Hysterectomy	55 per cent.
Expectant treatment in all cases,	7 per cent. to 25 per cent.

Prior's operation I believe is a good one under certain conditions only, but it does not drain the organ, and I believe that is the important point.

The objections to the operation I suggest might be as follows:

1. All cases are not those of virulent infection.
2. It causes additional injury to an organ infected.
3. Curettage and removal of membranes are often sufficient.
4. It may so injure the uterus as to interfere with labor.

Regarding the first objection, it is admitted; and if we are prepared to take prompt measures, we would not always advise its immediate undertaking.

Answering the second objection, I would admit that it causes more injury; but we do not hesitate to open an infection in other organs, and we occasion no fresh infection, and experience in this operation is similar to operation in other parts.

To the third objection, as to the first, I would answer: If we are prepared to perform the operation immediately, should it be required, well and good.

In answering the fourth objection, as yet I cannot say, but I do not believe it would have any bad results, especially after a knowledge of how the uterus is at times treated by the inexperienced in curettage, removal of growths, etc.

In favor of the operation we can say:

1. It is conservative.
2. It is easily performed by the experienced.
3. It is logical, because it treats the organ as an infected part, and gives drainage to the uterus and those tissues and vessels shown by post mortem examinations to be affected.
4. The mortality is greatly lowered, and the operation gives far superior results so far, although its exact results must yet be proved by a larger number of cases than as yet I have practised upon.

I will report only four cases and the results. They are as follows:

CASE I.—Woman, thirty-two years old, mother of two children. Supposed to be in perfect health previous to confinement. Child born on March 2, 1898. On March 4th, forty hours after labor, had chill. Temperature rose to 104° F.; pulse, 130; respiration, 38. March 5th, temperature, 105° F.; pulse, 140; respiration, 40. Face pinched, anxious and flushed. Lochia scanty and somewhat offensive. A general perspiration over body.

Same evening cleaned the bowels. Ordered a stimulating enema. Gave tincture of digitalis, 10 minims, hypodermically, and proceeded to etherize the patient. After most careful preparation, curetted, removing a piece of placenta; uterine lavage with 10 quarts of plain sterile water and one of normal salt solution; opened the posterior vaginal wall, investigating with the finger the tubes, ovaries, etc. Then passed forceps through the uterus and withdrew gauze, as before mentioned, leaving the same in to drain, thus forming there a U of gauze, entering the vaginal opening, and emerging through cervical canal and out of the vagina. Quinine sulphate, 20 grains, given every three hours as after treatment.

March 5th, patient improved generally. Temperature, 103° F.; pulse, 120; respiration, 34. March 7th, still improving; temperature, 101.2° F.; pulse, 108; respiration, 30. Continued to improve and made a good recovery. Drains were removed on sixth day after the operation, and were replaced by uterine and postcervical gauze drainage only. On the thirteenth day all drainage removed.

CASE II.—Woman, twenty-six years of age, first child. Normal until birth of child, as by examination. Labor on July 10, 1900. Was greatly torn in the cervix and posterior vaginal wall into uterus. Repaired immediately. Same evening temperature, 100° F.; pulse, 90; respiration, 24. Continued to rise until the fifth day, then temperature was 104.2° F.; pulse, 124; respiration, 36. Operated on with same procedure, also cutting stitches previously inserted. Sixth day, temperature, 103.2° F.; pulse, 120; respiration, 30. Seventh day, temperature 101° F.; pulse, 118; respiration, 30. Continued to fall until twelfth day, when everything being normal, the dressings were removed and others substituted as before. Recovered.

CASE III.—Woman, forty years of age. Mother of six children. Labor began August 15th. Was in labor for twenty hours, when version was performed. Cervix and posterior vaginal wall torn. Repaired immediately. Temperature at the end of six hours, 104.2° F.; pulse, 128; respiration, 40. Third day, temperature, 106° F.; pulse, 154; respiration, 44. Operated. In addition to operation aforesaid, because of infiltration and swelling of the tubes, ovaries, and broad ligament, these were punctured and relieved of a yellowish discharge containing many streptococci.

The following day, temperature, 104° F.; pulse, 140; respiration, 40. Second day, temperature, 103° F.; pulse, 140; respiration, 36. Third day, temperature, 103° F.; pulse, 120; respiration, 32. Fourth day, temperature, 102° F.; pulse, 120; respiration, 30.

Gradually, with fluctuations, temperature, pulse, and respiration returned to normal, and patient made a slow recovery.

CASE IV.—Woman, thirty-nine years of age. Married, mother of eleven children. Possibly had a right pus tube for many years; time unknown. Craniotomy was performed on the child, November 6, 1903, and the child delivered. The woman was horribly lacerated, and as there was so much shock, the physician did not repair the lacerations. Posterior fourchette and sphincter ani were torn through, and the cervix torn almost up to the uterine artery. Great shock followed.

On the seventh day after labor the temperature was 105° F., the pulse 135, and the respirations 34. Operation and same treatment. Patient was afflicted with a venous thrombus on the left side, and was confined to bed for ten weeks, but finally recovered.

Chemung County Medical Society.—At the annual meeting of the medical society of the county of Chemung, held at the City Club, Elmira, N. Y., May 17th, the following officers were elected for the ensuing year: President, Dr. C. N. Hammond; vice-president, Dr. Anna M. Stuart; secretary, Dr. Jessie L. Herrick; treasurer, Dr. G. V. R. Merrill; censors, Dr. John C. Fisher, Dr. Charles Jennings, Dr. W. M. C. Brown, Dr. H. D. Wey, Dr. A. H. Booth. The retiring president, Dr. Hamilton D. Wey, read a comprehensive paper, entitled Present Status of Vaccination. Of the guests of the meeting, Dr. William Warren Potter, of Buffalo, read a paper, entitled Asepsis in the Obstetric Chamber, and Dr. W. H. Glenny, of Buffalo, one entitled Accurate Determination of Blood Pressure as an Aid to Diagnosis. J. L. Herrick, secretary, 408 Union Place, Elmira, N. Y.

CASE OF ATHEROMA AND ANEURYSM OF THE ABDOMINAL AORTA AT THE AGE OF TWENTY-ONE YEARS.

By CHARLES R. ANDREWS, B. S., M. D.,

ATLANTA, GA.

It has long been known as an established fact that atheromatous degeneration of the arteries and aneurysm, one of its primary sequels, occur in the vast majority of all cases in persons who are middle aged or well advanced in life. Authorities agree that between the ages of thirty and forty years these degenerations are most common.

R. W. Parker, after a careful search of medical literature, was able to find only 15 cases af aneurysm occurring in persons under twenty years of age. In most of the cases of this series of 15, the aneurysms occurred in the arteries of the extremities and neck, coming on spontaneously in some, and as the result of injury in others; but in very few instances were they due to a weakening of the vessel wall following atheromatous degeneration. Aneurysm of the abdominal aorta at the age of twenty-one years is a surgical curiosity.

The case under consideration was that of a young adult male, white, scarcely twenty-one years old. He only lived seventeen hours after his admission to the hospital, having been sick previously for nine weeks, and coming into the hospital only as a *dernier ressort.* He was a member of a famous gang of outlaws in this State, and had lived a life of debauchery and suffered many hardships since his early youth.

It is most probable that syphilis was the prime factor in inducing these degenerative changes, though the patient denied any specific history.

Prior to his death a marked initial regurgitant murmur was recognizable, and at the post mortem examination his heart was found to be somewhat hypertrophied, though not greatly so; on the upper surface of the mitral valve was discovered a large warty growth capped with calcareous deposits. The aortic valves were also sclerotic and thickened.

The arch of the aorta was atheromatous and studded with several ulcers, which had extended through the intima. The arteries of the extremities were atheromatous, though not so markedly so as the arch of the aorta.

Just about the location of the cœliac axis was a sacculated aneurysm 4.5 cm. in diameter. The thrombus within the aneurysmal sac was rather firm and laminated, the blood having coagulated in concentric layers at different periods of time.

The patient complained of no pain, and gave no symptoms which would have led one to suspect the condition. This aneurysm belonged to the class described by Osler as being latent; giving rise to no physical signs, and producing no pressure phenomena.

Besides these lesions, the patient had a large anæmic infarct in his spleen, and two smaller ones in his left kidney; these infarcts being due, most probably, to small fragments of the growth on the mitral valve which had become dislodged and had plugged some of the terminal arteries in the spleen and kidney.

A chronic interstitial nephritis was also present, together with most extensive pleuritic adhesions, and an adhesive pericarditis, which completely obliterated the pericardial sac.

As stated before, while aneurysm and atheromatous degeneration are not entirely unheard of in persons of this age or even younger, still, they are quite rare, and are only met with once in a very great while.

If the saying is true that "a man is as old as his arteries," then truly this youth was an old man.

Therapeutical Notes.

Buccal Gangrene.—*Journal des praticiens,* for May 14, 1904, quotes Viau's *Guide pratique pour les maladies de la bouche et des dents* on the treatment of this rare disease. The thermocautery should be used on the affected part, fly blisters applied to the œdematous tissues and moist dressings used externally. Mouth washes are indicated: Leaves of sage, thyme, hyssop, peppermint, origanum, wormwood, and rosemary, of each equal parts are taken. To 300 grammes (10 ounces) of an 8 per cent. alcoholic solution of the foregoing, 1 gramme of pure creosote is added. This makes a pleasant wash to be used every three hours. Or the following may be used:

℞ Potassium chlorate	5 grammes (75 grains);
Distilled water	120 grammes (4 ounces);
Honey of roses	30 grammes (1 ounce).

M. For a mouth wash.

After using one of the foregoing:

℞ Hydrochloric acid	2 grammes (30 minims);
Honey of roses	15 grammes (½ ounce).

M. To paint affected parts.

For internal treatment, Viau prescribes:

℞ Quinine sulphate	50 centigrammes (7½ grains);
Dilute sulphuric acid	10 drops;
White sugar	15 grammes (½ ounce);
Cinnamon water	120 grammes (4 ounces).

M. One teaspoonful every three hours.

Or the following may be substituted:

℞ Potassium chlorate	4 grammes (1 drachm);
Distilled water	180 grammes (6 ounces);
Lemon juice	30 drops.

M. Take the entire amount by spoonfuls in the twenty-four hours.

For Nævi in Infants.—The *Revue française de médecine et de chirurgie,* for January 18th, gives the following:

℞ Ichthyol	1 gramme (15 minims);
Collodion	9 grammes (135 minims).

M. Paint the nævus twice or thrice daily. When the thick crust becomes detached, wait till it falls off, then recommence.

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THE POSSIBLE EXTINCTION OF PULMONARY CONSUMPTION.

Certain capable observers are convinced of the probability that within a comparatively short period pulmonary tuberculous disease will virtually become extinct. A well known sanitary statistician, Dr. S. W. Abbott, the secretary of the Massachusetts State Board of Health, in one of the recent publications of the American Statistical Association, cites opinions to this effect, and adds that, if we may judge by the present rate of decrease of deaths from the disease, it does not seem at all impossible that in the next fifty years the many sanatoria now peopled with consumptives may be filled with those who are suffering with cancer, " since cancer appears to be steadily increasing, while phthisis is tending toward extinction." Bright as this forecast is with regard to consumption, it is undeniably discouraging as to the matter of cancer—unwarrantably so, we think, when we seem to be on the eve of the subjugation of cancer.

The death rate from consumption has shown an almost uninterrupted decrease in Massachusetts and in England during the last half century. In Massachusetts it has fallen from 27.1 to every 10,000 of the population to 18.8. In the early part of that period many more women than men fell victims to the disease, but this disparity was gradually effaced, and now the deaths of women are decidedly fewer than those of men. This latter change began in England so far back as the year 1865, but it was not recorded in Massachusetts until thirty years later. It has occurred in spite of the predominating indoor occupation of women, and the general decrease has taken place in spite of increasing density of population.

Dr. Abbott does not deal with the probable causes of these changes, but simply presents the figures. They probably coincide with advancing improvement in the general hygiene, and they began too far back to be accounted for to any great extent by the increasing tendency of persons with incipient tuberculous disease to seek a renewal of health in climatic resorts and in other rational means of treatment. Whatever they may be imputed to, and how speedily so ever they may promise to rid us of the disease, it would by no means be the part of wisdom for us to relax in the slightest degree the efforts of recent years to get the better of it. We must keep on in the campaign, now very promising, against " the great white plague."

ESSENTIAL DYSMENORRHŒA.

Whether or not we may admit that there is such a thing as essential dysmenorrhœa depends largely if not entirely, it seems to us, upon how we define the affection. In a recent clinical lecture on the subject *(Journal de médecine interne,* May 1st) M. Dalché says: " To deserve the name essential, dysmenorrhœa must be unaccompanied by any appreciable lesion of the genital organs or by any derangement of the general health." He then declares that the patient whose case furnishes him with the text for his discourse is suffering with essential dysmenorrhœa, and in the same lecture he traces her trouble to an inflammatory condition of the ovaries, though he arrives at this opinion, he says, by a process of exclusion, for the ovarian affection is not so pronounced as to make a diagnosis by objective signs practicable.

We incline to the belief that the causes of dysmenorrhœa are various, but we do not believe that they are yet so well understood or so readily recognized as to warrant the diagnosis of any one of them by exclusion in a given case. We are disposed to think, moreover, that to attribute dysmenorrhœa to lack of development of the ovaries or to an inflammatory state of those organs not sufficiently advanced to give rise to physical signs savors somewhat of the speculative. But such speculation is not without its value if it rescues any physician of the present generation from the blind belief in the invariably mechanical ætiology that seems to have taken possession of the early gynæcologists of the last half century. The death blow to that theory, which never had anything more than the thinnest plausibility to sustain it, ought to have been dealt by Bouilly's observation—which must also have been the observation of almost every experienced practitioner—thus put by Dalché: " From the time of puberty, certain young girls begin to suffer several days before their periods; the blood comes; the pain continues for two or three days, and then subsides; the blood goes on flowing after the pain has ceased."

We have no doubt that dysmenorrhœa depends far oftener upon some systemic condition, congenital or acquired, than upon any ascertainable abnormity of the uterus or ovaries, and attempts to trace the connection between such abnormal states of the system and painful menstruation seem likely to lead in the end to a more satisfactory understanding of dysmenorrhœa than we can now boast of, but we question the good of assuming the existence of an essential dysmenorrhœa.

THE MOSQUITO PROBLEM IN NEW YORK.

If anything is to be done this season to eliminate the mosquito as a cause of disease in New York it should be done at once. Already the Riverside Park is swarming with the insects. Possibly it will prove impracticable to rid that particular locality of the pests unless our authorities can secure the cooperation of the New Jersey officials, for there seems to be much plausibility in the theory that the mosquitoes in the park find their way to it across the Hudson River. There are practically no puddles in the park itself, and there is in the neighborhood no body of water save the river, which is well stocked with fish. Either the larvæ are not developed on that water or we must give up the idea that fish prevent their development.

But any difficulty there may be in exterminating the mosquitoes of the Riverside Park should not deter us from the utmost efforts to put an end to those that infest other parts of the city, or will do so in the course of a few weeks. Irregularities of the pavement and hollows in vacant lots are many, and only rain is needed to convert them into ideal breeding places for mosquitoes. Moreover, there are the house top tanks that should be attended to, as we have several times pointed out. To correct the surface irregularities and to subject the tanks to the necessary treatment will take time, and it will take a large corps of inspectors or the expenditure of much time by the present inspectors, besides the services of no small number of workmen. All this means additional expense to the city, but it cannot be avoided if we are to put into operation the known means of preventing the diseases that mosquitoes unquestionably convey.

The idea of the connection between the spread of certain disease—notably, in our climate, malarial disease—and the sting of some species of mosquitoes long ago ceased to be a mere theory; it has over and over again been proved true by actual tests, and it has taken an encouraging hold upon the popular understanding. It may be taken for granted, therefore, that any reasonable appropriations for the purpose of exterminating mosquitoes will meet with but little opposition. Much may be accomplished in this direction by the action of individual householders, and the " campaign of education " needed to keep them impressed with the importance of the matter should be unremitting. It is our part as medical men to see that it is carried on vigorously and continuously.

THE INFLUENCE OF GROWTH ON THE DEVELOPMENT OF TUBERCULOUS DISEASE.

If there is a disease upon which the influence of growth is evident, it is certainly tuberculous disease, and in the large majority of cases this disease appears during the period of adolescence. In endeavoring to ascertain the part played by growth in the ætiology of ordinary tuberculous diseases the following facts are to be noted, namely, that growth prepares the soil and it may also be an active pathogenic element. When the infection exists in a latent form, growth may stimulate the bacillus to activity, and the conditions to which it may give rise open the door to the specific agent of the disease.

Growth certainly has such a marked action on tuberculous disease that it not infrequently happens that the evolution of the bacillus is subordinated to that of growth. When a child's development is moderate, or should it become arrested, the subject may regain his health; but when, on the contrary, it becomes exaggerated, it appropriates all the nutritive material, so that the subject does not have a sufficient amount with which to repair the losses his body undergoes from the havoc produced by the disease. It is a well known fact that during acute diseases growth may impoverish the organism to such an extent that it becomes an easy prey to the invasion of tuberculous disease.

Let us take the ordinary case as typical of what occurs in the poorer population of all large cities. A woman gives birth to several children. For some years she has coughed and finally dies, at about the age of thirty, of tuberculous disease. What becomes of her children? Some will maintain that the generative cells of the child possess a physiological *manière d'être*, and will evolve in the same manner as those from which they have been derived; consequently, the same conditions of soil that have allowed the parent to become tuberculous subsist in her descendants. Others would say that the child had simply been infected by the mother. The possibility of the bacilli passing from the mother to the child via the placenta is at the present time absolutely demonstrated, and undoubtedly the existence of placental lesions would be invoked, but the experimental fact, for all that, remains. Leaving aside all discussion of these theories, we may admit that they both contain an element of truth.

A child born of a tuberculous mother comes into the world without being infected, and, when carefully cared for, the first few years of its life will be gone through without any symptoms, but often at about the age preceding puberty the nutrition will become more or less impaired. This is shown by the facies and general appearance of the child. Puberty then comes and the subject begins to grow rapidly, and it is just at this time that the state of his inherited nutrition, which has remained in a latent condition since birth, begins to manifest itself. Now, in point of fact, at this period one will remark that the child is not in a condition which will be functionally sufficient for his development; he grows, but remains thin and becomes weak.

It is at this time that children are overworked because they are being armed for the struggle for life. It is still time enough to avoid the misfortune which is a menace to the child, and he may be prevented from becoming infected if his studies are stopped and if he is sent to the country where he may be able to indulge in moderate exercise and receive food appropriate for his condition.

Unfortunately, a number of opposing causes for attaining this end exist. In the first place, there is the poverty or the material impossibility of doing for the child, but there are also many prejudices on the part of parents and their lack of insight when told that their child is a candidate for tuberculous disease; it therefore results that the disease at length develops. To send a child to the country and thus oblige him to leave his work is simply an avowal that he is physically inferior to his little friends, and vanity on the parents' part will oftentimes clash with proper reasoning. "He will do like other children," they say, and he consequently continues his life in bad hygienic surroundings. Parents will administer medicine, which after a certain time causes dyspepsia; gymnastics are ordered, which only fatigue the child, because it is simply an output of strength added to all the others to which he is unequal. Predisposed, the child may not have any other disease, but he presents a soil marvelously prepared for infection. The more he grows the more these causes become intense, and when the child takes cold or is attacked with bronchitis, the tubercle bacillus finds an open door to receive it and develops with all the greater ease because it finds an old friend in this hereditary soil. From this time on, the child is tuberculous, and growth, with all the other accomplice causes which go with it, contributes powerfully to denutrition. Now, general pathology teaches us that denutrition is everything in the evolution of tubercle bacilli, and it is this which makes a tuberculous subject a phthisical one.

Let us suppose, on the contrary, that the child has been born infected and that he has presented no symptoms during infancy. Under the influence of the various causes which have been enumerated, it is an easy matter to admit that growth and its complications cause the bacillus to come forth from its latent condition and give to it, at the same time that it receives a new vitality, a special localization. From this there result tuberculous lesions of the bones and joint, so frequent during early childhood, and they are simply different stages of infection. In point of fact, so long as the bones are in a state of development, Koch's bacillus prefers them particularly and disdains the lungs; the tuberculous process remains localized and can be successfully attacked before becoming generalized. All this is not merely theoretical, because experimental work has furnished us with precise facts relative to the point.

Taking as an example a child that has become tuberculous because he was growing, what is his destiny? Clinical observation shows that the evolution of tuberculous disease has an intimate relation to growth, and to be convinced on this point it is quite sufficient to compare such disease in subjects not in the period of growth in order to recognize the part played by the latter. Beyond this period, under ordinary conditions, the progress of the disease is slow, and those who can care for themselves may live indefinitely. The disease has periods of arrest and remissions, but a cure is far from being infrequent. It is distant from our thought to maintain that tuberculous disease arising during the period of growth cannot be cured, because successful outcomes of this kind are no longer to be counted. It is, however, essential to point out those cases in which growth, although the cause of all, appears to become repentant and then becomes a salutary factor, even an agent of cure. This action should be likened to that which is so frequent after acute infectious diseases, especially typhoid fever. But in order that this condition of affairs shall reign, it is necessary that the soil shall not have become weakened and that the digestive tract retains a perfect integrity, and also that the patient finds in his alimentation, not only the elements necessary for his nutrition, but those requisite for repair as well. Thus it may be explained why forced feeding, when rightly conducted, may result in a cure, or at least improvement, in some cases of tuberculous disease.

Growth is a power of great intensity when it can be directed right, and may repair the damage it has caused, but unfortunately this is the exception. However, it must also be admitted that there are few subjects presenting the required conditions. Generally speaking, the inexorable fatality of social position controls everything, but often, also, by a bitter irony those who have it in their power lack the energy or will to submit to the exigencies of a life necessary for tissue repair; or, on the other hand, when they do submit to it, the golden hour is lost. During the evolution of tuberculous disease the end of growth is like a dangerous cape to be rounded, and many are wrecked in the undertaking. Those who safely navigate through the troubled waters and who have sufficient strength remaining have overcome one of the greatest obstacles to their cure.

Charles Greene Cumston.

THE AMERICAN MEDICAL ASSOCIATION AND THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

The first fruits of the recent healing of the schism that has for so many years divided the medical profession of the State of New York and excommunicated a large portion thereof, are manifested in a letter from Dr. Musser, of Philadelphia, president of the American Medical Association, to Dr. Wey, president of the Medical Society of the State of New York, which appears in another column. This letter invites the attendance of the members of the latter society at the Atlantic City meeting, on behalf of the American Medical Association, and at the instance of the New York State Medical Association. Before the 1905 meeting of the American Medical Association the Medical Society of the State of New York will once more have taken its place as a constituent part of the association; but meanwhile this graceful act of the New York State Medical Association and the president of the American Medical Association will be heartily applauded.

THE 1905 MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

We understand that the physicians of Hot Springs, Arkansas, intend to press upon the forthcoming meeting of the American Medical Association the advantages of holding next year's meeting in Hot Springs. The government hospital is to be mentioned as an attraction, and the ample hotel and meeting accommodations of the place are to be urged. All these arguments are well founded, as those who attended the meeting of the Mississippi Valley Medical Association held in Hot Springs a few years ago can testify.

HUMAN AND BOVINE TUBERCULOUS DISEASE.

When Koch startled the world at the Tuberculosis Congress in London by the assertion that he had proved that human tuberculosis and bovine tuberculosis were not identical, or even interchangeable, it was inevitable that scientific inquiry should at once direct itself to an examination of the accuracy of his results. A Royal Commission was appointed in England, in August, 1901, to investigate the matter, and we learn that it has now arrived at such a conclusion as to justify the publication of an interim report to the effect that human tuberculosis and bovine tuberculosis are, to all intents and purposes, one and the same thing. The doubts which we, in common with the greater part of the scientific world, then expressed as to the accuracy of Koch's conclusions appear likely to be fully justified.

AN "ENDURANCE" PIANO THUMPER.

The newspapers have recently chronicled a youth's remarkable "continuous performance" on the piano, breaking all records in long continued playing. Doubtless it was long practice that enabled him to accomplish his task, and we take it that his neighbors are to be credited with the endurance, which perhaps resulted in the injury of their health.

Obituary.

F. SAVARY PEARCE, M. D.,

OF PHILADELPHIA.

In the recent decease of Dr. Pearce at an early age the profession loses one of the most active and promising of its neurologists. He was the neurologist of the Philadelphia and Howard hospitals and professor of nervous and mental diseases in the Medicochirurgical College. Dr. Pearce was a frequent contributor to the literature of his specialty, and several of his contributions have appeared in our columns. He was secretary of the section in nervous and mental diseases of the American Medical Association, and his untimely decease will be greatly felt at the coming meeting.

THOMAS MURRAY DRYSDALE, M. D.,

OF PHILADELPHIA.

A long and honorable career has been terminated in the death of Dr. Drysdale. He was at one time the president of the Philadelphia Obstetrical Society, and he was one of the original members of the American Gynæcological Society. He had been the consulting gynæcologist to the Medicochirurgical Hospital.

News Items.

Society Meetings for the Coming Week:

MONDAY, *June 6th.*—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; Corning, N. Y., Academy of Medicine; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, *June 7th.*—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, *June 8th.*—New York Pathological Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Philadelphia County Medical Society; Lenox Medical and Surgical Society (private); Medical Society of the Borough of the Bronx, New York.

THURSDAY, *June 9th.*—New York Academy of Medicine (Section in Pædiatrics); New York Academy of Medicine (Section in Otology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, *June 10th.*—Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, *June 11th.*—Obstetrical Society of Boston (private).

Change of Address.—Dr. John Guttman, to 54 St. Marks Place, New York.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending May 28, 1904:

	Week end'g May 28.		Week end'g May 21.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	1,107	32	1,482	39
Diphtheria and croup	396	49	400	49
Scarlet fever	312	22	392	26
Smallpox	1	..	..	..
Chickenpox	68	..	88	..
Tuberculosis	403	158	475	187
Typhoid fever	22	14	45	8
Cerebrospinal meningitis	..	80	..	82
Totals	2,309	355	2,882	391

A Reception in Honor of Professor Hoffa.—On Tuesday evening Dr. Reginald H. Sayre gave a reception in honor of Professor Albert Hoffa, of Berlin.

Professor Dr. A. Hoffa operated yesterday in the orthopædic department of the Postgraduate Hospital before a distinguished audience of invited guests.

St. Mary's Hospital, Brooklyn.—Mr. Hugh McLaughlin has given a valuable collection of over one million postage stamps to the fair being held for the benefit of this institution, as well as a collection of shells and alligators' teeth fancifully made up into jewelry, penholders, etc.

Thief Working in Harlem.—It is reported that two Harlem physicians have lost valuables to the amount of $4,300 by the work of a well dressed thief, who called during their absence and stated that he would await their return. This is a well worn dodge. and the servants of doctors should be warned against it.

The Eastern Medical Society of the City of New York held a stated meeting on May 13th, at which the following was the programme: Presentation of Specimens. Patients, and Reports of Cases. (a) Uterine Fibroid, Pyosalpynx (two cases), Dermoid Cyst, by E. K. Browd, M. D.; (b) A Series of Cases of Bone and Joint Surgery, by John A. Bodine, M. D.; (c) Tracheotomy with Unusual Features, Resection of Sciatic Nerve for Recurrent Tumor, Skin Grafting, by A. E. Isaacs, M. D. Paper: The Clinical Features, Diagnosis, Prognosis, and Treatment of Epidemic Cerebrospinal Meningitis. by Henry Koplik, M. D. Discussion by Dr. William P. Northrup, Dr. Henry Dwight Chapin, Dr. Charles G. Kerley, Dr. Louis Fischer, Dr. George W. Jacoby, and Dr. Morris Manges.

Kings County Medical Association Changes Name.—About forty members of the Kings County Medical Association met May 25th at the Imperial to organize a society whose aim is to perpetuate the pleasant social and professional intercourse which characterized the old organization. Dr. Squibb, the temporary chairman, stated the reasons for calling the meeting, and those present voted unanimously to continue the meetings in the fall under the name of the Brooklyn Medical Association. The following officers were chosen to serve for the ensuing year: President, Dr. E. H. Squibb; vice-president, Dr. Adolph Wieber; recording secretary, Dr. F. C. Raynor; corresponding secretary, Dr. G. F. Maddock; treasurer, Dr. H. Arrowsmith; executive committee, Dr. J. C. Hancock, Dr. M. G. White, Dr. G. H. Ostrander, Dr. L. Grant Baldwin.

Tuberculosis as a Disease of the Masses and How to Combat It, the international prize essay of which Dr. S. A. Knopf, of New York, is the author, has now the distinction of having been translated into Japanese. The translation was made by Dr. Goro-Shibayama upon the recommendation of Professor S. Kitasato, Director of the Imperial Institute for Infectious Disease at Tokio, who honored it with a preface. This makes the eighteenth edition which has appeared since the Berlin tuberculosis congress of 1899 conferred the prize on Dr. Knopf. The essay, originally written in German, was translated into English by the author. This latter edition is known as the American edition to distinguish it from the English edition, arranged for use in England by Dr. Barbour. The following is a complete list of the translations which have appeared to date: American, translated by the author; Brazilian, by Dr. Clemento Ferriera, of St. Paul, Brazil; Bulgarian, by Professor A. Bezenseck, of Philippopel; Dutch, by Dr. J. W. F. Donath, of Amsterdam; English, arranged for use in England by Dr. J. M. Barbour, of London; French, translated by Dr. G. Sersiron, of Paris; Hebrew, by Dr. L. W. Zwisohn, of New York; Hungarian, by Dr. William Roth-Schulz, of Budapest; Icelandic, by Dr. G. Bjornsson, of Reikjavik; Italian, by Professor Roberto, of Massalongo, Verona; another Italian, by Dr. Giovanni Galli, of Rome; Japanese, by Dr. Goro-Shibayama, of Tokio; Mexican, by Dr. D. Vergara Lope, of Mexico; Polish, by Dr. Stanislaus Lagoysky, of Warsaw; Russian, by Dr. Ph. Blumenthal, of Moscow; Servian, by Dr. Vojislav V. Mihailovic, of Gratz; Spanish, by Dr. Ernesto Sanchez y Rosal, of Berlin. A third edition in English for use in Canada is in course of preparation. A Roumanian and a Portuguese edition are also expected to appear soon.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g May 28.		Week end'g May 21.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	11	2	11	5
Diphtheria	68	9	51	13
Scarlet fever	87	11	65	3
Typhoid fever	120	22	182	30
Consumption	..	62	..	62
Cerebrospinal fever	..	..	..	1

A Luncheon by Dr. John B. Roberts.—On Friday Dr. Roberts gave a luncheon in honor of the fellows of the American Academy of Medicine and the visting members of the American Medical Association.

Professor A. Maitland Ramsay, M. D., of Glasgow, Scotland, the official guest of the American Medical Association, which meets at Atlantic City in June, will be the guest of Dr. Charles A. Oliver, of Philadelphia, while in that city.

Obituary.—The past few weeks have been significant in the death of several distinguished Philadelphia physicians. Dr. F. Savary Pearce, the eminent neurologist, died at the home of his father in Steubenville, Ohio, on May 27th. Dr. Thomas Murray Drysdale, an eminent Philadelphia physician, also died last week.

Wills Hospital Clinics.—The surgical staff of Wills Hospital, Race Street, between Eighteenth and Nineteenth Streets, Philadelphia, invites the delegates and members of the American Medical Association to attend a series of special clinics to be held at the hospital on Monday and Tuesday afternoons at two o'clock (June 13th and 14th) immediately following the meeting of the association in Atlantic City. On Monday afternoon, the 13th instant, through the courtesy of the Board of City Trusts of Philadelphia, the privileges of the hospital have been granted to Professor A. Maitland Ramsay, M. D., of Glasgow, Scotland, who, under the guidance of Dr. Charles A. Oliver, will demonstrate and operate upon interesting cases occurring in the clinics of Dr. W. W. McClure, Dr. Oliver, Dr. Samuel D. Risley, Dr. S. Lewis Ziegler, and Dr. McCluney Radcliffe. In the evening, at 8.15 o'clock, a meeting of the Wills Hospital Ophthalmic Society will be held at the hospital, to which all ophthalmologists are invited. The subject for discussion will be Enucleation and Its Substitutes. Dr. George C. Harlan will preside. After the meeting an informal reception to Dr. Ramsay by the attending surgeons to the hospital will be held at the hospital. On Tuesday, the 14th instant, Profesor Ramsay, under the guidance of Dr. Frank Fisher, will demonstrate and operate upon the interesting cases occurring in the clinics of Dr. Fisher, Dr. Conrad, Dr. Berens, Dr. P. N. K. Schwenk, Dr. William Zentmayer, and Dr. William C. Posey. After the clinics, the assistant surgeons to the hospital will entertain Professor Ramsay by a visit to Willow Grove Park for supper, music, and electric fountain display, returning to the city by eleven o'clock. Trolley cars for the park will leave the hospital door at five o'clock. All visiting ophthalmologists are more than welcome to join in the party.

Jefferson Medical College.—At a public commencement, held at the American Academy of Music on the 27th day of May, 1904, the degree of M. D. was conferred on the following gentlemen by the president, Honorable William Potter, the exercises closing with an address by George F. Baer, LL. D., president of the Board of Trustees of Franklin and Marshall College, and president of the Philadelphia & Reading Railway:

Eben Alexander, Jr., of North Carolina; Emory Graham Alexander, of North Carolina; Lewis Bronson Amsbry, of Pennsylvania; James Howard Anderson, of Pennsylvania; Clarence Elwood Apple, of Pennsylvania; Walter P. Bader, of Pennsylvania; Raymond Barber, of Pennsylvania; Hagop G. Barsuman, of Turkey; Ivan Proctor Battle, of North Carolina; Jose Sastrano Belaval, of Puerto Rico; Leonard Bershad, of Pennsylvania; James Dana Blair, of Pennsylvania; Charles Walter Bonney, of New York; Harry Levis Botsford, of West Virginia; Miron Luke Briggs, of Pennsylvania; Myer Brody, of Pennsylvania; Joel Daniel Brown, of Pennsylvania; Charles Henry Bryant, of Massachusetts; Harry Sheldon Buckingham, of New Jersey; Howard Beirne Burwell, of Alabama; George John Callan, of Pennsylvania; M. D. Campbell, of Pennsylvania; Harris May Carey, of Delaware; Sidney Smith Carrier, of Pennsylvania; William Turner Carstarphen, of North Carolina; Ralph Robert Charlesworth, of Pennsylvania; Louis Chodoff, of Pennsylvania; James Patrick Coll, of Pennsylvania; William Glasgow Condit, of Iowa; Frank Webster Cottom, of Ohio; Harold David Cowen, of Iowa; B. Lampton Crawford, of Mississippi; George Aloysius Cunningham, of Pennsylvania; William Price Davis, Jr., of Pennsylvania; David H. Davitch, of Pennsylvania; John Henry Dean, of Texas; Homer Denman, of New York; Arthur Howard Dodge, of Rhode Island; John Patrick Donahoe, of Pennsylvania; Elliott Bard Edie, of Pennsylvania; James Clarence Elder, of Ohio; John Wesley Ferman, of Pennsylvania; Edwin Rahn Fleming, of Pennsylvania; Andrew E. Forster, of Pennsylvania; David Herman Fuller, of Massachusetts; Gaillard Botchford Fuller, of Ohio; William Pounder Gillespie, Jr., of Pennsylvania; John Randolph Gillum, of Indiana; Maurice Goldberg, of Pennsylvania; Lee McKluskie Goodman, of Pennsylvania; Stoddard Perry Gray, of New York; George Washington Grier, of New Jersey; James King Hall, of North Carolina; Elias Essad Hamati, of Syria; Howard Cyrus Harper, of Pennsylvania; Gustave Hartman, of Sweden; William Curtis Hensyl, of Pennsylvania; George Llewellyn Hoffman, of Pennsylvania; John Ferguson Hope, of Pennsylvania; Lucius Locke Hopwood, of Iowa; James Jefferson, of New Jersey; William Thomas Jones, of Mississippi; Louis Joseph, of Pennsylvania; Thomas J. Kagey, of Virginia; Alexander Spencer Kaufman, of Pennsylvania; Frank Keagy, of Pennsylvania; William Morton Kennedy, of Pennsylvania; Bryon Linzie Kesler, of Utah; Harry E. Kilgus, of Pennsylvania; Harry Howard King, of New York; Adam Raymond Klein, of Iowa; Harry Hamilton Lane, of New York; Edward Martin Larson, of Iowa; Nathan Lewis Leventhal, of Pennsylvania; Cyril Ettrick Lewis, of California; Frank Cornelius Leytze, of Iowa; John Forsyth Little, of Pennsylvania; Charles Fay Longfellow, of Illinois; Clark McEwen Luman, of Pennsylvania; Condon Carleton McCormack, of Oregon; Charles Molten McLaughlin, of Pennsylvania; McCormick Earle McLean, of Pennsylvania; Wallace Peter MacCallum, of Massachusetts; Alden B. MacDonald, of Pennsylvania; Hugh R. Magill, of Massachusetts; Frederick Aaron Meisle, of Pennsylvania; Alexis Merritt Melvin, of Pennsylvania; Graydon Duncan Mervine, of Pennsylvania; Atlee David Mitchell, of Pennsylvania; Wilson McKenevy Moore, of Pennsylvania; Edwin Daniel Stimble Mullison, of Pennsylvania; Eugene Francis Murphy, of Minnesota; Ralph Vorhees Murray, of Indiana; Connell Edward Murrin, of Pennsylvania; Charles Henry Muschlitz, of Pennsylvania; Samuel A Muta, of New Jersey; William Gordon Niles, of California; Harry Ross North, of New Jersey; Emil Heinrich Oelke, of Iowa; Owen O'Neill, of Connecticut; Francis Denison Patterson, of Pennsylvania; Ross Vernet Patterson, of Illinois; Andrew James Paulson, of Minnesota; Charles Oscar Peiffer, of Pennsylvania; Harry Hartzell Penrod, of Pennsylvania; Orlando H. Petty, of Ohio; Edward Johnston Porteous, of Pennsylvania; Frederick Morris Pritchard, of Pennsylvania; Josiah Merton Pumphrey, of Ohio; Frederick Page Ransom, of Ohio; Clarence Galleher Rea, of Indiana; Charles Adam Reinemund, of Iowa; William Frederick Ridgway, of New Jersey; James Foster Riter, of Ohio; Jerome B. Rogers, of New Jersey; James Nathan Rohrbach, of Pennsylvania; John Rouse, Jr., of Pennsylvania; Emery Andrew Rust, of Iowa; Harry Abraham Schaffer, of Pennsylvania; Charles Wesley Schaubel, of Pennsylvania; George William Schlindwein, of Pennsylvania; George Frederick Schug, of Iowa; Julius Segal, of Pennsylvania; Doyle Seward, of Mississippi; William Jacob Shenberger, of Pennsylvania; Harlan M. Shirey, of Indiana; William H. Shortt, of Pennsylvania; Ralph Edwin Shrom, of Pennsylvania; Joseph Smith, of New York; Owen Smith, of North Carolina; William Francis Smith, of Illinois; Howard Lincoln Snyder, of Kansas; Paul Darling Sprankle, of Pennsylvania; Lew Walter Spriggs, of California; Eugene Arthur Stanley, of Vermont; Frank Earle E. St. Clair, of Iowa; Harry Abraham Stembler, of Pennsylvania; Eber Fortner Stevenson, of Iowa; Ellerslie Wallace Stevenson, of Pennsylvania; John Wallace Stokes, of New York; Jackson Taylor, of Pennsylvania; Walter Albert Taylor, of New Jersey; Theodore B. Templin, of Indiana; Ernset Julius Thierman, of Iowa; John Danner Thomson, of Georgia; John Albert Topper, of Pennsylvania; Clarence Clark Towle, of Massachusetts; Ernest Treat, of Pennsylvania; John Holmes Trinder, of Pennsylvania; Hunter Heiner Turner, of Pennsylvania; LeRoy C. Waggoner, of Pennsylvania; James Frederick Wagner, of Pennsylvania; Henry V. Walter, of Pennsylvania; John Edward Wellner, of Pennsylvania; Martin Daniel Westley, of North Dakota; J. Norman White, of New York; Ira Engler Whitehill, of Maryland; Horace Lewis Walters Wignall, of New Jersey; James Thomas Williams, of California; Walter Edward Williams, of Pennsylvania; Herbert Willis, of Pennsylvania; Otis Lee Wingate, of Pennsylvania; Harry Robert Woods, of Pennsylvania; Herbert Woolley, of New Jersey; Randall Zimmerman, of Pennsylvania.

The honorary degree of LL. D. was conferred by the college upon Professor Albert Hoffa, the distinguished orthopædic surgeon of Berlin.

The class of 1894 held its first reunion last week. A permanent organization was effected, and the following officers elected: President, Dr. W. H. King; vice-president, Dr. R. C. Rosenberger, and secretary-treasurer, Dr. W. A. Brinton. It was decided to hold a reunion every five years.

GENERAL

The Milk Question in Chicago.—During the week 399 samples of milk and cream were analyzed in the Chicago laboratory, and of these 6.2 per cent. were found below grade. Of these samples 13 were found to contain water. The rest of the below grade samples were low in butter fat. No preservative has been found at any time during the last two months, but with the onset of warm weather the utmost care will be taken to see that preservatives are not used. Heretofore, there has been no object in adding preservatives, as the milk would keep very well, owing to the cool weather. During the month there have been 731 applications for milk licenses given to stores, and 1,333 to wagons. This is only about one half the usual number, and the department wishes to warn milk dealers that all those who have not their licenses by June 1st will be prosecuted.

Statement of Mortality in Chicago, Ill., for the Week Ending May 28, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on United States Census Bureau's estimated midyear populations of 1,932,315 for 1904 and of 1,873,880 for 1903:

	May 28, 1904.	May 21, 1904.	May 30, 1903.
Total deaths, all causes	437	483	581
Annual death rate per 1,000	11.82	13.04	16.16
By sexes—			
Males	258	284	342
Females	179	199	239
By ages—			
Under 1 year	82	88	94
Between 1 and 5 years	34	33	59
Over 60 years	96	93	106
Important causes of death—			
Acute intestinal diseases	29	22	27
Apoplexy	14	15	11
Bright's disease	32	28	32
Bronchitis	13	15	17
Consumption	48	62	62
Cancer	21	18	29
Convulsions	8	9	15
Diphtheria	7	7	14
Heart disease	37	36	41
Influenza	..	..	3
Measles	2	1	9
Nervous diseases	24	20	38
Pneumonia	55	82	107
Scarlet fever	2	..	8
Suicide	5	10	7
Smallpox	..	..	..
Typhoid fever	4	5	7
Violence (other than suicide)	21	29	40
Whooping cough	2	1	5

Following is an extension of the table of tuberculosis and pneumonia for the two principal cities of the country between November 1, 1903, and May 28, 1904:

	New York.	Chicago.
Total deaths, all causes	46,999	16,780
Deaths from consumption	5,228	1,806
Deaths from pneumonia	9,865	3,703
Proportion per cent. of all deaths—		
From consumption	11.12	10.76
From pneumonia	20.98	22.06

New York's estimated midyear population for 1904 is 3,838,024. Chicago's is 1,932,315.

Cause of Smallpox in Chicago.—Chicago continues to be the dumping ground for the smallpox of the surrounding country. On May 25th a most repulsive looking case of the confluent type walked into the City Hall direct from a railway train, which had carried him forty miles from a town in Wisconsin. It speaks well for the vaccinal condition of the city that there is so little spread from these cases, but their too frequent occurrence should be a warning to all unvaccinated. It cannot be too often repeated that it is only the unvaccinated who contract smallpox. Of the 82 cases discovered since the first of the year the most searching examination by the experts of the Isolation Hospital has failed to find a single one who had been properly or recently vaccinated. Dr. Spalding, the chief medical inspector, insists that smallpox is an optional disease. No one need have it; no one can have it who is properly vaccinated—even after intimate contact with such a loathsome case as that from Wisconsin.

Bishop's College, Montreal, Canada, granted the degrees of M. D. and C. M. to the following on May 27th:

R. F. Barrett, of Montreal; G. N. Briggs, of Montreal; H. W. Byers, of Montebello, Que.; C. F. Crutchlow, of Montreal; T. F. Donnelly, of New Carlisle, Que.; F. J. Garraty, of Richmond, Que ; D. A. MacGregor, of Fournier, Ont.; J. J. McGovern, of Richmond, Que.; F. W. Watier, of Montreal; A. E. Wilson, of Montreal.

Minnesota Soldiers' Home.—The addition to the hospital at the Soldiers' Home at Minnehaha Falls is rapidly nearing completion. The addition is a three story building in the rear of the present building and adjoining it. The material used is pressed brick, to correspond with the rest of the building, and the estimated cost is $15,000. It is expected that the work will be entirely completed before the end of June. The addition serves to enlarge the hospital dining room and kitchen and the operating room. Provision is also made for two new wards, which will go far toward relieving the pressure for room in the hospital.

The American Association of Life Insurance Examining Surgeons; annual meeting at Atlantic City, N. J., Monday, June 6, 1904. Programme:

Items of Experience from a Medical Director's Standpoint, by Dr. E. H. Hamill, of Newark, N. J.; The Essentials of the Medical Examination, by Dr. J. W. Fisher, of Milwaukee, Wis.; The Relation of Modern Medicine and Surgery to Life Expectancy, by Dr. Allison Maxwell, of Indianapolis, Ind.; Abstract Diagnosis versus Applied Diagnosis, by Dr. Charles Woodhull Eaton, of Des Moines, Ia.; The Estimation of Arterial Tension in Insurance Examination, by Dr. Henry W. Cook, of Richmond, Va.; The Moral Hazard in Life Insurance, by Dr. J. L. Davis, of Cincinnati, Ohio; The Recognition of Eye Diseases in Relation to Life Insurance, by Dr. George F. Suker, of Chicago; The Recognition of Incipient Insanity, by Dr. Richard Dewey, of Wauwatosa, Wis.; The Significance of Indigestion, by Dr. Fenton B. Turck, of Chicago; Further Observations Regarding Theory and Facts of the Origin of Cancer and Its Bearing Upon Life Insurance, by Dr. E. Holovtchiner, of Omaha, Neb.; The "How to Live," by Dr. George F. Butler, of Alma, Mich.; The Effect of the Moderate Use of Alcohol as Affecting Longevity, by Dr. T. D. Crothers, of Hartford, Conn.; Rectal Diseases in Relation to Life Expectancy, by Dr. Joseph M. Mathews, of Louisville, Ky.; Gonorrhœa in Relation to Life Expectancy, by Dr. Ferd. C. Valentine, of New York; The Significance of a Discharge from the Ear, by Dr. Edward B. Dench, of New York. President, Dr. Charles Lyman Greene, of St. Paul; secretary, Dr. J. J. Morrissey, of New York.

The American Gastroenterological Association will hold its annual meeting, June 6 and 7, 1904, with the following programme: Monday, June 6th, 10 a. m., the President's Address, by Dr. S. J. Meltzer, of New York, followed by a symposium on Gastric Ulcer. Introduction, by Dr. J. C. Hemmeter, of Baltimore, Md.; bibliography, by Dr. Charles D. Aaron, of Detroit, Mich.; pathological anatomy, by Dr. Harlow Brooks, of New York; pathogenesis, by Dr. W. G. MacCallum, of Baltimore, Md.; Incidence of Gastric Ulcer in the United States, by Dr. Campbell Howard, of Baltimore, Md.: Gastric Ulcer in Children, by Dr. E. G. Cutler, of Boston, Mass., and Experiments in Producing Artificial Gastric Ulcer, by Dr. Fenton B. Turck, of Chicago.

At 2.30 p. m., continuation of symposium: Symptomatology and course, by Dr. Max Einhorn, of New York; atypical forms, by Dr. G. W. McCaskey, of Fort Wayne, Ind.; complications and sequelæ, by Dr. M. Manges, of New York; conditions of blood and urine, by Dr. T. Futcher, of Baltimore, Md.; differential diagnosis, by Dr. H. W. Bettman, of Cincinnati, Ohio; Further Remarks on the Use of Orthoform in the Diagnosis of Gastric Ulcer, by Dr. F. W. Murdoch, of Pittsburgh, Pa.

Tuesday, June 7th, 9.30 a. m., conclusion of symposium: Medical treatment, by Dr. S. W. Lambert, of New York; surgical treatment, by Dr. Joseph A. Blake, of New York; Classification of Gastric Ulceration and Hæmorrhage; Report of a Case of Perforating Angeiosclerotic Gastric Ulcer, by Dr. A. L. Benedict, of Buffalo. Exhibition of specimens.

Papers: Concerning Heterochylia, by Dr. J. C. Hemmeter, of Baltimore, Md.; A Case of Chronic Pancreatitis, Diagnosis, Operation, Recovery, by Dr. Julius Friedenwald, of Baltimore.

Medical Interne, Government Hospital for the Insane.—The United States Civil Service Commission announces an examination on June 29 and 30, 1904, to secure eligibles from which to make certification to fill at least two vacancies in the position of medical interne in the Government Hospital for the Insane, Washington, D. C., at $600 per annum each, and other similar vacancies as they may occur in that hospital. The examination will consist of the subjects mentioned below, weighted as indicated: Letter-writing (the subject-matter on a topic relative to the practice of medicine), 5; anatomy and physiology (general questions on anatomy and physiology, and histologic or minute anatomy), 15; chemistry, materia medica, and therapeutics (elementary questions in inorganic and organic chemistry; the physiological action and therapeutic uses and doses of drugs), 10; surgery and surgical pathology (general surgery, surgical diagnosis; the pathology of surgical diseases), 20; general pathology and practice (the symptomatology, ætiology, diagnosis, pathology, and treatment of disease), 25; bacteriology and hygiene (bacteriologic methods, especially those relating to diagnosis; the application of hygienic methods in prophylaxis and treatment), 10; obstetrics and gynæcology (the general practice of obstetrics; diseases of women, their pathology, diagnosis, symptoms, and treatment, medical and surgical), 15; total, 100. Age limit, 20 years or over. This examination is open to all citizens of the United States who comply with the requirements. Applicants must be graduates of reputable medical colleges. Applicants should at once apply either to the United States Civil Service Commission, Washington, D. C., or to the secretary of the local board of examiners at the various places where the examinations will be held, several in each State, for application Form 1312. No application will be accepted unless properly executed and filed with the commission at Washington prior to the hour of closing business on June 22, 1904. In applying for this examination the exact title as given at the head of this announcement should be used in the application.

Pith of Current Literature.

BERLINER KLINISCHE WOCHENSCHRIFT.

April 18, 1904.

1. Contribution to the Study of Hæmatology, By J. MITULESCU.
2. Case of Wandering Spleen in a Man, By E. MEYER.
3. The Constitution of Tetanolysin, By H. SACHS.
4. Ætiology of Lipomatosis and Leo's Acid Treatment of Pruritus, By F. KOEHLER.
5. Action of Some Ions Upon Cell Substances, By H. DEETJEN.
6. Physiological Aspects of Clinical Medicine, By M. M. WALKOW.

1. **Hæmatology.**—Mitulescu has attempted to establish the hæmoglobin and iron percentages of the blood in various diseases, to discover the differences existing calorometrically and chemically. The results were, with a few exceptions, practically parallel, so that it is evident that the Fleischl hæmoglobinometer answers all clinical purposes.

4. **Lipomatosis.**—Koehler reports the case of a man who developed lipomatosis simultaneously with his gain in weight at a sanatorium for tuberculosis. The lipomata disappeared again as the man lost weight. The author also reports the successful use of sulphuric acid (three parts to 200 of water), given every two hours, in two cases of extensive pruritus.

5. **Action of Ions.**—Deetjen says that the action of distilled water upon animal cells, like blood, in bringing about structural changes, is much modified by the addition of small quantities of calcium chloride or the chlorides of the other earthy alkalies. The author describes in detail these differences which are to be seen in the nucleus, as well as the body of the cell. He says that the kations of the metals are poisonous to the cells.

ZENTRALBLATT FUER CHIRURGIE.

April 9, 1904.

1. New Method of Operative Treatment of Chronic Nephritis, By J. BAKES.
2. Asepsis of Hands During Operation, By L. RYDYGIER.
3. Intravenous Infusion, By A. SCHUECKING.
4. Exclusion of Atmospheric Pressure in Operations on the Thorax, By F. SAUERBRUCH.

1. **Operative Treatment of Chronic Nephritis.**—Bakes contends that the weak point of Edebohls's operation lies in the uncertainty of the establishment of sufficient collateral circulation after decapsulation of the kidney. He suggests slitting the peritonæum parallel to the upper edge of the cæcum and ascending colon, and fastening the lower part of the wound in the peritonæum to the hilum of the kidney. The omentum is then drawn up through the peritonæum and wrapped about the entire kidney. Bakes reports one successful case—one of large, white kidney—operated on in this way.

2. **Asepsis During Operations.**—Rydygier is not enthusiastic over the use of gloves to insure asepsis of the hands, and believes in the thorough

washing of the hands after each operation and after each change of dressing. During operations, he keeps his hands clean by frequent rinsing in sterilized salt solution.

3. **Intravenous Infusion.** — Schuecking describes an apparatus which he has employed for a great many years, and which has the advantage of insuring freedom from air bubbles. He reports a resuscitation of a newborn asphyctic infant by injecting two ounces of saccharine solution into the umbilical vein.

PRESSE MEDICALE.

April 16, 1904.

Traumatic Cysts of the Hand, By Dujarier and Legène.

Cysts.—Dujarier and Legène describe two traumatic cysts of the hand, one resulting from a wound by a wooden splinter withdrawn immediately, the other from the explosion of a railway torpedo, a fragment of which was found in the cyst. These cysts were examined microscopically and the results are given in a series of diagrams. The first was a true epidermoid cyst, but the interior of the second contained no epithelium. Complete extirpation is curative.

April 20, 1904.

1. Calcium Salts and Gelatin as Clotting Agents, By Gley and Richaud.
2. Decapsulation of the Kidney, By Tuffier.

1. **Clotting Agents.**—Gley and Richaud point out that they have already stated that absolutely pure gelatin has no blood clotting effect, and that this supposed action of gelatin was really due to the presence of calcium salts that had not been removed by the process of purification. They say now that even impure gelatin will not always clot blood. They have found, besides, that small doses of calcium salts produce a temporary clotting, that larger doses do not, and that a solution of 3 parts in 20,000 is toxic in dogs by paralyzing the heart. The albumose or gelatose contained in commercial gelatin, moreover, has a clotting power, and the varying action of gelatin may be attributed to the amount of this substance contained. The authors recommend complete disuse of gelatin for its imagined clotting effect, although some experimenters maintain that it increases the quantity of fibrinogen in the blood.

2. **Renal Decapsulation.**—Tuffier has found that after decapsulation, the kidney becomes fixed to adjoining tissues by a fibrous cicatrix, much less vascular than the original capsule. His experiments on dogs in which he enveloped the operated kidney in the great omentum, tied the vein, and constricted the renal artery for a time, later ligating it completely, thus hoping to supply the kidney with blood by anastomosis with the vessels of the omentum, are detailed. Subsequent removal of the other kidney had invariably fatal results. The kidney operated on gradually diminished in size after arterial ligature, while the other became enormously hypertrophied. Tuffier's conclusions are that however beneficial the results of decapsulation may be, they are not due to compensatory peripheral neoanastomosis.

ROUSSKY VRATCH.

March 27, 1904.

1. Some Remarks on Three Cases of Cæsarean Section, By A. A. Mauratoff.
2. A Case of Syringomyelia in Its Initial Stages, By M. I. Lifshitz.
3. Life and Death (*To be continued*), By G. G. Schlagter.

1. **Cæsarean Section.** — Mauratoff reports three cases of Cæsarean section, and with these as text, makes some remarks concerning the indications and the technics of this operation. The relative indication for Cæsarean section is a narrow pelvis with a true conjugate of seven or seven and a half centimetres or less. The exact figures adopted as the limit vary with various authors from 8½ to 5 cm. The mortality of the mothers after Cæsarean section, according to Bar, is 6.32 per cent., and after symphyseotomy, according to Neugebauer, is 11.10 per cent. Of the cases reported, two were operated during the labor itself when the cervix was fairly well dilated, and the muscles of the uterus were considerably exhausted. In the third case the operation was performed at the very beginning of labor. In the first two cases the uterus, after having been relieved of its contents, contracted very sluggishly, and there was a post partum hæmorrhage. In the third case the uterus contracted strongly, and the patient recovered rapidly. This teaches that, when Cæsarean section is necessary, it should be performed at the very outset of labor, or before labor, when the uterus has not yet been exhausted by muscular fatigue. A danger of late Cæsarean section, which is not to be forgotten, is the penetration of germs into the cavity of the uterus from outside after the bag of membranes has been rupured. The author does not apply an elastic ligature to the lower segment of the uterus during the operation, as he considers this unnecessary. The ligature presses upon the underlying portions of the uterus and lessens the contracting powers of these parts. The pressure of the hand of an assistant is to be preferred, as it is more diffuse, less forcible, and can be more easily controlled. The operation is now so quickly performed that the assistant has not time to get tired. Mouratoff uses the following method of suturing the uterus after Cæsarean section. A full-curved needle is threaded upon each end of a suture; one needle is held by the operator and the other by an assistant. Each needle is then introduced in such a way that the suture takes in the muscular layer and the peritonæum, and avoids the cavity of the uterus. In this manner a series of deep sutures is introduced on either side, and over this another series of superficial sutures. Theoretically, the best material for these sutures is reindeer tendon, but it is difficult to have this material on hand properly prepared, and therefore silk is ordinarily used by the author. Mouratoff does not see any advantage in the new method of incising the uterus proposed by Fritsch, who advocates a transverse incision of the fundus in addition to the usual longitudinal incision.

BOSTON MEDICAL AND SURGICAL JOURNAL.

May 26, 1904.

1. Dr. Watson and Mr. Holmes; or the Worm That Turned, By J. W. COURTNEY.
2. Sulphurous Acid and Its Salts as Food Preservatives, as Aids to Fraud, and as Possible Causes of Lesions of the Kidneys, By CHARLES HARRINGTON.
3. Notes on Radium. Production of the Gamma Rays from the Beta Rays of Radium: Use of Radium in Some Diseases of the Eye, By FRANCIS H. WILLIAMS.
4. Vaginal Section in the Treatment of Extrauterine Pregnancy, By FRANK A. HIGGINS.

2. **Sulphurous Acid and Its Salts.**—Harrington's observations seem to show: (1) That sulphurous acid and its salts are not specially efficient as food preservatives. They inhibit to some extent the growth of bacteria, but their chief action consists in preventing the development of the characteristic odor of putrefaction. (2) That the use of these preservatives aids fraud in two ways: *(a)* By giving to the substances preserved a fictitious appearance of freshness and good quality, and *(b)* by masking the most usual signs of putrefaction. (3) That these drugs have an injurious effect on the kidneys. The author used cats in his experiments and the kidneys in all six of the animals used showed marked changes.

4. **Vaginal Section.**—Higgins reports three cases in which he performed vaginal section, and in which an ectopic gestation was found. He does not advocate vaginal section in the treatment of extrauterine pregnancy. Case 1.—Diagnosis of probable acute pelvic infection. Vaginal section. Tube and ovary ligated and removed *en masse*. Recovery from operation. Two weeks later an abdominal section had to be performed in order to relieve symptoms produced by the presence of an infected blood clot in the abdomen. Patient recovered. Case 2.—Diagnosis of a probable acute pyosalpinx was made. Vaginal section revealed the error. The ruptured sac was clamped at both ends. Sac packed. By the following evening symptoms of hæmorrhage developed. Laparotomy for the arrest of hæmorrhage. Patient rallied from this second operation but died forty-eight hours later. Case 3.—Diagnosis before operation not stated. Vaginal section opened a walled of cavity filled with clotted blood. This cavity was emptied of its contents and packed with gauze. This author concludes: "The experience gained in these three cases is of course not large, but it is quite enough even with two recoveries in three desperate cases, to convince me that the abdominal route is by far the safer and more satisfactory method when once the diagnosis is made, even though it seems scarcely possible for the patient to undergo the shock of a laparotomy. The time required is a little more by the abdomen but the results in the control of hæmorrhage are much more certain. I am not sure, however, that if one, in a mistake of diagnosis, opens by vaginal section into a ruptured extrauterine pregnancy, he should always immediately follow it up by an abdominal operation. I should say not if he feels certain that he has been able to control the hæmorrhage, or unless the patient is in unusually good condition, or later she shows evidence of continued hæmorrhage."

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

May 28, 1904.

1. Physical Signs of Pleural Effusions, By WILLSON O. BRIDGES.
2. The Prevention of Typhoid Fever, By RUFUS L. COLE.
3. The Abuse of Drugs, By JOHN V. SHOEMAKER.
4. Prostatectomy. Report of 51 Cases Operated on from May 6, 1901, to February 26, 1904 (*To be continued*), By JOHN B. MURPHY.
5. The Cultivation of Surra Trypanosome of the Philippines, By FREDERICK S. NOVY, WARD J. MCNEAL, and CHARLES B. HARE.
6. A Consideration of Speech Defects, By JAMES M. BROWN.
7. The Army Medical Service. IV. (*Continued*).

1. **Pleural Effusions.**—Bridges has seen ten cases of pleural effusion in which other practitioners had failed to make a correct diagnosis. He believes that this experience demonstrates two facts: (1) That pleural effusions may present typical and misleading physical signs, and (2) that physicians do not always examine the chest with sufficient care. The author reviews the signs of pleural effusion.

2. **The Prevention of Typhoid.**—Cole emphasizes the fact that if typhoid fever is to be stamped out, in the absence of a specific treatment, two things must be done: (1) Nearly all cases of typhoid must be recognized, and (2) nearly all the typhoid bacilli must be destroyed as they leave the patient. The author's paper is devoted to the consideration of how best to accomplish this last object.

5. **Surra Trypanosome.**—Novy, McNeal, and Hare reach the following conclusions: (1) The trypanosome present in the Philippine surra can be cultivated artificially. (2) Attenuated cultures of this organism can be obtained as in the case of *Tr. brucei*. (3) This trypanosome is differentiated by its cultural characteristics from *Tr. lewisi* and from *Tr. brucei*. (4) The Philippine surra is, therefore, a distinct disease, different from nagana, and this observation confirms the work of Laveran and Mesnil on the non-identity of nagana and the surra of Mauritius. (5) The morphological differences between the Mauritian and Philippine trypanosomes suggest the probability that these organisms are distinct species and hence that the term surra covers a group of closely allied diseases.

6. **Defects of Speech.**—Brown thinks it strange that so little attention has been given to the study of the causation of the defects of speech. If the older authorities are grouped according to the views they have held of the ætiology of speech defects they can be assigned to one of the following classes: (1) Those who believed the cause of defective speech to be the tongue, tonsils, larynx, and palate. (2) Those who held the theory of psychical causation and who generally aimed at education of the will power to overcome the defect. (3) Those who considered the essential causal feature to be a deranged nerve centre, or lack of strength in the coordinating powers. The more modern authorities on this subject seem to consider the various causes

that have been enumerated, but they pay particular attention to abnormities of the upper air passages and their correction, followed by proper respiratory and vocal exercises. Among the primary causes first observed in children are fear, timidity, a fall, or ill treatment. Imitation lies at the bottom of many conditions, as in childhood this faculty seems to be more highly developed than at any other period of life.

MEDICAL RECORD.

May 28, 1904.

1. The Postgraduate Study of Medicine, By D. B. St. John Roosa.
2. The Army Medical Service, By Edward L. Munson.
3. The Naval Medical Service, By John F. Urie.
4. The Public Health and Marine Hospital Service, By M. J. Rosenau.
5. The Insurance Examiner, By Henry H. Schroeder.
6. Salaried Positions Open to Medical Men in the Larger Cities, By Henry A. Higley.
7. The Railway Surgeon, By William W. Sanford.
8. Medical Service in the Merchant Marine, By James Francis Donnelly, and Frederick Griffith.
9. Professional By-ways Open to Medical Women, By Emma E. Walker.
10. Legal Rights and Obligations of the Medical Practitioner, By Arthur N. Taylor.
11. State Medical Practice Laws, By R. J. E. Scott.

Note.—This " Postgraduate Number " of *Medical Record* contains sixty-four pages of reading matter and is, we take it, a contribution to the literature of " commencement week." The object of the various papers is to point out to the young physician the opportunities offered him of making a living outside of regular practice. The articles are addressed especially to " the young man on the threshold of life who has failed to select his ancestors among those well favored with this world's goods."

1. **Postgraduate Study.**—Roosa discusses the history, advantages, and future of postgraduate work. The only cities in which advanced systematic instruction in medicine can at present be secured are in the United States, New York, Philadelphia, and Chicago, and in Europe, Berlin and Vienna.

2. **Army Service.**—Munson asserts that army service does not fit a man for civil practice. Therefore if the army medical service is chosen it should be as a career and not as a temporary expedient. The pay ranges from $1,600 to $5,500 per year. Officers are retired at sixty-four years of age on three-quarters of their pay.

3 and 4. **Naval and Marine Hospital Services.**—According to Urie and Rosenau these two services offer about the same advantages, disadvantages, and pay as does the army medical service.

5 and 7. **The Life Insurance Examiner, and the Railway Surgeon.**—Schroeder's and Sandford's papers seem to show that for young men intending to devote themselves to building up their own practices, no salaried positions offer greater advantages and fewer drawbacks than do the positions obtainable from life insurance and railway companies. The time required to successfully attend to one's duties varies from two to six hours a day, and the pay from $500 to $3,000 a year. The higher figure is infrequent and the work expected precludes private practice. The average salary in large cities is about $1,200 a year.

Papers 6, 8, 9, 10, and 11.—The titles of these papers sufficiently explain their scope.

MEDICAL NEWS.

May 28, 1904.

1. Some Notes on Vocal Fremitus, By William N. Berkeley.
2. Results in Diffuse Septic Peritonitis Treated by the Elevated Head and Trunk Position, By Russell S. Fowler.
3. Two Appliances to Facilitate Eye and Throat Work, By Edward B. Coburn.
4. A Study of the Tuberculosis Problem in New York City, By James Alexander Miller.
5. A Remarkable Case of Gastric Cancer: Separate Involvement of Cardia and Pylorus: Gain of 35 Pounds in Weight Within Three Months of Death, By G. W. McCaskey.
6. Postpartum Tuboovarian Abscess Causing Hydronephrosis, By A. Ernest Gallant.
7. Ethyl Chloride as a General Anæsthetic, By A. F. Erdmann.

1. **Vocal Fremitus.**—Berkeley asserts that the observation of vocal fremitus, though often of importance, is falling into disuse. Fremitus may best be elicited by pronouncing such words as good, boodle, rood, moon. It should be felt for with the palmar surface of the four fingers of the best trained hand. Symmetrical portions of the two sides of the chest should always be compared. There is normally an excess of fremitus on the right side in front. To this all authors assent. The author asserts that as a matter of fact fremitus is everywhere more intense on the right side. The author attempts to establish a ratio of intensity between the left side and right side fremitus, and between the fremitus that can be elicted over the trachea and over the two sides of the chest. The author takes exception to the statement usually made that vocal fremitus is reduced in vesicular emphysema.

2. **The Fowler Position.**—R. S. Fowler reports the results obtained in treating one hundred well marked cases of diffuse septic peritonitis resulting from inflammation of the vermiform appendix. The cases were treated by himself and by George R. Fowler. Sixty-seven of the cases recovered. Of the thirty-three deaths, seventeen occurred within twenty-four hours of operation. The salient points in the treatment of these cases were: (1) A small incision and the avoidance of eventration; (2) thorough cleansing of the primary focus of infection and removal of the appendix. (3) Evacuation and cleansing of all accessory abscess cavities and the pelvis before washing out the peritoneal cavity. (4) A rapid systematic flushing of the peritoneal cavity with sodium peroxide solution followed by hot saline. (5) The continuance of the saline flushing until the sutures are placed, and for the most part tied. (6) The provision of proper drainage for the pelvis either by means of a large glass tube containing a capillary drainage strip emerging through the lower angle of the wound or, in females, by a large calibre rubber tube filled with

wicking passed through a posterior colpotomy incision. (7) The drainage of accessory abscess cavities with gauze or wicking. (8) The elevation of the head of the bed to accelerate the drainage of septic fluid into the pelvis where it can be removed through the glass tube or, in case of vaginal drainage, find a ready exit.

4. **Tuberculosis in New York City.**—Miller states that the object of his paper is to deal with those aspects of the tuberculosis problem which are of practical interest and importance to the physician in his work among the poor tuberculous patients in private and dispensary practice in New York City. He seeks to fulfill his object (1) by a brief description of the existing institutions and agencies which have an influence upon this subject; (2) by a demonstration of the way in which physicians may utilize these institutions to meet indications arising in various classes of cases; and (3) by an indication of the extent of our responsibilities toward these patients. The paper contains a vast amount of classified information concerning the various institutions, hospitals, and societies for the care of the tuberculous poor.

5. **Gastric Cancer.**—McCaskey gives, in the title to his paper, the leading features of the case he reports. We add these few particulars: Examination of the patient's blood showed 15,000 leucocytes, 6,000,000 red cells, and 110 per cent. hæmoglobin. Examination of the gastric contents showed absence of free HCl, strong biuret reaction, and the presence of lactic acid. The patient was under the author's observation and treatment for a few weeks, and the stomach conditions improved somewhat, a little free hydrochloric acid appearing once or twice. A few weeks later the stomach symptoms suddenly left him, his appetite became morbidly voracious, and he ate with impunity enormous quantities of meat, bread, potatoes, and other solid food, and in three weeks his weight increased thirty-five pounds. There was no dropsy at that time and the phenomenal increase of weight was clearly due to tissue building. The autopsy proved the case to be one of cancer.

7. **Ethyl Chloride.**—Erdmann writes quite an elaborate article on ethyl chloride as a general anæsthetic. He reviews the various methods of administering the drug and illustrates the best known inhalers. The author is of the opinion that with the exception of nitrous oxide gas, ethyl chloride is the least dangerous of the general anæsthetics. This method of anæsthesia should be tried more freely, as it possesses many advantages and is especially suited for minor operations and general office use.

AMERICAN MEDICINE.

May 28, 1904.

1. Empyema, By DE FOREST WILLARD.
2. Experimental Pancreatitis Considered in Its Relation to the Acute Forms of Pancreatitis in Man, By RICHARD M. PEARCE.
3. Acute Anterior Poliomyelitis in Adults, with Report of a Case in Which There Was Also a Peripheral Facial Palsy and Paradoxic Pupils Complicated with Hippus, By ALFRED GORDON.
4. Neuritis as a Complication of Some Portion of the Childbearing Process, By WILLIAM R. NICHOLSON.
5. Clinical Report of a Case of Lithogenous Icterus, By BYRON ROBINSON.
6. Posterior Gastroenterostomy, with Enteroenterostomy: A Study of Conditions Found at Autopsy, By W. L. WALLACE.
7. Observations on the Duty of the Physician to His Patient Through the Surgeon, By HENRY SEWALL.
8. The Santa Cruz Mountains of Jamaica, West Indies, for the Tuberculous, By MR. LOGAN RUSSELL, and LESLIE ALEXANDER.

1. **Empyema.**—Willard calls attention to the thoracic deformities that will almost inevitably occur if cases of empyema are allowed to go unrecognized for any length of time. He reports and illustrates one such case of deformity. He concludes as follows: (1) Early diagnosis of pleurisy and early operation are the prime elements in the avoidance of empyema. The general practitioner is the one who needs to be on the alert. (2) A test for fluid should be made with the aspirating needle, not a hypodermic, as the latter is too small and short. Liquid, if present, should be immediately withdrawn; if purulent, further operation within a day or two is advisable as soon as the lung expands and the heart moves toward its normal position. Aspiration should be limited to diagnostic purposes, to the withdrawal of serum, and as a preliminary operation in empyema. (3) In all cases of pyothorax, free drainage, not aspiration, should be the rule. The larger the openings the quicker will cure be effected. Resection of ribs is imperative for exploration by the finger and for removal of fibrinous masses. (4) Washings are contraindicated, except in fœtor, and even then more perfect drainage is indicated rather than irrigation. (5) In old chronic cases with contracted lung and degenerated pleura, more or less excision of the chest wall and pleura should be performed, even to the excision of the entire extent of all the ribs. (6) Even in tuberculous empyema, benefit is derived from thorough drainage.

3. **Acute Anterior Poliomyelitis.**—Gordon asserts that while there are a fair number of cases recorded of acute anterior poliomyelitis in adults yet most of these cases are not above the suspicion of being something else. Certain it is that lately the acute spinal diseases of adults, corresponding to the typical infantile palsies, have been reported more and more rarely. The case reported presents clinically an affection which points to an invasion of the cells of a segment of the spinal cord and of those of a nucleus of the medulla, or perhaps to an involvement of two whole motor neurones; one in the cord and the other in the medulla. If it is not an example of a pure poliomyelitis, it nevertheless is undoubtedly not a case of polyneuritis.

4. **Neuritis.**—Nicholson reports two cases of neuritis which followed parturition. The ætiology of neuritis during the child bearing period has been a matter of some discussion and there have been many classifications proposed based on the exciting cause. The author proposes the following grouping: 1. Cases supposedly due to some toxæmia. 2. Cases arising from a septic process. 3. Cases resulting from some mechanical agent operative dur-

ing labor or in the early puerperium. This last group probably contains the largest number of cases.

LANCET.

May 14, 1904.

1. Some Disorders of the Blood and Bloodforming Organs in Early Life (Goulstonian Lectures: II), By R. Hutchison.
2. Acute Infective Gangrenous Processes (Necroses) of the Alimentary Tract (Erasmus Wilson Lectures: I), By E. M. Corner.
3. A Comparison of the Animal Reactions of the Trypanosomes of Uganda and Congo Free State Sleeping Sickness with Those of *Trypanosoma Gambiense* (Dutton). A Preliminary Report, By H. W. Thomas. and S. F. Linton.
4. A Chinese Remedy for Hydrophobia, By V. G. Thorpe.
5. Aliens, Dirt, and Disease, By N. B. Harman.
6. The Relation of the Pancreas to Diabetes and the Question of the Transplantation of that Gland as a Remedy for the Disease, By J. W. Allan.
7. A Case of Dermoid Cyst of the Mesentery, By J. B. Hall.
8. Neuroretinitis in Chlorosis, By J. J. Evans.
9. Fasting in Therapeutics, By J. Haddon.

1. **Blood Disorders in Children.**—Hutchison, in his second Goulstonian lecture, considers splenic anæmia and leucæmia of infancy. He inclines to the view that splenic anæmia of infancy is a definite morbid entity: not a simple secondary anæmia, an aleucæmic stage of true leucæmia, or a condition half way between leucæmia and pernicious anæmia. He also holds that the condition is entirely distinct from the symptom complex known as splenic anæmia of adults (Banti's disease). Myelogenous leucæmia is rare in childhood while the lymphatic form of the disease is correspondingly frequent Clinically the cases conform to the acute form of the disease and may be classified as follows: 1. Those which exhibit profound anæmia with general glandular enlargement with a hæmorrhagic tendency in the later stages. 2. Those in which the hæmorrhagic tendency is exhibited from the outset, petechiæ appearing early, and the case resembling one of infective purpura. 3. Pseudoscorbutic cases in which mouth lesions are the most striking feature. The frequency of lymphatic leucæmia in childhood is possibly correlated with the great extent and activity of the adenoid tissue at that age.

2. **Acute Intestinal Gangrene.** — Corner, in the first Erasmus Wilson lecture, defines his subject as death or necrosis of the tissues of the gut dependent in the acute cases mainly on the action of septic organisms, and in subacute or chronic ones mainly upon the interference with the blood supply. A study of the question of obstruction of the mesenteric vessels leads to the following conclusions: *Clinical.*—1. It is most common in men past middle life. 2. It is most common secondary to valvular disease of the heart, especially mitral disease. 3. The onset is generally sudden with symptoms of peritonitis. 4. In one class the picture is one of intestinal obstruction or peritonitis due to appendicitis or the perforation of a gastric ulcer. 5. There is also another class in which blood is passed per rectum and which signifies infarction of the bowel. 6. Subacute and chronic cases are seen as well as the most acute. 7. In some cases it is most probably spontaneously recoverable from, especially if only a small area of the bowel is rendered bloodless. *Pathological.*—1. A constant situation of the embolus in the superior mesenteric artery may give rise to all varieties of clinical phenomena. 2. With a precisely similar lesion some subjects die in thirty hours and some not for from twelve to twenty days. 3. Gangrene of the gut has been noticed to occur within thirty hours and sometimes not after twenty-two days. 4. A collateral circulation can be formed in slowly developing cases of visceral vascular obstruction. And even in more acute instances there is an attempt at the formation of such a collateral circulation. 5. The superior mesenteric artery is almost invariably the site of the embolus in fatal cases, possibly because it will always cause symptoms and nearly always death, which need not occur with involvement of the inferior mesenteric and its branches, or those of the cœliac axis. 6. The explanation of the individual variations, clinical and pathological, seems to depend upon the pathogenicity of the bacteria present in the gut as to the severity, rapidity, and other characteristics of the cases. On the bacteriology of this affection there is no work done.

3. **Trypanosomiasis.**—Thomas and Linton, as stated in the title of their article, have compared the animal reactions of the trypanosomes from cases of sleeping sickness occurring in Uganda and the Congo Free State with those of *trypanosoma gambiense* (Dutton). They sum up their results as follows: 1. The trypanosomes found in *(a)* cerebrospinal fluid of Uganda sleeping sickness cases, *(b)* cerebrospinal fluid of Congo Free State sleeping sickness cases, *(c)* blood of Uganda trypanosome fever cases, and *(d)* blood of Congo Free State trypanosome fever cases, are all identical in animal reactions and morphology with *trypanosoma gambiense.* The specific name *gambiense* (Dutton) must therefore for the future include the trypanosomes from the mentioned sources. 2. There seems to be no acquired immunity against infection. 3. There is no transmission of immunity to offspring. 4. An animal which seems to have recovered may months later show parasites once more apparently as the result of lowered vitality.

4. **Hydrophobia.**—Thorpe states that the powdered seeds of a species of strychnos, probably strychnos nux vomica, have for several hundred years been used in China as a remedy for hydrophobia—probably on the principle of *simila similibus curantur.* The dose, expressed in terms of the alkaloid, would be from $^{1}/_{13}$ to $^{1}/_{33}$ grain.

6. **Pancreas Transplantation in Diabetes.**—Allan states that physiological experiments, pathological experience, and the results of implanting thyreoid in myxœdema all point to transplantation of pancreas in diabetes as a reasonable and justifiable proceeding. In a severe and progressive case of diabetes, refusing to respond to dietetic or drug treatment, he would advise transplantation of the pancreas on the following conditions: (1) That after full and honest explanation the patient re-

quests that the operation be done; (2) that the patient shall not be suffering from acetonuria at the time; and (3) that a sheep shall be killed close to, or in the place of operation and its pancreas directly conveyed to the body of the patient.

BRITISH MEDICAL JOURNAL.

May 14, 1904.

1. Remarks on the Infective Nature of Rheumatic Fever, Illustrated by the Study of a Fatal Case, By F. J. POYNTON.
2. Abdominal Pain in Acute Rheumatism, By S. V. PEARSON.
3. On the Bacteriology of So-called "Sterilized Milk," with Special Reference to the Municipal Supply of Milk for the Feeding of Infants, By W. ROBERTSON, and W. MAIR.
4. "Gouttes de Lait et Consultations de Nourissons," By G. VARIOT.
5. The Occurrence of Primary Tuberculous Infection of the Intestinal Tract in Children: the Results of 5,142 Consecutive Necropsies, By W. HUNTER.
6. Intubation in Laryngeal Diphtheria, By J. BIERNACKI, and J. C. MUIR.
7. A Suggestion for the Treatment of Puerperal Convulsions by Spinal Subarachnoid Puncture. With Notes of a Case so Treated, By T. A. HELME.

1. **Infectivity of Rheumatism.**—Poynton reports a fatal case of rheumatic fever occurring in a girl aged nine years, which he thinks goes to support the view that rheumatic fever is an infective disease. The illness was an example of that form of endocarditis which may be called the malignant rheumatic form. In simple endocarditis the microorganisms either cease to be active or are destroyed; in fibroid endocarditis the infection is persistent, but the resistance of the tissues is great; in the malignant type the tissue resistance is feeble, and the microorganisms grow in countless numbers in the valve. Pure cultures of the diplococcus of rheumatism were obtained from the heart valve, the spleen and the kidney. Cultures from the lung were not pure, but the diplococcus was present. The infective view of rheumatic fever makes prominent the following facts: 1. That the earliest symptoms of the disease (vague pains in childhood, etc.), are of the greatest importance, as leading to an early diagnosis. 2. That there exist true rheumatic bronchopneumonia, pleurisy, peritonitis, and renal rheumatism. Amygdalitis is closely associated with rheumatism, the microorganisms finding entrance through the damaged tonsils. 3. That experimental heart disease can be produced with great constancy. 4. That simple and malignant endocarditis are stages in the same process. 5. That ante mortem thrombosis may occur in the heart without severe valvular lesion. 6. That the rapidity of the formation of vegetations can be accurately determined. 7. That infarcts may form without visible valve disease or thrombosis (*e. g.*, in chorea). 8. That the myocardial changes so long recognized can be artificially produced.

2. **Abdominal Pain in Rheumatism.**—Pearson calls attention to the frequency of abdominal pain as a symptom of acute rheumatism in childhood. It is usually situated in the upper half of the abdomen, starting from the costal margin close to the middle line, and runs either to the umbilicus or straight across the epigastrium. It is not a superficial pain, yet does not go through to the back, and is always described as sharp. It is of short duration, but recurs, each paroxysm lasting several minutes. It is most frequently brought on by exertion or excitement. There is no nausea or vomiting or other signs of gastric or intestinal disturbance. There is no soreness or tenderness of the abdominal walls. The symptom is more common in girls than in boys, and any of the better recognized symptoms of acute rheumatism may accompany these paroxysms. The pains are supposed by Still to be due to a catarrhal condition of the gastric mucosa, but with this the author does not agree. The treatment is that of acute rheumatism. Five illustrative cases are cited.

3. **Sterilized Milk.**—Robertson and Mair give the results of their study of the bacteriology of sterilized milk as supplied by the infant milk depot of Leith. They found bacteria in all but fifteen per cent. of the specimens examined, and reached the following conclusions: 1. The designation "sterilized" as applied to milk sold from municipal depots is wrong and misleading. 2. Every one should be instructed as to the necessity for keeping the milk as cool as possible. 3. Faith in the powers of steam sterilizers should not be too implicit. Each day's supply should be sold on the day on which it is prepared. 4. All bottles, after being taken from the sterilizer, should be placed in warm water and gradually cooled.

5. **Intestinal Tuberculosis.**—Hunter's investigations show that out of 5,142 necropsies held at Hong Kong during 1902 and 1903, evidence of intestinal tuberculosis was found in only thirteen cases. In eight the condition was regarded as secondary, in five there being pulmonary tuberculosis, and in three acute generalized tuberculosis. All the five cases regarded as primary occurred in children under five years of age, the process having apparently commenced in the follicles of the small intestine. His conclusions are as follows: 1. That primary tuberculosis of the intestine is rare in children under five years of age. 2. That tuberculosis of the mesenteric glands is also rare. 3. That the results obtained amongst a native population where tuberculosis in all its forms is rife, and the conditions of life extremely favorable for the dissemination of the disease, point to the alimentary canal as a rare avenue through which tuberculosis is conveyed in childhood.

6. **Intubation.**—Biernacki and Muir report a series of seventy cases of diphtheria in which intubation was performed. They conclude that in private practice tracheotomy is a perferable operation, as the nurse can attend to any difficulties which may arise. Intubation is the easier operation to perform, but in rare cases œdema may render its performance impossible. The tube should be removed on the fourth day at the latest, and left out if possible.

7. **Eclampsia.**—Helme reports a case of eclampsia occurring in a woman aged twenty-nine years, in which lumbar puncture was performed and a drachm and a half of spinal fluid withdrawn. No further convulsions occurred, and the patient recovered completely.

THE AMERICAN MEDICAL ASSOCIATION.

Fifty-fifth Annual Session, to be held at Atlantic City on June 7, 8, 9, and 10, 1904.

A feature of practical interest at the annual meetings of the American Medical Association, and one that commonly attracts considerable attention, is the exhibition of commercial products used by physicians. This year this exhibition is expected to be of more than ordinary value. The location of the exhibition, at the entrance of Young's pier, is probably the best that could have been selected; and owing to the fact that the long corridor is the direct route for the general public passing to and from the outer end of the pier, the display will undoubtedly obtain great publicity. An important rule from the association's regulations for exhibitors reads as follows: "All exhibitors of medical preparations under proprietary names must furnish the Committee on Exhibits a complete formula of the same before any assignment of space will be made."

We present herewith a plan of the exhibition hall, the booths being numbered on the plan, and an index of those exhibitors from whom we have received particulars, with the numbers of their booths and a brief statement of their principal exhibits, which we hope will be of interest to our readers.

W. D. Allison Company, Physicians' Equipment, Indianapolis. Booths 44 and 45.—This firm will display a line of office furniture for both the specialist and the general practitioner. Among the articles never before shown will be a new rhinological chair and cabinet and an improved automatic operating table.

American Ferment Company, Jersey City, N. J. Booth 61.—Preparations of vegetable ferments, such as caroids and bana diastase, the latter said to be a diastatic preparation obtained from the banana plant in powder, tablets, and liquid; also pill triturates prepared by the Mead process, by means of which pure powdered drugs are incased in the thinnest of gelatin covering. It is asserted by the Ferment Company that pills so made are more friable and more soluble than other pills. Demonstrations of this fact will be given.

American Peroxide & Chemical Company, New York. Booth 54.—This company will exhibit their peroxide of hydrogen for which they claim the following advantages: It complies strictly with all the requirements of the U. S. *Pharmacopœia*, is absolutely non-explosive, permanent, and potent, as a result of special method of manufacture; and being less acid than most other preparations, is also non-irritating. Zinc stearate, in many combinations suited to the treatment of cutaneous diseases, will also be shown.

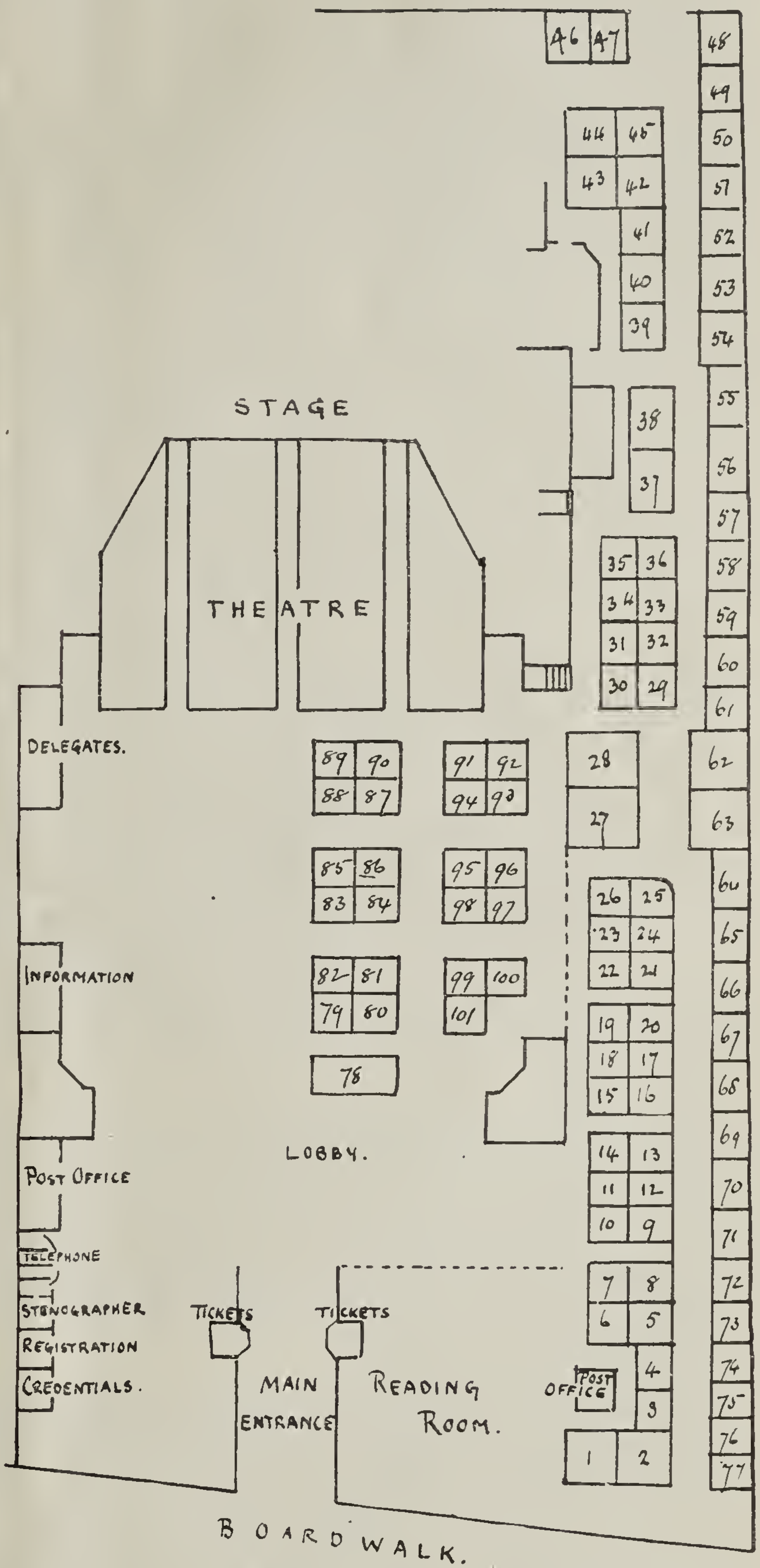
Armour & Co., Chicago. Booths 80 and 81.—Special attention will be called to the products of the Armour Laboratory, such as pepsin, pancreatin, and their compounds, extract of red bone marrow, nutrient wine of beef peptone, thyreoids, suprarenals, suprarenalin, and the suprarenalin solution, which last is asserted by the firm to be a clear, stable, uniform, non-irritating, and powerful liquid preparation of the astringent, hæmostatic, and pressor principles of the adrenal substance. Their soluble beef will also be exhibited.

Ballardvale Lithia Spring Water Company, Lawrence, Mass. Booth 32.—Ballardvale water is said to be a natural spring water, containing nothing but lithia salts in solution. It dissolves uric acid in the system and effects its elimination from the body. It will be served free in illustration of its qualities.

Bernstein Manufacturing Company, Philadelphia, Pa., Metallic Bedstead and Aseptic Hospital Furniture. Booths 74 and 75.—This exhibit comprises sterilizing apparatus, operating tables, instrument and dressing tables, dressing carriages, hospital bedsteads and general hospital supplies.

James G. Biddle, X Ray Instruments, Philadelphia. Booths 87 and 90.—This exhibition will include several up to date induction coils, with accessory apparatus for x ray work. Mr. Biddle is general sales agent for the Röntgen Manufacturing Company. An important device on exhibition will be an x ray tube meter, which indicates exactly how much energy is being delivered to a tube.

Bioplasm Company, New York. Booth 72.—This company for the first time exhibits the several forms of a unique glandular preparation, under the name of "bioplasm." It should not be confounded with the usual glandular extracts or other organic preparations, as in its manufacture the several digestive, as well as ductless, glands unite and are excited to action, and the result claimed by the manufacturers is that a new ferment is created which acts in the blood stream like an internal secretion, and



Plan of the Commercial Exhibition on Young's Pier. The numbers correspond to the numbers of the booths occupied by the various exhibitors. (See alphabetical list.)

stimulates metabolism. It is asserted to have the property of rapidly increasing the antitoxic elements of the blood.

P. Blakiston's Son & Co., Medical and Scientific Publishers, Philadelphia. Booth 16.—An exhibit of standard medical, dental, pharmaceutical, and allied scientific books. A special effort will be made to emphasize the progress made in recent years in the printing and binding of standard medical works. Attention is called to Montgomery's *Gynæcology*, Edgar's *Obstetrics*, Tyson's *Practice of Medicine*, etc.; also to the preference for morocco binding, as being more serviceable than other forms.

Bovinine Company, New York. Booth 70.—Bovinine is a condensed beef juice, prepared by a cold process.

John Carle & Sons, Wholesale Druggists, New York. Booth 73.—The principal exhibit will be imperial granum food for infants and invalids, of which samples will be distributed. Also a new preparation, formical lubricant, sterile, a water soluble lubricant which is asserted to be neutral, fat free, antiseptic, and non-irritant. Copies of the *Nursing World* and *Clinical Record* will be distributed.

Churchill Chemical Company, New York. Booth 86.—This firm will exhibit pinagestine elixir (*Ananassa sativa*, Churchill). The only product of pineapple juice in the market prepared for the exclusive prescribing physician. The pineapple fruit and its digestive enzyme, the bromelin ferment, are by consent of scientific authorities worthy of physicians' attention. The pinagestine elixir is said to contain no saccharine material, or fibrous or other extraneous substance. According to the *Lancet* the digestive property of the pineapple enzyme is so powerful in its action upon the proteids that it will digest as much as one thousand times its weight within a few hours. This firm will also exhibit Churchill's viburnum compound, the formula of which includes viburnum prunifolium, gelsemium, cimicifuga, hyoscyamus, symplocarpus fœtidus, all powerful specifics in the neurotic and functional affections peculiar to women. The nauseating properties of its constituents are said to be completely disguised by the menstruum.

F. A. Davis Company, Medical Publishers, Philadelphia. Booth 64.—The special feature of this exhibition will be Sajous's *Cyclopædia of Pracical Medicine*, a new and revised edition in six large volumes; the first volume of Sajous's *Internal Secretions and Principles in Medicine;* Dr. James Moores Ball's *Modern Ophthalmology*, considered the most sumptuous work on the subject yet published; Dr. Herman Lenhartz's *Manual of Clinical Microscopy and Chemistry*, translated from the latest German edition by Dr. Henry T. Brooks, of New York, and containing a number of beautiful colored plates; Dr. Isaac Ott's new *Text Book of Physiology*, and many other works by the best writers.

Deimel Linen-Mesh Company, New York. Booth 51.—Hygienic underwear, comprising various styles and weights of the Dr. Deimel underwear for men, women, and children.

Denver Chemical Manufacturing Company, New York. Booth 62.—Antiphlogistine, a soothing antiseptic for sensitive and abraded surfaces, causing resorption of the exudates from swollen tissues and restoring the stagnated circulation therein. A scientific substitute for the old-fashioned and insanitary poultices.

De Zeng Optical Company, Philadelphia. Booth 53.—This firm will exhibit a complete display of instruments. Special prominence will be given to the De Zeng luminous ophthalmoscope and retinoscope, and demonstrations on living eyes will be given daily to all interested.

Electro Surgical Instrument Company, Rochester, N. Y. Booths 55 and 56.—A full line of electrically lighted surgical instruments, including among others, the Bransford Lewis ureter cystoscope, the Elsner ureter cystoscope, Einhorn's gastrodiaphane and œsophagoscope, the Koch urethroscope, the Swinburne posterior urethroscope, the Tuttle air dilating proctoscope and sigmoidoscope, the Beach rectal tube, and the Cook rectal specula. Also a fine display of x ray and other electrotherapeutic apparatus.

Fairchild Bros. & Foster, Digestive Ferments, and their Products, New York. Booth 6.—Exhibition of the "Fairchild" products, including panopepton, essence of pepsine, peptonizing tubes, peptogenic milk powder, enzymol, lecithin, etc.

The Fitchmul Company, Concord, N. H. Booth 94.—This firm will exhibit fitchmul, an emulsion of various balsams, Fitch's black haw compound, and pan zin oid (a digestive preparation).

E. Fougera & Co., Importing Pharmacists, New York. Booth 91.—This firm will exhibit colchi-sal (colchicine-methyl-salicylate comp.), well established as a gout remedy, and betul-ol (methyl-oleo-salicylate comp.), for cutaneous exhibition in myalgias; "kugloids" of glycerophosphate of quinine, dissolved in benzoates of eucalyptol and creosote; Huxley's syrups and tablets of the compound glycerophosphates, which they assert to be permanent and the most concentrated preparations on the market; and last, the new antiseptic salt "hux-sal," which is a soluble salt, partly chemical and partly a mechanical mixture of antiseptic materials (eugenol, piperonal, thymol, menthol, eucalyptol, terpineol, etc.), which, in 2 per cent. solution, is equal as a germicide to $^{1}/_{1000}$ mercury bichloride. It is non-toxic, antiseptic, and disinfectant, and gives off ozone gradually in solution, but in its dry state as a salt this does not occur. It is said to be one of the most pleasant and cleansing of all preparations of its class, and to have great advantages over solutions, in that the country physician can make antiseptic solutions of any strength for surgical purposes, gargles, lotions, etc., on the spot. It is very cheap, and a gallon of the strongest antiseptic solution can be made for a few cents.

Fritzsche Brothers, Distillers of Essential Oils and Manufacturing Chemists, New York, American branch of Schimmel & Co., Miltitz, near Leipsic, Germany. Booth 22.—This firm will exhibit pollantin, an antitoxine serum against hay fever and rose fever, discovered by Professor Dunbar. The exhibit consists of a group of eight photographic pictures representing plants the pollen of which contains the toxine inducing hay fever, etc., with specimens of the toxine and the antitoxine serum in both powdered and liquid form.

Gleason Grape Juice Company, Fredonia, N. Y. Booth 83.—This firm will exhibit their unfermented fruit juices, Gleason's grape juice, and Gleason's apple juice.

Heatley Commode Bed Company, New York. Booth 52.—The Heatley commode bed was described in the *New York Medical Journal and Philadelphia Medical Journal* (Consolidated), in its issue for May 7th, page 909. It consists of a bed, in which portions of the bed and of the mattress are perforated, so that by an ingenious mechanical device a bedpan can be placed under bedridden patients and removed as required, without even so much disturbance of the patient as is involved in the raising of the pelvis, and without any exposure of the patient at all. The pan can be left in position indefinitely, or removed after each use. When the pan is not in use, a bed cushion of the same make as the mattress replaces it, so as to restore the continuity of the bed. This bed has already been introduced into several of the large London and provincial hospitals in England. Being to all intents and purposes like an ordinary bed, it can, moreover, with advantage form part of the furnishing of every household, as a contingency against protracted sickness or accident.

Horlick's Food Company, Racine, Wis. Booth —. —Various malted and other preparations will be exhibited: Horlick's food for infants and invalids; Horlick's diastoid; and particularly, Horlick's malted milk, to which attention is specially directed. Malted milk lunch tablets will also be shown, and malted milk ice cream will be served during the meeting.

Keasbey & Mattison Company, Manufacturing Chemists, Ambler, Pa., New York, and Chicago. Booth 26.—The special exhibits of this firm are alkalithia, an effervescent combination of uric acid solvents, and phosphate and benzoate of soda, an ideal hepatic stimulant. They will also exhibit sodium phosphate, magnesium sulphate, magnesium citrate, bromocaffeine, and cafetonique. Samples of only the first two will be distributed.

W. T. Keener & Co., Medical Publishers, Chicago. Booth 9.—The special feature of this exhibit will be a display of recent foreign medical books, English, French, and German; special attention being also given to books of their own publications.

Keystone Electric Company, Philadelphia. Booths 17 and 20.—This company will exhibit the following electrical apparatus: X ray apparatus, galvanic, faradaic, and cautery batteries, wall cabinets, table plates, Finsen lights, vibrator and massage outfits, current controllers, motor dynamos, diagnostic lamp outfits, eye and ear oscillators, eye magnets, electros, air compressors, etc.

Kress & Owen Company, Manufacturing Chemists, New York. Booth 100.—The special exhibit will be the alkaline antiseptic glyco-thymoline.

Lea Brothers & Co., Medical Publishers, Philadelphia and New York. Booths 99 and 101.—Medical books and journals, prominent among which will be von Bergmann's *System of Surgery,* edited by Dr. W. T. Bull, of New York; Hare's *System of Therapeutics,* and also the *Text Book of Therapeutics* and the work on *Diagnosis,* by the same author, and the new edition of Musser's *Diagnosis,* just published.

Charles Lentz & Sons, Surgical Instruments, Etc., Philadelphia. Booth 66.—This firm claims for its instruments the property, as the result of special processes of manufacture, of great tenacity or keenness in the cutting edge. A complete outfit of Dr. Andrew J. Downes's latest electrothermic-hæmostatic instruments and also a formaldehyde gas generator will be special exhibits.

J. B. Lippincott Company, Medical Publishers, Philadelphia. Booth 36.—This firm will exhibit a full line of their medical publications.

Londonderry Lithia Spring Water Company, Nashua, N. H. Booth 71.—Londonderry lithia spring water, effervescent, will be served free to visitors.

McKesson & Robbins, Manufacturing Chemists, New York. Booths 48 and 49. This firm will exhibit a new dentifrice called calox, the introduction of which marks an era in the history of dentifrices. Calox is an oxygenated tooth powder, which, it is asserted, when brought into contact with the fluids of the mouth, liberates oxygen in the same manner as hydrogen dioxide, thus sterilizing the mouth as well as cleaning the teeth. It unites the triple rôle of tooth powder, mouth wash, and antacid, and is the first dentifrice placed at the disposal of the profession which is available for the harmless sterilization of the mouth. McKesson & Robbins will also exhibit two new oxygen compounds, natrozone alpha and natrozone beta, pyrozone solutions, the McK. & R. nose cup for nasal lavage, and the McK. & R. toilet salt.

Malt-Diastase Company, Food Products, Brooklyn, N. Y. Booth —. Exhibition of diastatic nutrients, maltzyme (plain; maltzyme with cod liver oil; maltzyme with cascara sagrada; maltzyme with hypophosphites; maltzyme with iron, quinine, and strychnine; maltzyme with iron; and maltsenta (maltzyme with yerba santa in tablet form).

Maltine Company, Malt Food Products, New York. Booth 79.—Exhibition of maltine preparations and of the crude materials entering into their composition.

Meinecke & Co., Hospital and Sick Room Specialties, New York. Booth 8.—Special exhibit of a new aseptic operating pad, devised by Dr. Howard A. Kelly, and described in the *New York Medical Journal and Philadelphia Medical Journal,* Consolidated, for May 21st, page 1017. The new aseptic operating pad will be displayed in several styles. Other advanced specialties will also be on exhibition.

Mellin's Food Company, Boston. Booth 21.—Exhibition of the well known Mellin's food only.

Norwich Pharmacal Company, Norwich, N. Y. Booth 50.—This firm will exhibit specimens of standard pharmaceutical preparations, pills, tablets, effervescent salts, elixirs, etc. Special exhibits will be unguentine, unguentine spray, zemacol (a new animal derivitive), and sal tonique (a new effervescent tonic aperient); also an antiseptic thermometer case.

Philadelphia Casualty Company, Insurance, Philadelphia. Booth 96.—The scope and protection of this company's professional accident policy will be exhibited and explained. This company is a Pennsylvania corporation, with assets exceeding $750,000, and it issues the only policy ever written that provides absolutely full indemnity for death or disability from septicæmia or septic infection, without reference to the circumstance of the simultaneity of the wound and infection. The company will also exhibit and demonstrate the utility of its malpractice insurance policy, which has special features not to be found in any other contract or policy intended for the defense or protection of professional men against suit for alleged civil malpractice.

Rebman Company, Medical Publishers, New York and London. Booth 98.—A special exhibit of plates from Jacobi's *Dermochromes,* recently published by this firm. These illustrations of skin diseases are produced by a new four-color process, which is considered superior to anything hitherto achieved in that line. Two other important books are Freund's *Radiotherapy* and *Health and Disease in Relation to Marriage*—a symposium by the most eminent German authorities. The *Archives of the Röntgen Ray,* and also samples of every book in their catalogue will be exhibited.

Rigaud & Chapoteaut, Manufacturing Pharmacists, Paris. Booth 92.—Display their novelties, glycogen, cypridol, lecithine (dissolved in oleic acid and in capsules), as well as their well known specialties, morrhuol creosoté, strontium iodide, bromide, and lactate (purified by the Paraf-Javal process), apioline, and cerevisine. Their new product, glycogen, seems likely to be of greater service as a therapeutic aid rather than a drug. Dr. Jacques de Nittis, of Paris, found that glycogen, which heretofore had been considered simply as so much stored up carbohydrate material (easily convertible into glucose on oxidization, and thence liberating energy), had besides this an as yet ill understood bearing on disease. While, in normal health, the liver secretes large quantities of glycogen, it is diminished in disease. When glycogen is administered on an empty stomach, it appears to possess distinctly prophylactic, antitoxic, and bactericidal properties, besides controlling diabetes and albuminuria.

W. B. Saunders & Co., Medical Books Publishers, Philadelphia, New York, and London. Booth 78.—Their exhibit will be a fully representative one, comprising a collection of new and successful works. The superb illustrations for Dr. Howard Kelly's new work on the *Vermiform Appendix,* now in active preparation by them, can be examined at leisure.

Schieffelin & Co., Manufacturing Chemists, New York. Booths 68 and 69.—A general line of pharmaceutical and chemical products will be shown, special attention being called to the soluble coated pills, in which the exact coloring of the different coated masses can be seen through the coating. The following specialties will also be exhibited: Hemoquinine, an antimalarial and reconstructive; uriform, a urinary antiseptic; heromal, and heroterpine.

Smith, Kline, & French Company, Manufacturing Pharmacists, Philadelphia. Booth 27.—Exhibit of Eskay's albumenized food and Eskay's neurophosphates. Eskay's food will be served free to those desirous of testing its properties and palatability.

Arthur H. Thomas Company, Laboratory Apparatus, Philadelphia. Booth 67.—This exhibit will be devoted principally to microscopical and clinical apparatus for physicians' office use in the examination of blood, urine, sputum, etc. A few selected articles from their general line of laboratory apparatus and material will be shown, particular attention being called to samples of museum jars for pathological laboratories, incubators, sterilizers, microtomes, and projection microscope. The new Stanton blood pressure indicator will be demonstrated, as will also the new physicians' portable microscope in compact case, carrying mechanical stage, hæmoglobin apparatus, hæmocytometer, etc.

Vibrator Instrument Company, Chattanooga, Tenn. Booth 39.—This firm will exhibit several Chattanooga vibrators; also treating tables and a skeleton on which demonstrations of their method of treatment will be made.

R. V. Wagner & Co., Electromedical Instruments. Booth —.—Special attention is called to Dr. Wagner's new adjustable focus tube with a simple device for regulating the focus. They will also exhibit their regular Wagner mica plate static machine.

Henry K. Wampole & Co., Manufacturing Pharmacists, Philadelphia. Booth 1.—Pharmaceutical preparations, especially Wampole's perfected and tasteless preparation of the extract of cod liver oil, antiseptic solution "formolid," creo-terpin, as-par-o-line, antiseptic vaginal cones, apergols, al-vi-nine suppositories, and pil. nephritic.

William R. Warner & Co., Pharmaceutical Chemists, Philadelphia. Booth 85.—A full line of their pharmaceutical products, both staple and special. Among the latter will be ingluvin, tono, granular effervescent calcium carbonate, formin comp., recipes A and B, etc.

Welch Grape Juice Company, Westfield, N. Y. Booths 88 and 89.—These booths are composed of trellis work covered with artificial grapes and vines, forming an arbor from which Welch's grape juice, the pure unfermented juice of the choicest Concord grapes, will be served to all visitors. This company, which was founded by Dr. Welch, at Vineland, N. J., has done much to popularize the use of grape juice by exercising great care in the selection of the grapes used and in the various processes to which the unfermented juice is subjected so as to insure its complete sterilization and perfect keeping qualities.

DIAGRAM OF ATLANTIC CITY.

The accompanying diagram of that portion of Atlantic City of special interest to the visitors to the American Medical Association, is reproduced from our issue of May 21st.

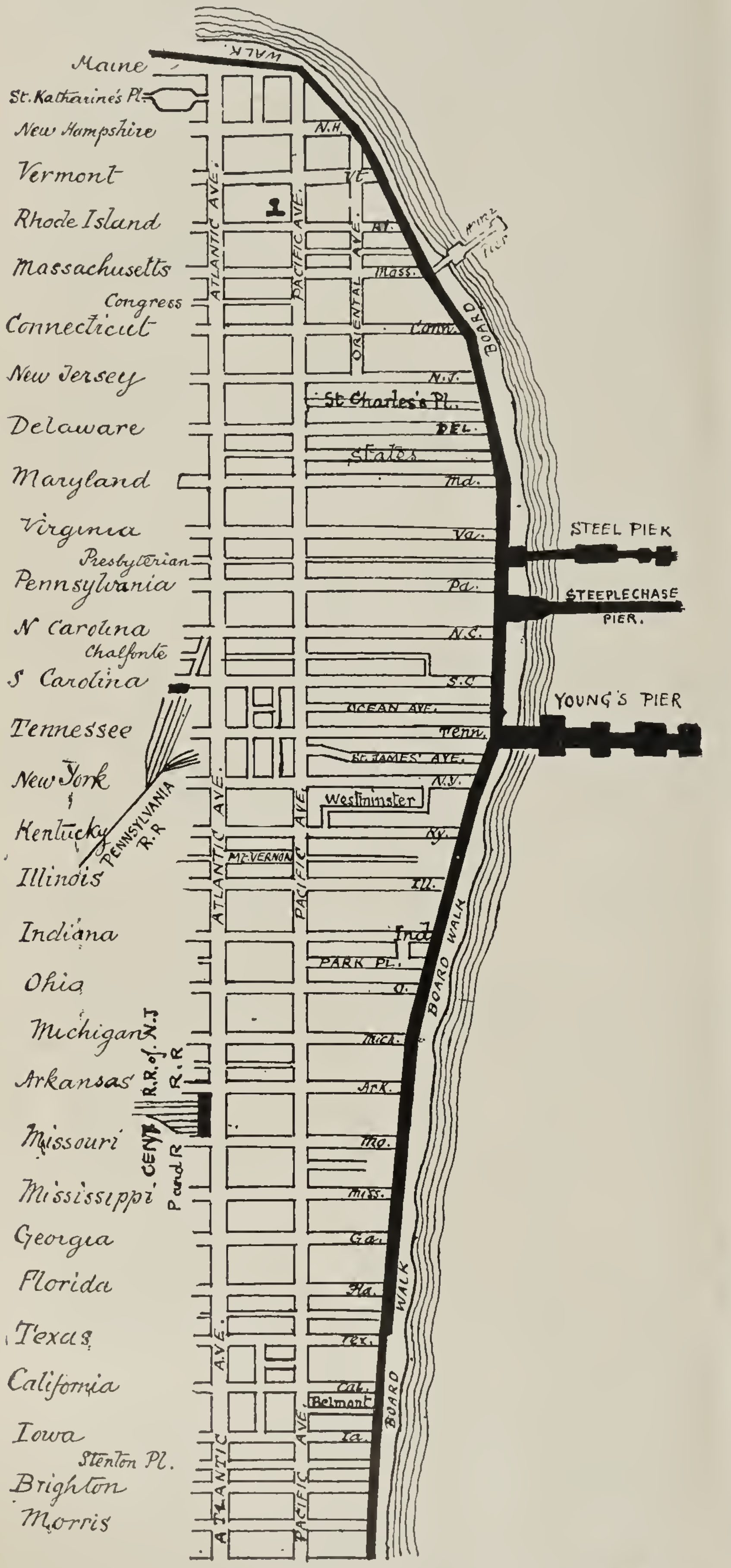

Maine
St. Katharine's Pl.
New Hampshire
Vermont
Rhode Island
Massachusetts
Congress
Connecticut
New Jersey
Delaware
Maryland
Virginia
Presbyterian
Pennsylvania
N Carolina
Chalfonte
S Carolina
Tennessee
New York
Kentucky
Illinois
Indiana
Ohio
Michigan
Arkansas
Missouri
Mississippi
Georgia
Florida
Texas
California
Iowa
Stenton Pl.
Brighton
Morris
MAINE
N.H.
Vt.
R.I.
Mass.
Conn.
N.J.
St Charles's Pl.
DEL.
States
Md.
Va.
Pa.
N.C.
S.C.
OCEAN AVE.
Tenn.
ST. JAMES' AVE.
N.Y.
Westminster
Ky.
Ill.
Ind.
PARK PL.
O.
Mich.
Ark.
Mo.
Miss.
Ga.
Fla.
Tex.
Cal.
Belmont
Ia.
ATLANTIC AVE.
PACIFIC AVE.
ORIENTAL AVE.
MT. VERNON
BOARD WALK
STEEL PIER
STEEPLECHASE PIER.
YOUNG'S PIER
PENNSYLVANIA R.R.
R.R. of N.J.
CENT. R.R.
P and R R.R.

Diagram of portion of Atlantic City. Atlantic Avenue (upon which the traveler emerges from either depot) and Pacific Avenue run up and down. All places of special interest to those attending the meeting lie in the area comprised between Atlantic Avenue and the sea, along the beach of which extends the Board Walk.

THE RUSH MONUMENT.

The Rush Monument will be dedicated on Saturday, June 11th, at 5 p. m., and not on Friday, June 10th, as stated in our issue for May 21st.

INVITATION TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

The following letter from the president of the American Medical Association has been received by the president of the Medical Society of the State of New York:

PHILADELPHIA, May 23, 1904.

My Dear Dr. Wey:

At the suggestion of some members of the New York State Medical Association, and in accordance with my own desires, I hereby extend to you and, through you, to the members of the Medical Socity of the State of New York, an invitation to attend the session of the American Medical Association, at Atlantic City, June 7th to 10th, and to take part in the scientific proceedings.

Trusting to have the opportunity of meeting you all,

I am
Very sincerely,
J. H. MUSSER.

THE NEXT PLACE OF MEETING.

The places talked of as candidates for the entertainment of the association in 1905 are Portland, Ore., and Hot Springs, Ark.

Proceedings of Societies.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, April 7, 1904.

The President, Dr. R. C. NORRIS, in the chair.

A New Operation for Puerperal Sepsis.—By SWITHIN CHANDLER, M. D., (See p. 1088.)

Dr. GEORGE M. BOYD said that every contribution to the treatment of puerperal sepsis was of interest. He had listened to this paper with interest, because of the fact that this method and the method which had been described by Dr. Pryor had seemed in his opinion rather heroic treatment in this class of cases. As he looked back on his obstetrical experience it did not seem to him that a treatment quite so heroic as puncturing the cul de sac and packing the pelvis with gauze—let it be plain gauze, or iodoform gauze as Pryor described—or a treatment as described by the present essayist would have been warranted. We occasionally had a death from puerperal sepsis, but the majority of patients recovered. Many of the bad cases had a general systemic infection with only a local manifestation of infection. In the cases in which recovery had not ensued he had felt that the infection was beyond the uterus, and that the patients died from a general systemic infection. He could hardly feel, then, that he was prepared to endorse the operation that had been suggested.

Dr. W. Reynolds Wilson had always felt that the way to approach this subject was from the point of view of diagnosis. To be sure, there were cases that were desperate, and cases which would require what Dr. Boyd had chosen to call heroic measures, but it was very difficult to diagnosticate such cases in time to carry out such an operation. The bacteriological study of the case he thought was extremely important. The localized pelvic infections with the presence of the staphylococcus and lymphatic engorgement involving the parametrium were cases which, in the beginning, presented very severe symptoms, but which when properly treated by nonsurgical means usually made a very rapid recovery. At the same time it was difficult to differentiate these cases from cases of overwhelming rapid infection, infection which began early and which spread into the system before we were able to institute any local treatment. That being the case, it seemed to him there was required a very acute knowledge of the course of such infection, a knowledge which he thought most of us would find it very difficult to get. He thought we did not get enough infection nowadays to make it possible to draw the fine lines in diagnosis. He could understand perfectly well that the uterus might be the site of infection, that pelvic drainage might in certain cases interfere with the further spread of the disease. At the same time his mind was recalled to the first case that Dr. Chandler had described, in which a mass of the placenta was removed under ether, and in which he performed the operation. In that case it would be extremely difficult to tell whether the removal of the placenta itself might not have been sufficient.

Dr. R. C. Norris had listened very carefully to Dr. Chandler's paper, and he thought its gravest defect was his failure to indicate the class of cases requiring this kind of treatment. The same objections, intensified, were applicable to this treatment as to Pryor's operation. Pryor distinctly limited his to streptococcic infection, Dr. Chandler only spoke of "grave" cases. For cases of puerperal infection in the early stages, when it might be that the case was one of sapræmia, which promptly recovered after clearing out of the uterine contents; for general blood or lymphatic infection, and for uterine phlebitis, Dr. Chandler surely would not resort to this measure and hope for success. If the infection was a virulent streptococcus and had passed beyond, and was not confined to a localized area in the pelvis, as so frequently happened, surely this plan of treatment would not avail, as hysterectomy and the use of curetting had failed, as Pryor's operation had failed, and as every other surgical operation had failed. He thought that he should specifically state the classes of cases in which he would consider this operation necessary; and he would be glad if he would, furthermore, point out to us in what way these perforations of the uterus could accomplish drainage of that organ more efficiently than an intrauterine gauze drain. He was convinced that there were very rare cases of beginning peritoneal infection following abortion and labor, due to leakage from the tubes, that cul-de-sac drainage might save, if we could diagnosticate them by any means, clinical, bacteriological, or otherwise. If we could readily determine the channels through which the infection was spreading and how far it had spread, we should know when and in what cases to drain and attempt to avert a fatal termination. So far as his experiences went, that could not be determined. He had gone over this ground in the discussion of Dr. Pryor's paper. Until Dr. Chandler designated more certainly in what class of cases he advocated the use of this method he thought it was distinctly dangerous teaching. Dr. Chandler spoke of it adding to Dr. Pryor's operation in that the uterus was also drained. The uterus could be drained as efficiently and certainly with less danger without making useless perforations through the uterus into the peritoneal cavity. Gauze passing from the cavity into the vagina would drain the uterus as well as three pieces of gauze that perforated the uterus and passed into the peritoneal cavity, without the serious danger attendant upon the latter. Dr. Norris could not conceive why any one should perforate the uterus, expecting to secure better drainage of the uterus. He could see no advantage and only dangerous surgery in the operation, and he would like Dr. Chandler to convince us that his patients recovered because, and not in spite, of his operation. He felt that he added grave danger by carrying from an infected uterus a gauze drain into a peritoneal cavity that might be free from infection. His judgment was that it added a distinct risk in the treatment of any case. He should feel quite as inclined to treat a case in this manner as he would, in a case of beginning sepsis, to open the abdomen and cul-de-sac and insert a loop of gauze, with the hope of saving life. If it was drainage we were striving for, why stop with the uterus and cul-de-sac? We must remember that drainage was not going to save every case of sepsis. It was utter folly to attempt to drain the pelvis, or even the uterine cavity, if the infection had already spread beyond. It was risk enough to open the cul-de-sac, but this was doubled by perforating the infected uterine wall and inserting gauze into the peritoneal cavity. Dr. Pryor's operation was only done in cases of streptococcic infection. Its employment was based upon bacteriological study and he had limited his cases to that class. Dr. Chandler had not done so. He simply spoke of "grave infection." The mere finding of streptococci did not tell how virulent the case was. Dr. Norris repeatedly found streptococci in the uterus after labor when the woman had no fever. He had also found them in women who had fever and who got well. The mere finding of organisms was not enough; the difficulty in selecting treatment depended wholly upon the question of diagnosis spoken of by Dr. Wilson. There were no means to predict the outcome in individual cases, no means more reliable than clinical ones to differentiate the gravity of our cases, and until that could be done, this method of relying wholly upon drainage and running the risk of infecting the peritoneal cavity should not go unchallenged. Dr. Norris considered it dangerous practice and believed that it would lead, in a large number of cases, to increased mortality. Relatively few cases would be saved by vaginal drainage and these few would just happen to be appropriate cases operated upon at the right time. We had no accurate means of determining the appropriate cases early in the course of the disease and when that right time arrived. He thought a word of caution should be sounded and that we should reserve pelvic and abdominal surgery in puerperal sepsis, to cases with distinct localized lesions. To open the cul-de-sac or perforate the uterus and pack with gauze where no evidence of infection outside of the uterus existed, or when evidence did not exist that infection had spread to the lymphatics or venous systems, was the height of folly. When no localized infection existed this method was unscientific. Even with the most skilful bacteriological examination we could not predict in any case whether it was a type of case that pelvic drainage would save. If Dr. Chandler operated upon a patient when the infection had passed beyond the uterus and pelvic cavity, he helped the patient not one iota by opening the cul-de-sac, perforating the uterus, and dragging three pieces of gauze from the opening in the vaginal vault, through the uterus and the cervix, making a U-shaped drain. If the infection was localized in the uterus the patient ran the risk of septic peritonitis from which she might die, as the direct result of this treatment.

Dr. W. REYNOLDS WILSON begged to supplement his remarks by stating his experience in hospital practice with cases of infection. He did not believe that one half per cent. of the cases that began as infected cases went on to septicæmia, that was, to a fully developed systemic infection. The class of cases that it had been his experience to deal with have been, first, putrefactive cases, in which there was intoxication from retained débris within the uterus. That was the common class of cases which he had observed. In the second place, cases of parametritis, a simple lymphangeitis, with œdema of the broad ligament. In this class the expectant treatment had always been satisfactory. The third class of cases was of the gonorrhœal infection. These were the common cases in his experience based upon a more or less extensive observation, and in every one of such cases were such treatment resorted to, the chance of streptococcic infection of the peritonæum would be imminent.

Dr. B. C. HIRST would like to add a word of condemnation of this proposition of Dr. Chandler, which could not be based on much practical experience, and which was, he thought, distinctly dangerous. Indeed, it was difficult to criticise it as severely as it deserved, and yet to observe the courtesy of debate. He should object to a proposition of this kind appearing as read before the Obstetrical Society, unless accompanied by the criticism which was sure to follow. Dr. Pryor's proposal to drain the pelvis, to which Dr. Norris had referred at length, was more rational than Dr. Chandler's, but it, too, was founded on incorrect premises, was not, he thought, the result of sufficient clinical experience with all forms of puerperal sepsis, and was wrong in principle. He had performed a good many exploratory incisions, especially in the early history of the operative treatment for puerperal sepsis. When in doubt in a case of metritis, whether the inflammatory product was in the uterine wall and was about to break into the peritoneal cavity, or whether it was contained within and limited to the wall, he still resorted to an exploratory abdominal section, as he did also in cases of pelvic cellulitis, to be sure there was no intraperitoneal involvement. From a considerable experience, therefore, in the inspection of the pelvic cavity in cases of sepsis, he was in a position to say that Dr. Pryor's premises on which he based his procedure for opening the vaginal vaults were incorrect. The pelvic peritonæum was not immediately invaded in streptococcic infection and was usually never invaded at all. He had seen a number of cases of the gravest infection in which there was no involvement of the pelvic or abdominal peritonæum. The pelvic peritonæum was often entirelv unaffected and there was no serum in the pelvic cavity. If, therefore, Dr. Pryor's procedure was incorrect, Dr. Chandler's, he thought, was totally unwarranted. The former would occasionally be followed by fatal peritonitis which could otherwise have been avoided; the latter, if ever actually tried in practice, would be even more likely to cause death in this way.

(*To be continued.*)

Book Notices.

The Eye. Its Refraction and Diseases. The refraction and functional testing of the eye. complete in itself, in twenty-eight chapters, with numerous explanatory cuts and diagrams. By EDWARD E. GIBBONS, M. D., assistant surgeen of the Presbyterian Eye, Ear, and Throat Hospital; demonstrator and chief of clinic of eye and ear diseases in the University of Maryland, Baltimore. New York: The Macmillan Company. London: Macmillan & Co., Ltd. 1904.

For a number of years a work on refraction has been needed to fill the place left vacant by the discontinuance of the publication of Landolt's masterly work, one which would present not merely the outlines but the details of a subject of great importance to the specialist, and this seems to answer the purpose the best of any work on the subject that the reviewer has yet seen. He agrees fully with the author "that the student should be familiar with the physics involved, for the proper understanding of the subject," and he thinks the value of this work is based rather on the presentation and discussion of old material in a clear and excellent style, and on the inclusion of the necessary mathematics, which is usually omitted in books on refraction, than on the presentation of new material with which the author thought to justify its publication. It is also pleasant to note the absence of the usual dedication, or reference to the wants of, the student and general practitioner. Works on refraction are for the use of specialists.

One criticism may be suggested. Why is the title of the book *The Eye: Its Refraction and Diseases,* when diseases of the eye are not dealt with?

Beiträge zur experimentellen Therapie. Herausgegeben von Professor Dr. E. v. BEHRING, wirklicher geheimer Rath, Director des Instituts für Hygiene und experimentelle Therapie der Universtät Marburg. Heft 8. Tuberculoseentstehung, Tuberculosebekampfung und Säuglingsernährung. Berlin: August Hirschwald, 1904.

These studies from the Marburg Institute are of the greatest interest and importance for all students of tuberculosis, for no less a contention is advanced than that the prevention of tuberculosis is an accomplished fact, if only the views of the distinguished author are accepted and put in general practice. From a less authoritative source than the discoverer of the antitoxine treatment of diphtheria this announcement might seem extravagant and premature. The preeminence of Behring in the field of experimental therapeutics is such, however, that any conclusions he has reached will receive the most attentive and respectful consideration.

Behring believes that the foundation for most cases of pulmonary tuberculosis is laid in early infancy, and that the mode of infection is primarily through the gastrointestinal tract by means of bacilli-laden milk. The mucous membrane of the stomach and bowels in infants affords a ready port of entry for the tubercle bacilli on account of its thin and defective covering of epithelium, which Disse's researches show to be even entirely lacking for considerable areas. This embryonal character of the mucous membrane is also associated with a deficient secretion of the antibacterial ferments which help the mature organism to resist infection. These unfavorable conditions persist for about three weeks after birth, and it is at this time, according to Behring, that the initial tuberculous infection takes place. The so called scrofulous diathesis is thus produced, and the individual is ever after peculiarly susceptible to later infection.

The successful warfare against tuberculosis must be waged, then, in early infancy. In calves Behring has succeeded in producing a satisfactory immunity by injecting with attenuated cultures of the tubercle bacillus, and he believes that by a like procedure human infants can be safely immunized. Until the profession and the public have been educated to accept this new doctrine, much can be done by insuring an uncontaminated milk supply for young infants. A certain degree of immunity can also be obtained by adding to the milk the antibodies contained in sera obtained from immune animals. It is probable that the milk of cows rendered artificially immune to tuberculosis, by the author's methods, contains these antibodies in considerable amount. As a practical measure for immediate adoption, Behring urges the treatment with formaldehyde in the proportion of 1-40,000 of the milk supplied to cities.

A large part of the volume is taken up with acrimonious controversy and replies to critics, in a manner which at times transcends the usual amenities of scientific discussion. To call a Herr Professor and Geheimrath a Spucknapffanatiker is little short of Majestätsbeleidigung, and shows a bitterness of dispute in agitating the tuberculosis question which has not yet been reached in this country. In bandying opprobrious names, the worse epithet evolved in New York has been phthisiophobe, and this is mild and inoffensive compared with Spucknapffanatiker. If any one called us a Spucknapffanatiker we should be inclined to retort by calling him another.

Incidentally Behring makes the somewhat extraordinary statement that had it not been for him the world would have been obliged to wait a hundred years or longer for the serum treatment of diphtheria. In this country there is a general impression that Roux, of Paris, independently and almost at the same time achieved the discovery. The fact that Roux shared equally with Behring in the award of the Nobel prize would tend to confirm the justice of this opinion. Inability to recognize merit in their contemporaries often seems to be one of the regretable infirmities of men of genius.

Orthmann's Handbook of Gynæcological Pathology, for Practitioners and Students. Translated by C. Hubert Roberts, M. D., Lond., F. R. C. S., Eng., M. R. C. P., Physician to the Samaritan Hospital, London, etc.; assisted by Maximilian L. Tretchmann, F. R. C. S., Eng., M. B., C. M. Edin. London: John Bale, Sons, and Danielsson, 1904. (Price, five shillings net.)

Orthmann's work is widely known and esteemed in its original form, and the English-reading public is therefore to be congratulated on its translation. This is the third book on this subject to appear within the past eighteen months, so one must assume that the profession is being educated to an appreciation of the scientific basis of disease. For the gynæcologist, therefore, and for the pathologist who is not a specialist along these lines, this book will have a special interest.

The work is divided into two parts,—Technics and Diagnosis. The text is in narrative form and contains a running clinical comment on each pathological condition under consideration. Considerable space is devoted to the infectious granulomata. Orthmann refers the origin of ovarian embryomata to one of the three germ layers, thus rendering the assumption that they arise from an included ovum superfluous. The discussion of the pathology of tubal gestation in its various forms is especially lucid and extensive, as is the division dealing with ovarian diseases.

The illustrations are very numerous and are excellently executed. The book from all standpoints can be most heartily endorsed and commended. The translation has been done with a facile pen.

A Compend of Pathology, General and Special, A Student's Manual in One Volume. By Alfred Edward Thayer, M. D., Professor of Pathology, University of Texas. Second Edition. Containing 131 Illustrations. Philadelphia: P. Blakiston's Son & Co., 1903. Pp. xxiv-711.

This book represents the author's two small quiz compends published in one volume. The text has been thoroughly revised and a chapter on the nervous system has been added. The general plan of the work has not been altered otherwise. The book is but a little larger than the combined size of its predecessors, and naturally has its limitations. Still, as we pointed out in our previous reviews, the author has succeeded in presenting his subject in a most praiseworthy manner and no important facts have been overlooked. As a student's compend it leaves nothing to be desired and reflects much credit upon author and publishers alike.

Bulletin of the Ayer Clinical Laboratory of the Pennsylvania Hospital. No. 1, issued October, 1903. Philadelphia, Pa. Pp. 88.

The first number of this new journal contains a most excellent work on the pathological histology of

Hodgkin's disease by Dr. W. T. Longcope. Eight cases of this disease are described, and very full details of the pathological histology are given. The article is illustrated by several photographs and drawings. The principal conclusions that the author arrives at are that the ætiology of the disease is unknown and that the tubercle bacillus is not the causative factor in the production of the lesions.

Two smaller articles by Dr. Louis M. Warfield complete the first issue. We look forward to future numbers of the journal with much interest.

BOOK AND MAGAZINE NOTES.

We expect with confidence a helpful and scholarly treatise on bloodpressure in the work of Dr. Theodore C. Janeway, about to be issued by Messrs. Appleton & Co.

P. Blakiston's Son & Co. have issued a quiz-compend on Diseases of the Ear, Nose, and Throat, by Dr. John Johnson Kyle, which will prove useful mainly to undergraduates, although it contains an excellent formulary valuable to the practitioner for quick reference. The net price is 80 cents. Eighty-five excellent illustrations adorn the book.

McClure's Magazine for June contains a swift and breathless story, by Dr. Henry C. Rowland, entitled The Folly of Lamar. The young heroine, we fear, will require considerable mellowing before making a congenial life companion for the interesting hero, although as a sweetheart she is ideal.

A second edition of Dr. J. Clifton Edgar's superb work on obstetrics will go to press shortly. Notwithstanding the apparent completeness of the illustrations, room will be made for a large number of new ones of equal beauty and interest.

McClure's Magazine for June contains also The Inoculation of Mr. Skads, by John McAuley Palmer. Mr. Skads is a trust magnate who furnishes capital for the experiments of Dr. Faddison, the discoverer of the peculococcus, the microbe of theft. Many cures result among the lower order of criminals, but Mr. Skads accidentally becomes inoculated with the necessary serum with disastrous results to the trust. A humorous take-off on the ethics and editorial style of a prominent New York newspaper is a feature of the story.

Messrs. W. T. Keener and Co., of Chicago, publish a third edition, revised and enlarged, of A. Pearce Gould's standard work on The Elements of Surgical Diagnosis. The book has a deservedly high reputation for accuracy and completeness. The price is $2.00 net.

The Grafton Press has given us Woman's Unfitness for Higher Coeducation, by Dr. Ely Van de Warker. It is a powerful and an eloquent brief on the subject, of great value to the laity and especial value to parents. Physicians will find the work epitomizing their own views on the matter in succinct and able style. The physiological aspect of the question has invariably been ignored or ridiculed by the partizans of coeducation. Hermaphrodite education we suggest as a suitable synonym for the system.

PUBLISHERS' ANNOUNCEMENTS.

Messrs. D. Appleton & Co., New York:

Medical Diagnosis. Special Diagnosis of Internal Medicine. A Handbook for Physicians and Students. By Dr Wilhelm v. Leube, professor of medicine and physician in chief to the Julius Hospital, Wurzburg. Authorized translation from the sixth German edition, edited, with annotations, by Julius L. Salinger, M. D., late assistant professor of clinical medicine in Jefferson Medical College, and physician to the Philadelphia Hospital. With 5 colored plates and 74 illustrations in the text. Price, cloth, $5.00; half leather, $5.50. Sold only by Subscription.

The Clinical Study of Bloodpressure. By Theodore C. Janeway, M. D., Lecturer on Medical Diagnosis, University and Bellevue Hospital Medical College, etc. Seventy-five illustrations. [Octavo, cloth, $3.00.]

BOOKS, PAMPHLETS, ETC., RECEIVED.

Exposé de M. de Piza, Délégué du Brésil, sur la Fièvre jaune. Paris: Imprimerie et Librairie Paul Dupont, 1904.

The Hayfield Mower and Scythe of Progress. By the Mower-Man. Volume I. Numbers 1 to 26. Boston, Mass.: The Hayfield Mower. [Price, $1.25 net.]

The Roosevelt Hospital, New York. Thirty-second Annual Report from January 1, 1903, to December 31, 1903. New York.

New Inventions.

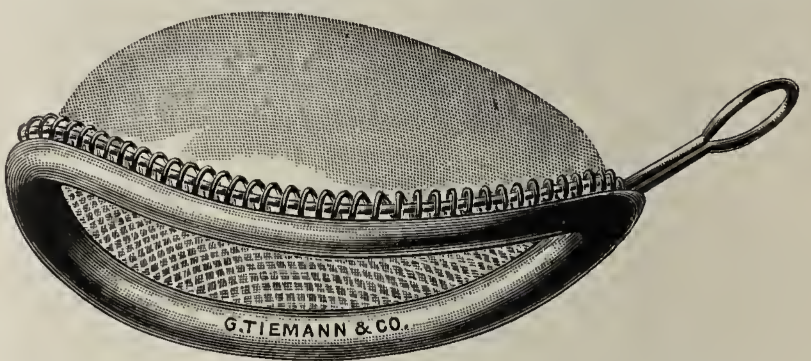
A NEW CHLOROFORM MASK.

By SIDNEY YANKAUER, M. D.,

NEW YORK.

The chloroform mask herewith presented has two new features which render it of special value.

The body of the mask consists of a framework of wire netting, instead of the one or two wires usually arranged for the support of the gauze covering the mask. This wire netting comes in contact with the gauze and supports its entire surface, thus preventing it from flapping back and forth with respiration, and from coming in contact with the nose and cheeks. The edge of the wire netting is continued into a metal gutter, shaped to fit the face, which turns up the edge of the gauze and prevents this from touching the skin. By keeping the gauze saturated with chloroform away from the skin a "chloroform burn" cannot occur, as the vapor of chloroform does not blister the skin.



The device for fastening the gauze consists of a stiff metal ring shaped to fit into the gutter. This ring is surrounded by a spiral spring, drawn taut, which diminishes the opening of the ring. When the gauze is laid over the wire netting and the ring pressed down into place, the gauze is held firmly by the spring, with an even but elastic pressure.

The entire apparatus can be sterilized, the gauze can be secured firmly and changed quickly, the danger of "chloroform burns" is obviated, and the use of vaseline is rendered unnecessary.

I am indebted to Messrs. Tiemann & Co. for the construction of the first models.

73 East Ninety-second Street.

Miscellany.

Strenuous Career of a Professional Colleague.—It is impossible not to be struck by the romantic vicissitudes of Jameson's career, says *Harper's Weekly*, for April 30th. Hardly seven years ago he was convicted and sent to prison by a British jury, urged thereto by a British judge, and was universally reprobated by English public opinion. Now he is premier of what dwellers at the cape love to call the premier colony of South Africa. Not less romantic and striking were the earlier transformation scenes of his life. Assistant in a London hospital; then fashionable physican in Kimberley during the great diamond boom, and, it is said, making fifty thousand dollars a year by his practice. Then friend and admirer of Cecil Rhodes, who persuaded him to throw physic to the dogs and go as a special ambassador to Lobengula, king of the Matabeles, at the great kraal at Buluwayo. Dr. Jameson carried his diplomatic point by doctoring the tyrannous old chief for the gout, knowing well that if he did not make a cure, the benevolent customary law of the Matabele would condemn him to be tortured to death. He made the cure, however, and won Rhodesia for the British empire. He reached the pinnacle of fame when he lectured at the Imperial Institute, with the Prince of Wales, now King Edward VII., in the chair, and was decorated with the Companionship of the Bath. Then came his apogee in the famous raid on Johannesburg, when with a few hundred troopers he invaded the Transvaal, and ran into the widespread arms of General Cronje. He expected to do in a week what the whole British empire failed to do in two years with a quarter of a million men. The exact extent to which Cecil Rhodes and Mr. Chamberlain were accomplices in the raid will never be known to the public; but no one has any serious doubts as to the fact. Jameson was made the scapegoat, and served several months' imprisonment, being finally liberated on medical certificate. He was for two years an invalid, and was for a long time not expected to recover. His star rose once more, however, and now he is Cape premier.

Official News.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending May 28, 1904:

Belknap, J. L., Assistant Surgeon. Ordered to the Naval Hospital, New York.

Brown, H. L., Assistant Surgeon. Detached from the *Lancaster* and ordered to the Naval Station, Guantanamo, Cuba, with additional duty on the *Monongahela.*

Eagling, E., Pharmacist, retired. Detached from the Naval Hospital, Yokohama, Japan, and granted leave abroad.

Flint, J., Assistant Surgeon. Ordered to the Naval Hospital, Chelsea, Mass.

Furlong, F. M., Passed Assistant Surgeon. Ordered to the Naval Museum of Hygiene and Medical School, Washington, D. C., for temporary duty.

Hibbett, C. T., Surgeon. Detached from the *Franklin* and ordered to duty in charge of the Naval Hospital, Cavite, P. I., sailing from San Francisco, Cal., June 11th.

Iden, J. H., Assistant Surgeon. Ordered to the Naval Hospital, Philadelphia, Pa.

Langhorne, C. D., Passed Assistant Surgeon. Detached from the *Monongahela* and ordered to the *Denver.*

Lovering, P. A., Surgeon. Detached from duty in charge of the Naval Hospital, Cavite, P. I., and ordered home to wait orders.

May, H. A., Assistant Surgeon. Ordered to the *Franklin*, Navy Yard, Norfolk, Va.

McDonnold, P. E., Assistant Surgeon. Ordered to the Naval Museum of Hygiene and Medical School, Washington, D. C., for temporary duty.

Thompson, E., Surgeon. Commissioned surgeon, with the rank of lieutenant commander, from March 3, 1903.

Wentworth, A. R., Surgeon. Ordered to the *Franklin*, Navy Yard, Norfolk, Va.

Wheeler, L. H., Assistant Surgeon. Ordered to the Naval Hospital, Chelsea, Mass.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from May 21 to May 27, 1904:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
California—San Francisco	May 8-15	1	
Dist. Columbia—Washington	May 15-21	6	
Florida—Jacksonville	May 15-21	1	
Georgia—Macon	May 15-21	4	
Illinois—Danville	May 15-21	2	
Kentucky—Covington	May 15-21	1	
Louisiana—New Orleans	May 15-21	12 1 imported.	
Michigan—Detroit	May 15-21	1	
Missouri—St. Louis	May 15-21	11	
Nebraska—Omaha	May 15-21	3	1
New Hampshire—Manchester	May 15-21	4	
Ohio—Toledo	May 15-21	1	
Pennsylvania—Pittsburgh	May 18-24	3	
South Carolina—Charleston	May 16-21	3	
Wisconsin—Milwaukee	May 15-21	8	
Smallpox—Foreign.			
Brazil—Rio de Janeiro	Apr. 11-24	133	63
Canada—Sydney	May 15-21	1	
China—Hongkong	Mar. 26-Apr. 2	6	5
China—Shanghai	Mar. 25-Apr. 2		8
France—Marseilles	Apr. 1-30		5
Great Britain—Birmingham	May 8-14	1	
Great Britain—Bristol	May 8-14	1	
Great Britain—Edinburgh	May 1-7	5	
Great Britain—Glasgow	May 7-13	25	1
Great Britain—Hull	May 1-7	1	
Great Britain—Leeds	May 8-14	3	
Great Britain—Liverpool	May 8-14	1	
Great Britain—London	May 1-7	14	1
Great Britain—London	May 8-14	26	
Gt. Britain—Newcastle-on-Tyne	May 1-17	3	1
Great Britain—Nottingham	Apr. 24-30	4	
Great Britain—Nottingham	May 1-7	4	
India—Bombay	Apr. 20-26		23
India—Karachi	Apr. 18-24	9	1
Italy—Catania	May 6-12		1
Italy—Palermo	May 1-7	2	
Japan—Moji	Apr. 1-9	Present.	
Japan—Nagasaki	Apr. 1-9	Epidemic.	
Japan—Sasebo	Apr. 1-9	Present.	
Java—Batavia	Apr. 10-16	11	1
Mexico—Tampico	May 8-14		1
Mexico—Torreon	May 8-14	5	5
Netherlands—Rotterdam	May 8-14		1
Russia—Moscow	Apr. 24-30	7	4
Russia—Odessa	Apr. 11-17	1	
Russia—Odessa	Apr. 18-24	4	1
Russia—St. Petersburg	Apr. 24-30	15	4
Russia—St. Petersburg	May 1-7	17	4
Russia—Warsaw	Apr. 10-16		27
Russia—Warsaw	Apr. 17-23		26
Straits Settlements—Singapore	Mar. 26-Apr. 2		1
Turkey—Alexandretta	May 1-7	Epidemic.	
Turkey—Beirut	Apr. 24-30	Present.	
Turkey—Constantinople	May 2-8		6
Smallpox—Insular.			
Philippine Islands—Cebu	Mar. 1-31	1	1
Philippine Islands—Manila	Mar. 27-Apr. 2	1	
Yellow Fever.			
Brazil—Rio de Janeiro	Apr. 11-24		7
Ecuador—Guayaquil	Apr. 24-May 4		5
Mexico—Coatzacoalcos	May 11-17	3	1
Mexico—Merida	Apr. 24-30	Present.	
Mexico—Vera Cruz	May 8-21	3	
Cholera.			
India—Bombay	Apr. 20-26		1
India—Madras	Apr. 16-22		1
Persia—Kermanschah	To Apr. 11		20
Plague—Foreign.			
Africa—Johannesburg	May 5	2	
Africa—Port Elizabeth	Apr. 17-23	2	1
Australia—Brisbane	Apr. 8-16	2	
Brazil—Nichtheroy	Apr. 15	1	1
Brazil—Para	Apr. 24	Still present.	
Brazil—Rio de Janeiro	Apr. 11-24		5
Chile—Antofogasta	Apr. 19	9	
China—Hongkong	Mar. 26-Apr. 2		3
Formosa	Mar. 31-Apr. 9	229	167
India—Bombay	Apr. 20-26		532
India—Madras	Apr. 16-22		1
Peru—Lima	Apr. 10-11	20	
Straits Settlements—Singapore	Mar. 27-Apr. 2		1
Plague—Insular.			
Philippine Islands—Cebu	Mar. 1-31	3	3
Philippine Islands—Manila	Mar. 25-Apr. 2	1	

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending May 28, 1904:

Buck, Carroll D., First Lieutenant and Assistant Surgeon. Ordered to attend the sick of the 119th Company, Coast Artillery, in addition to his present duties at the Louisiana Purchase Exposition, St. Louis, Mo.

Edie, Guy L., Major and Surgeon. Reported for and assigned to duty in the Surgeon General's Office, Washington, D. C., in charge of the Sanitary and Disbursing Division and as Disbursing Officer of the Medical Department. Assignment to duty in the Philippines revoked.

Henderson, Albert B., First Lieutenant and Assistant Surgeon. Ordered to report to Colonel William M. Wallace, president of the Army Retiring Board, War Department, Washington, D. C., for examination by the board.

Steer, Samuel L., First Lieutenant and Assistant Surgeon. Granted eighteen days' leave of absence, to take effect about June 1, 1904.

Stiles, Henry R., Captain and Assistant Surgeon. Reported for treatment at the United States Army General Hospital, Presidio of San Francisco, California.

Truby, W. F., First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence.

Vose, William E., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months and twenty-three days.

Williamson, L. P., First Lieutenant and Assistant Surgeon. In addition to present duties pertaining to the Louisiana Purchase Exposition, St. Louis, is announced as attending surgeon at the Northern Division headquarters in that city.

Wilson, Compton, First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence.

Woodbury, Frank T. Granted twenty days' leave of absence.

The following named medical officers have been appointed assistant surgeons, with rank of first lieutenant, from May 19, 1904: Robert M. Culler, William R. Davis, Leartus J. Owen, Frank W. Weed, William A. Wickline, Stanley G. Zinke.

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending May 26, 1904:

Anderson, J. F., Passed Assistant Surgeon. To proceed to Hartford, Conn., for special temporary duty. May 20, 1904.

Carter, H. R., Surgeon. Granted two days' leave of absence from May 26, 1904, under paragraph 189 of the regulations.

Clark, Taliferro, Passed Assistant Surgeon. To proceed to Duluth, Minn., for special temporary duty. May 20, 1904.

Duffy, Francis, Acting Assistant Surgeon. Granted leave of absence for two days from May 25th.

Hall, L. P., Pharmacist. To report to Chairman of Examining Board at Norfolk, Va., May 31, 1904, for examination to determine his fitness for promotion to the grade of pharmacist of the second class. May 23, 1904.

Hough, J. S., Acting Assistant Surgeon. Granted leave of absence for thirty days. May 23, 1904.

Hunter, W. R., Acting Assistant Surgeon. Granted leave of absence for seven days from May 22nd.

Nydegger, J. A., Passed Assistant Surgeon. Granted leave of absence for fifteen days from May 6, 1904, on account of sickness.

Wetmore, W. O., Acting Assistant Surgeon. Granted leave of absence for seven days from May 17, 1904, under paragraph 191 of the regulations.

Boards Convened.

Board convened to meet at Washington, D. C., May 26, 1904, for the physical examination of candidates for admission into the Revenue Cutter Service. Detail for the board—Assistant Surgeon General L. L. Williamson, chairman. Assistant Surgeon General W. J. Pettus, recorder.

Board convened to meet at Norfolk, Va., May 31, 1904, for the examination of Pharmacist L. P. Hall to determine his fitness for promotion to the grade of pharmacist of the second class. Detail for the board—Surgeon J. B. Stoner, chairman. Assistant Surgeon J. S. Boggess, recorder.

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Births, Marriages, and Deaths.

Married.

Blank—Ziegenhein.—In St. Louis, Missouri, on Wednesday, May 18th, Dr. Charles F. Blank and Miss Adele Ziegenhein.

Johnston—Johnson.—In Baltimore, Maryland, on Wednesday, May 25th, Lieutenant Gordon Johnston, U. S. A., and Miss Anna Julia Johnson, daughter of Dr. Robert Johnson.

Kiehle—Stevens.—In St. Louis, Missouri, on Thursday, May 19th, Dr. Frederick A. Kiehle and Miss Rose E. Stevens.

McSweeny—Curley.—In Brooklyn, N. Y., on Monday, May 16th, Dr. Edward Shearman McSweeny and Miss Marie Curley.

Nichols—Gallagher.—In Ellicott City, Maryland, on Saturday, April 9th, Dr. Albertus Bentley Nichols and Miss Rose Clarissa Gallagher.

Walker—Newsom.—In New York, on Monday, May 16th, Dr. Thomas Willoughby Walker and Miss Jean Matheson Newsom.

Westbrook—Kellogg.—In Benson, Vermont, on Tuesday, May 10th, Dr. George R. Westbrook and Miss Jessie J. Kellogg.

Died.

Alexander.—In Washington, D. C., on Monday, May 23rd, Dr. W. O. Alexander, in the fifty-eighth year of his age.

Andrews.—In Rochester, N. Y., on Thursday, May 19th, Dr. Lewis B. Andrews, in the forty-first year of his age.

Benedict.—In Ionia, Michigan, on Tuesday, May 17th, Dr. Theodore M. Benedict, of Greenville.

Blair.—In Olean, N. Y., on Saturday, May 21st, Dr. Frank P. Blair, of Allegheny, in the sixty-second year of his age.

Drysdale.—In Philadelphia, Pennsylvania, on Wednesday, May 25th, Dr. Thomas Murray Drysdale, in the seventy-second year of his age.

Griffin.—In Columbia, South Carolina, on Wednesday, May 18th, Dr. Peter Evans Griffin, in the seventy-fourth year of his age.

Griffith.—In Philadelphia, Pennsylvania, on Saturday, May 21st, Dr. Silas Griffith, in the seventy-fifth year of his age.

Ingraham.—In Buffalo, N. Y., on Monday, May 23rd, Dr. Henry D. Ingraham, in the sixty-third year of his age.

Jackson.—In Binghamton, N. Y., on Monday, May 23rd, Dr. David Post Jackson, in the sixty-fourth year of his age.

Mason.—In Hagerstown, Maryland, on Tuesday, May 24th, Dr. Edwin Gaillard Mason, of New York, in the thirty-ninth year of his age.

Purple.—In Albany, N. Y., on Wednesday, May 25th, Dr. William L. Purple, in the fifty-fifth year of his age.

Stanley.—In Atlanta, Georgia, on Monday, May 23rd, Dr. Henry N. Stanley, in the forty-fifth year of his age.

Vail.—In Long Beach, California, on Wednesday, May 18th, Dr. Merit Hard Cash Vail, in the seventy-sixth year of his age.

White.—In Fairhaven, Massachusetts, on Wednesday, May 18th, Dr. Charles Warren White, Jr.

New York Medical Journal
AND
Philadelphia Medical Journal.
CONSOLIDATED.

A Weekly Review of Medicine

VOL. LXXIX, NO. 24. SATURDAY, JUNE 11 1904 WHOLE NO. 1332.

Original Communications.

ROENTGEN RAYS IN THE TREATMENT OF CANCEROUS AND SKIN AFFECTIONS, AND EPILEPSY, AND IN DIAGNOSIS.*

BY J. HERMAN BRANTH, M. D.,

NEW YORK.

No discovery in the last century has interested the profession and the laity more than the Röntgen rays. The subject, however, for the last year has been so thoroughly essayed, theoretically and otherwise, that I feel somewhat embarrassed to bring it before you.

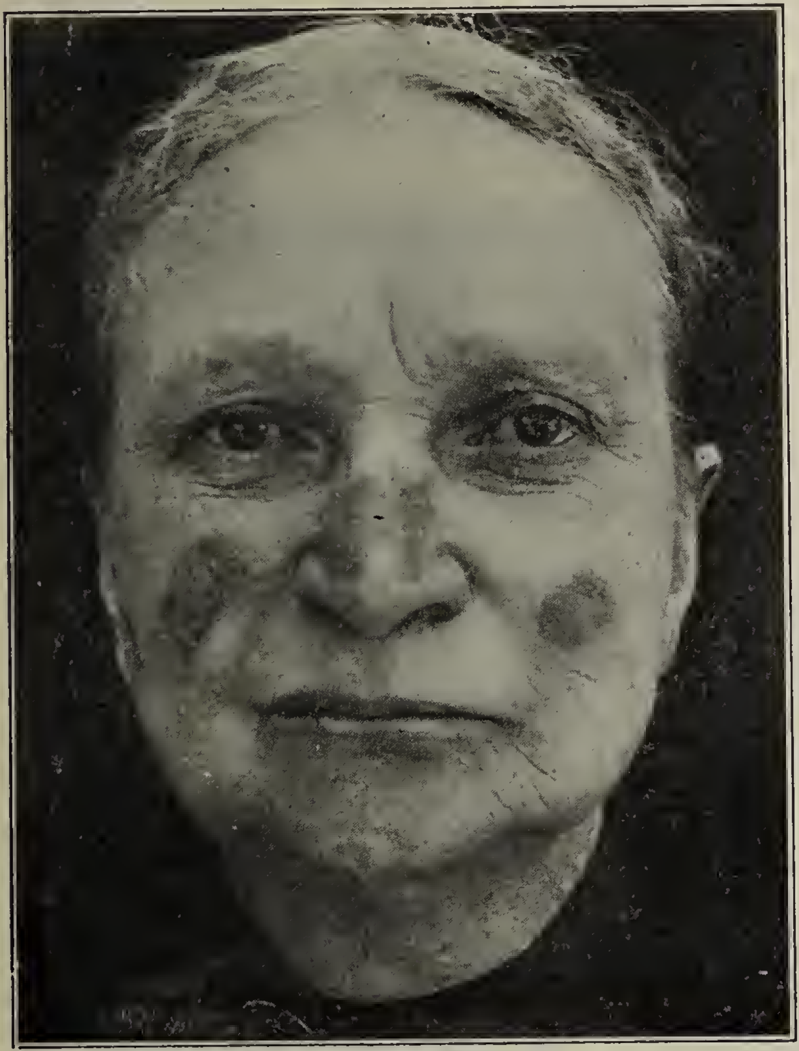

FIG. 1.—Lupus of the cheeks and nose.

I will speak frankly of my personal experience and my results, which may vary somewhat from the results of others. I will speak of a new treatment of epilepsy, that dreaded disease, where for ages we have sought in vain for a remedy. I will also speak of Röntgen rays in diagnosis, and will show you some photographs, both camera and x ray pictures, to illustrate points in the paper. I would beg your indulgence to receive my personal observation in place of theories and scientific speculations, for I am a practical worker, stripped of all enthusiasm, who comes here to speak of clean facts and practical points, of facts which I have observed again and again.

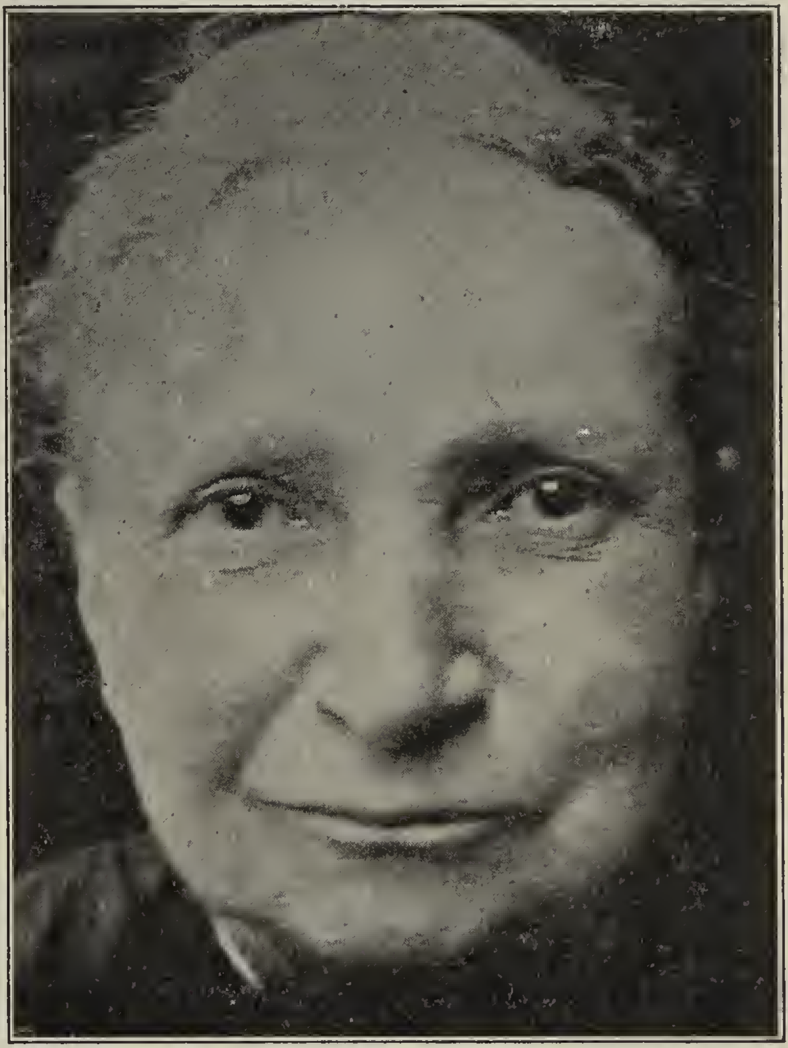

FIG. 2.—The same after eleven treatments.

When I began to work with x rays I was thoroughly skeptical as to their remedial value, indeed, I am not yet rid of skepticism, for the Röntgen ray surely is not a universal remedy for all ills. However, is it not a wonder that electricity, in one form or another, should step in as a remedy in affections, where we, with our pharmacopœia or surgery, have been heretofore helpless? For one thing I pray: May due conservatism prevail; well tried remedies should not be cast aside for the new and untried until ample experience merits such a displacement, which can stand honestly for healthy progress.

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* Read at the meeting of the Medical Association of the Greater City of New York, on Monday, January 11, 1904.

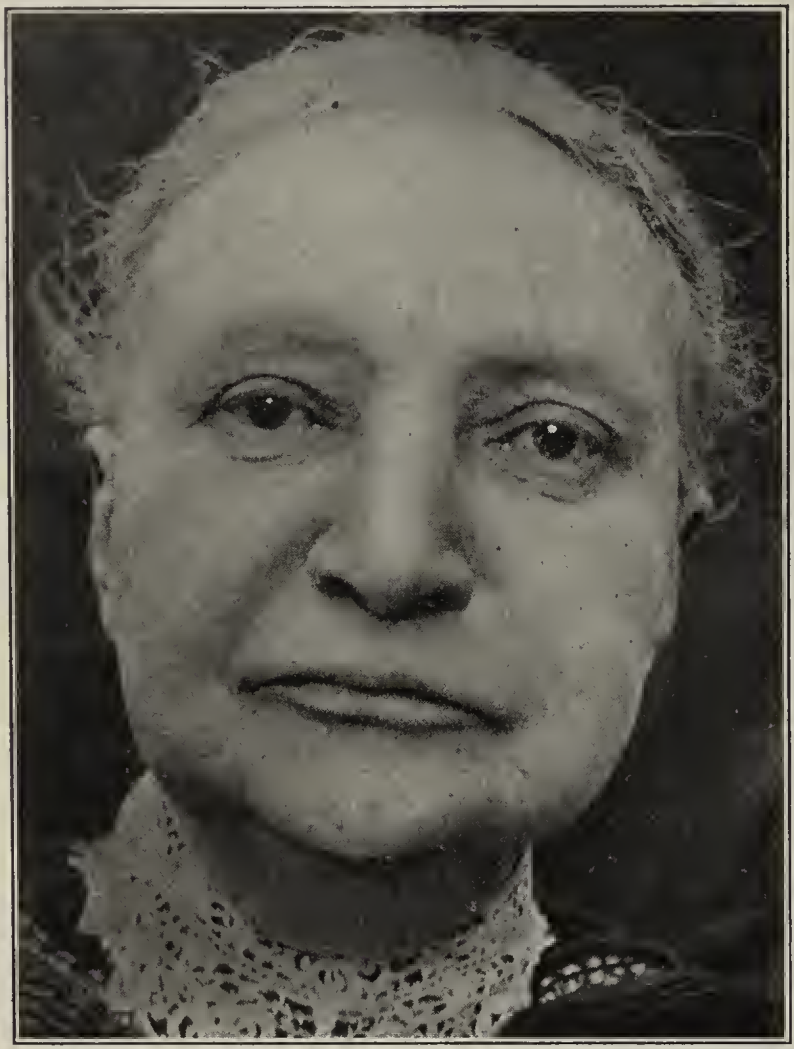

FIG. 3.—Present condition—no trace of the disease visible.

I owe many thanks to my friend and colleague, Dr. L. C. Vincent, for the help given me. About a year ago Dr. Vincent and your humble servant planned the use of x rays as a remedy in epilepsy, but owing to his illness of more than a half year, I had to prosecute this work alone; yet, nevertheless, he deserves at least half the credit for the results obtained.

Röntgen Rays in Cancerous and Skin Affections.—After these introductory remarks, let me take up the first part of my subject.. In cancer the results with this remedy are variable. *The deeper the cancer, the greater the difficulty to conquer the disease;* yet it has been my observation, that in nearly all the deeper seated cancers (referring now particularly to cancer of the breast) the disease comes to a period of rest; further development is stopped for a time. I have not seen one case of cancer of the breast recede into a normal condition by x ray treatment alone, but that a hard, more or less doughy deposit remains as a dormant focus, which at any time may wake up into any degree of activity. This is the general result I have observed. I should not deem it just to term that a cure.

To displace the knife indiscriminately by x ray applications is, in my opinion, wrong. I have at least one case of cancer of the breast, in which I operated by the thorough excision nine years ago without recurrence. The woman is in good health to-day.

The results where the cancer tumor is operated on by the thorough excision (Halsted's) and followed by x ray applications are oftener satisfactory. I have seen several recoveries from postoperative recurrences after x ray treatment. It appears to me that x ray treatment is more successful where the débris can be thrown off directly, which may explain the success of this treatment in epithelioma. If the Röntgen rays stimulate protoplasm into higher and more healthy activity and favor normal metabolic changes, then some of the mysterious workings and x ray results, here as well as in epilepsy, can be easier understood by me. Is it not illogical to depend upon absorption, which means the carrying of the products into the general economy, to cure a malignantly diseased area? Nature generally tries to build a wall around such a focus, to retard the spreading as much as possible. Nature

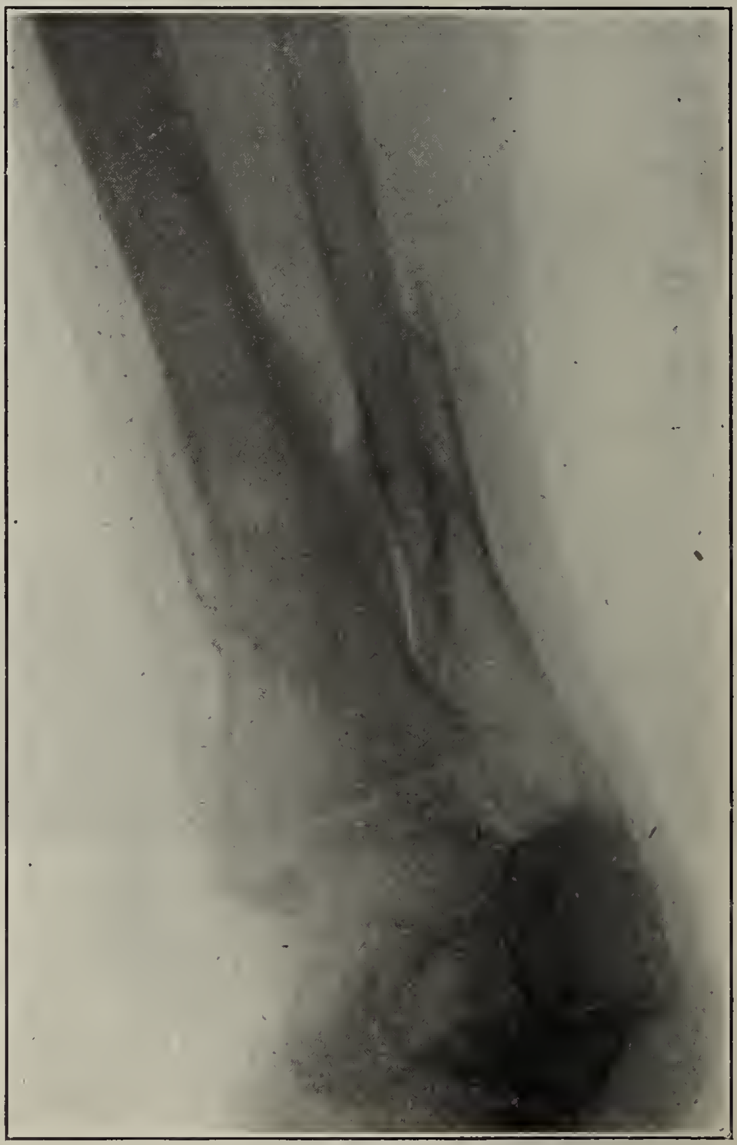

FIG. 4.—Compound comminuted fracture of the tibia and fibula.

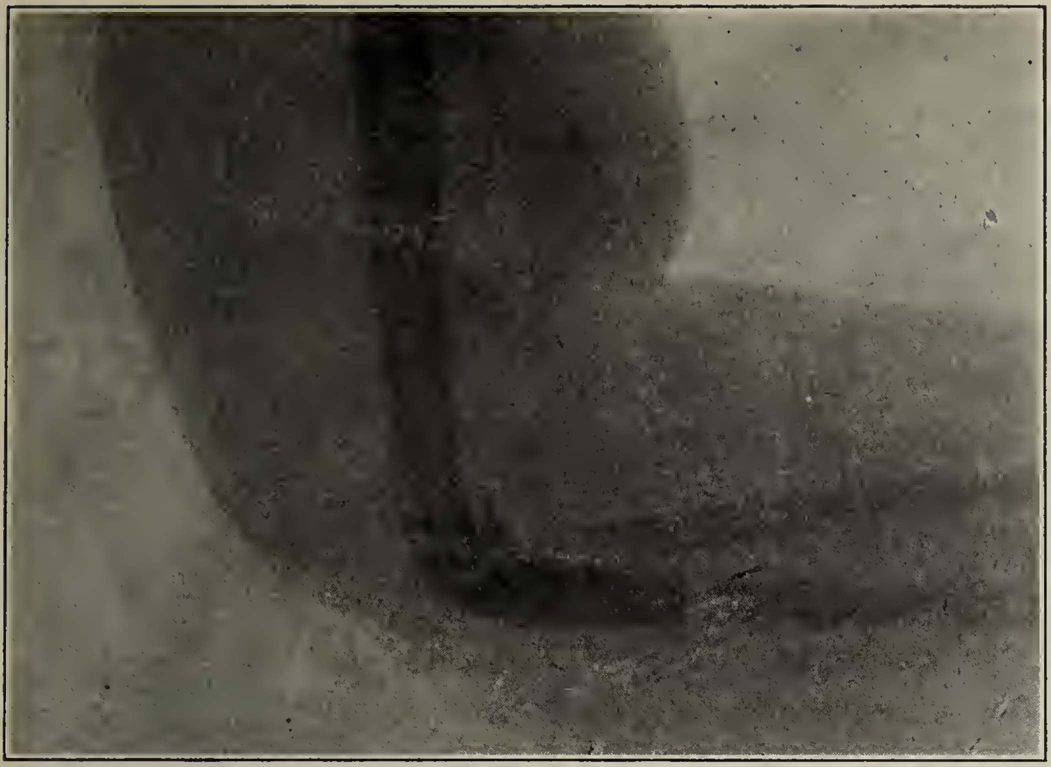

FIG. 5.—Arm eight years after excision of elbow joint.

does not want to deal with a cancerous or tuberculous deposit, for instance, in the same way as with a pleuritic effusion. If absorption of cancerous or tuberculous material occurs, we have a septicæmia, known as cachexia, and then the destruction of the patient is not far off.

In epithelioma, rodent ulcer, lupus, and some other skin affections, the x rays prove an almost certain remedy. Let me present a private patient, Mrs. C., who has had lupus for fifteen years. The best skill of prominent medical men all this time availed nothing, the disease went on spreading. Let me show you photographs of her condition when she came to me for treatment. There was a continual weeping of the lupous surfaces covering the roof of the nose, both cheeks—side and front, which were ulcerating—and both ears (Fig. 1). Fig. 2 is a photograph taken after eleven x ray applications. Now only a slight depression on her cheeks caused by loss of tissue is noticeable. It is a remarkable result of x ray applications that a good part of the disease-invaded tissue is restored on healing. This patient shows the typical x ray tan. She still receives one treatment a week. No trace of the disease is any longer visible (Fig. 3). I am treating now a young lady with port-wine nævus under the eye; she makes slow but certain progress.

Röntgen Rays as a Remedy in Epilepsy.—I now come to the second division of my subject. Of course, all cases are not amenable to this form of treatment, for instance, those where decided degenerative processes in the brain have set in. The starting point of the convulsion is probably primarily in the cortex of the brain, and secondarily in the medulla oblongata. In many cases the existence of the epileptic seizures depends upon the instability of the cellular brain elements, or on abnormal metabolism. It is accepted by many authorities that the x rays stimulate protoplasm into greater vital activity. Upon this theory the x rays were applied in this affection. Three treatments a week are given, beginning with five minutes' exposure at fifteen inches distance, and by degrees increasing to ten minutes' exposure at ten inches distance. A different part of the skull is exposed at each sitting. A hard or high vacuum tube (backing up a spark gap of five to eight inches), with five to ten spark gaps in the circuit, is used. One of the drawbacks is that the hair may drop out in areas; but it is safe to predict that the hair will return in a stronger growth than before. Some patients will not suffer with this form of alopecia after months of x ray treatment, while other will show this symptom after a small number of exposures. You will notice this form of alopecia on the patient presented to you.

Attention is directed to another feature. In some patients there seems to exist a bromide drug habit from the long previous use of this remedy; to withdraw the bromides suddenly may cause a shock to the system. In a few instances it was

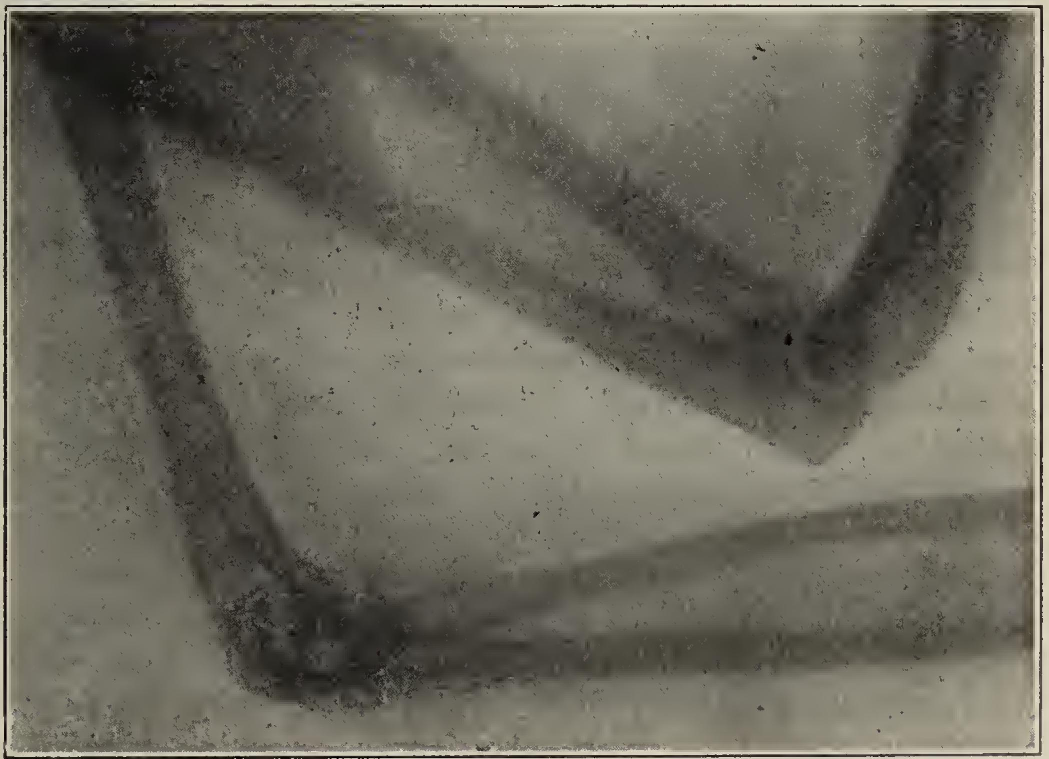

FIG. 6.—The lower picture shows the diseased elbow before excision Above, the healthy elbow of other arm is shown for comparison.

deemed proper to return to small doses of the bromides, and better results followed.

It is a rule with very few exceptions that by this form of treatment the patient gains weight at a rate that is surprising. This patient, F. G., aged fourteen years, gained nine pounds in four weeks. He is now a rollicking and bright boy. Before this treatment was instituted the spasms *(grand mal)* became more and more frequent; his memory was very faulty, so that his school lessons suffered; his companions were unpleasant to him, owing to his seizures. He took bromides; but, in spite of them, the intervals became shorter and shorter. I stopped the bromides and gave x ray treatment to the head, and the static brush to the spinal region and head. His memory is now good; his temperament amiable—he was formerly of an irritable and contrary disposition. So great is now his ambition to get his lessons perfect, that he carries his note book always with him; in fact, he studies while he is taking treatment. He is now struggling for first position in his class. His teachers and his mother are astonished at the mental changes in the patient. He has had no spasm since November 7th; he began treatment November 8th.

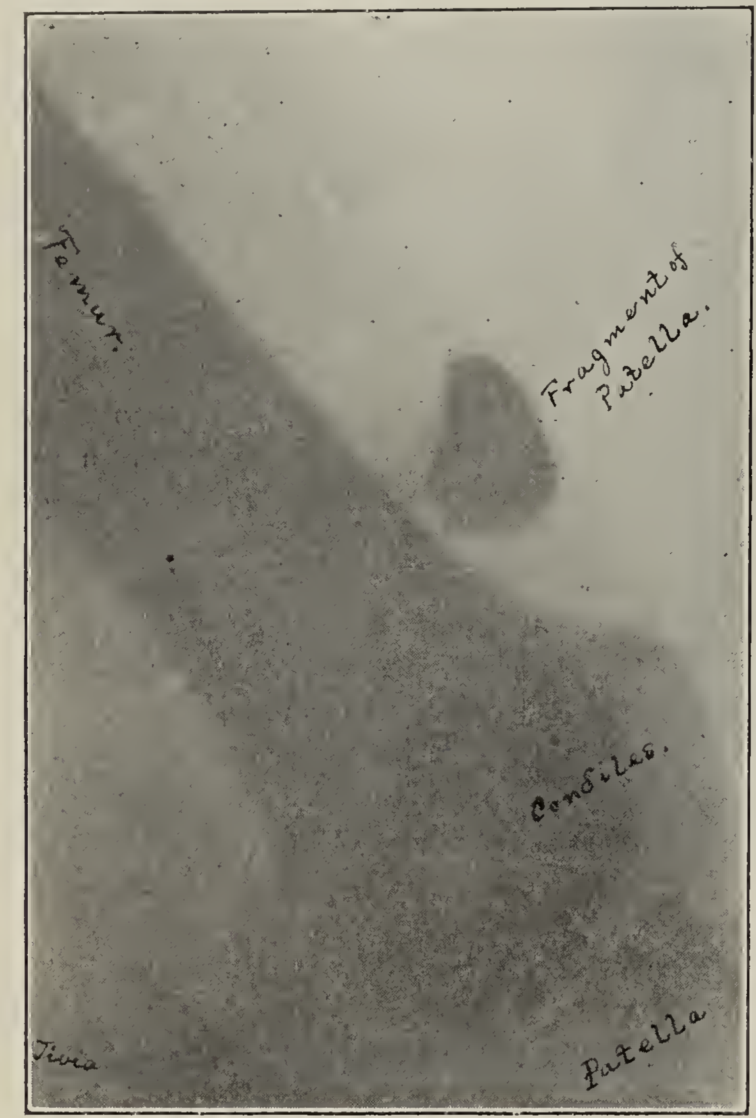

FIG. 7.—Fractured patella, the detached fragment drawn up.

I could cite here a number of such histories, varying, of course, somewhat with each individual. The gain in weight is noticeable, even in those cases where the mental faculties do not improve so fast. I have seen a gain of 15 pounds in six weeks in a girl aged twenty-five years.

The bromide eruptions disappear on the withdrawal of the bromides; this gives much encouragement to patient and relatives, for it removes a very offensive feature.

In many cases of the severer type of epilepsy of long standing an impediment of speech occurs, a difficulty in enunciation; this symptom has yielded to x ray treatment.

In the cases, both *grand mal* and *petit mal*, which were treated by this remedy, it was observed, in general, that the seizures became lighter and of shorter duration, the intervals became longer, and that when a seizure occurred, less prostration followed. In patients with from six to eight seizures a day, after receiving treatment for a few weeks, intervals of two and three weeks have been noticed.

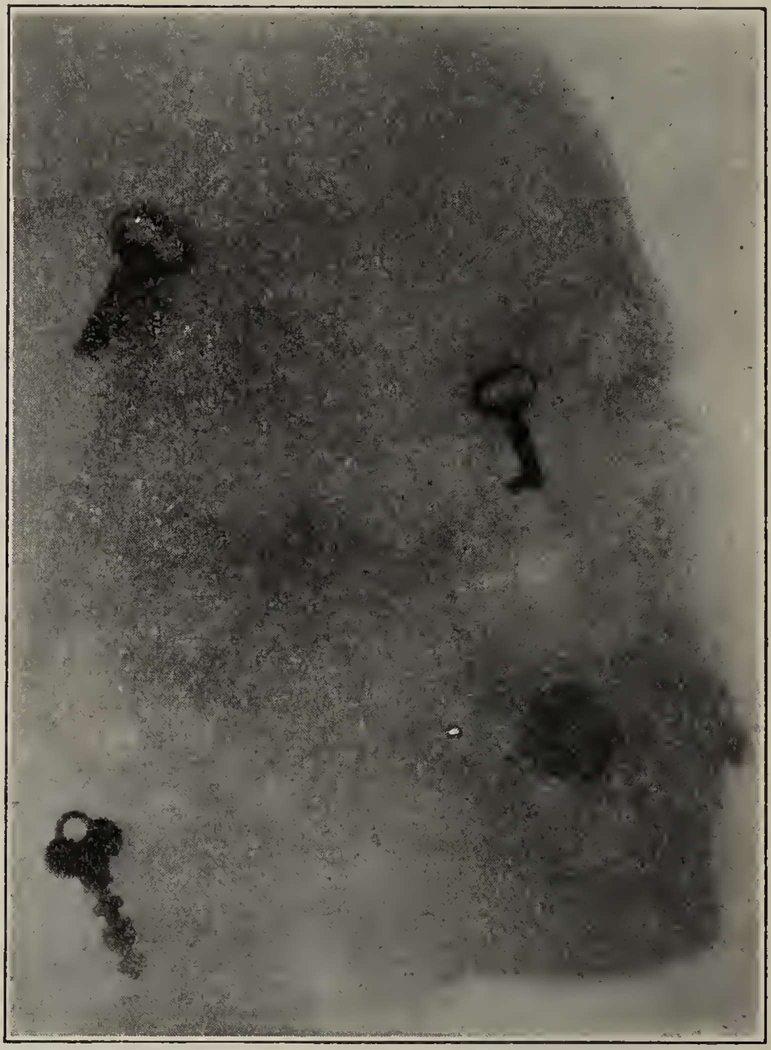

FIG. 8.—Radiograph taken through living skull. The coin is in the mouth, near the photographic plate. The dark keys are between skull and photographic plate; the light gray key and bar are on the side toward the x ray tube, the skull being between the light and the dark metal objects.

I have had no burns—that is, none but on my own hands, and they were due to the unduly long working hours with the x ray aparatus. The physician giving such treatment should, by all means, possess the experience and skill to use this remedy without harming the patient and still remain within remedial lines. X ray application is dangerous in unskilled hands. Only the well-trained physician with the gift of keen observation can judge as to the proper dosage. Some patients, in my own experience, have shown a dermatitis after three applications of ten minutes each. I have seen a superficial burn from one application of fifteen minutes, with the tube at four inches distance, in a patient who had been under x ray treatment for some time at ten minutes and ten inches, respectively, by which dosage the patient was well tanned. The result of the fifteen minutes' exposure was a blister, about the size of a spread hand, involving only the superficial layer of the skin, which was shed. Dr. Clarence Skinner reported two severe burns by x rays at the meeting of the Röntgen Ray Society, in Philadelphia. Though engaged in x ray work for nearly two years, and having observed hundreds of cases, I have not seen a single severe burn in my work. An x ray burn does not show itself until the lapse of from ten to twenty days. Such a burn heals tardily. "X ray burn," by the way, is a misnomer, for it is not a burn at all, but a necrosis, the vitality of the part having disappeared by the severe dosing. X ray applications are not painful.

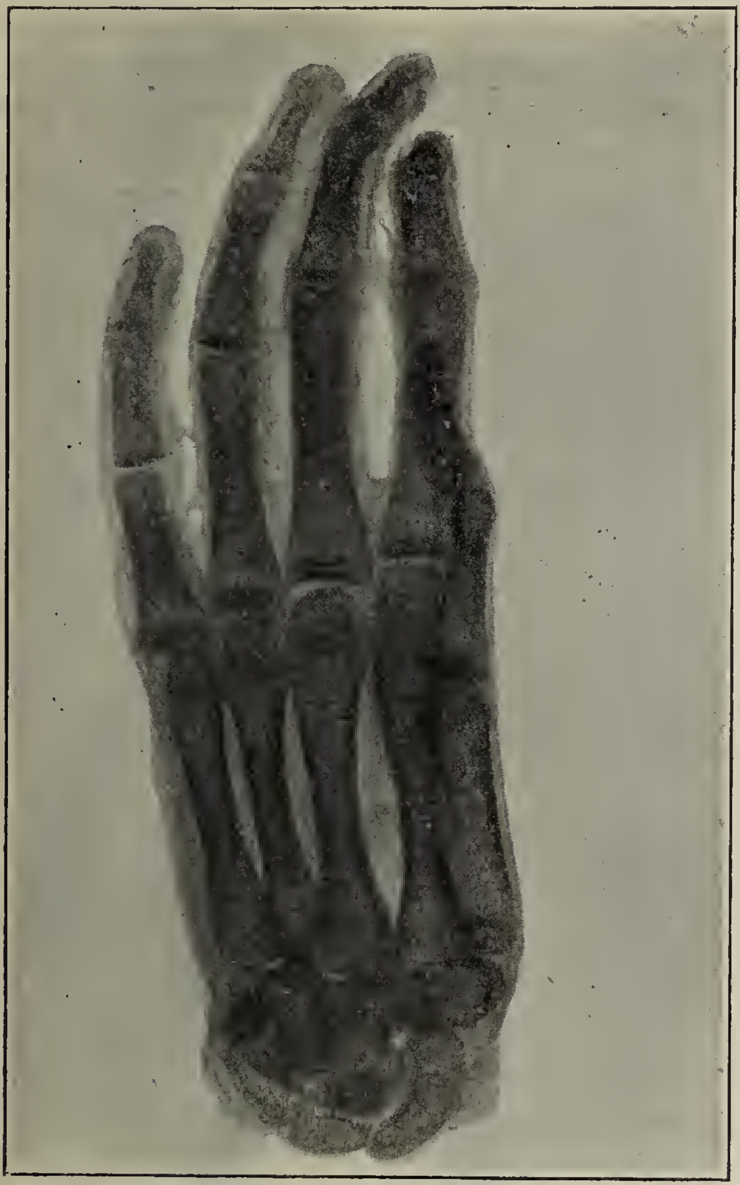

FIG. 9.—Radiograph of hand of a mummy.

Röntgen Rays in Diagnosis.—The diagnostic value of x rays should not be lost sight of, for already many patients have been saved from the necessary danger of an operation, because the x rays demonstrated that the operation was needless. The surgeon may be guided by an x ray photograph to operate with more safety and certainty to give relief. A photograph is by far more reliable than a fluoroscopic examination; the photograph reveals details, which are invisible by the fluoroscope.

Fig. 4 is a photograph of a compound comminuted fracture of the tibia and fibula. The injury was caused by a runaway elevator; the leg was caught between the floor of the elevator and the ceiling of the floor above. These radiographs were taken about three years after the accident. The lines of fracture are still visible, also the lapping of the fibula and the remaining callus of the tibia.

Fig. 5 is an x ray photograph of an arm from which I excised the elbow joint, in 1896; the joint is now cartilaginous and the patient has nearly the normal amount of motion. It will give you the opportunity to look into Nature's laboratory and see her finished work of a rebuilt joint, false though it is. I also show you a radiograph (Fig. 6) of the condition previous to the operation. The patient is present this evening.

Fig. 7 is a radiograph of a fractured patella revealed by x rays three years after the accident; the nature of the injury was not discovered by the attending surgeons, men of renown in our city.

Fig. 8 is a radiograph taken through the skull of a young man. It demonstrates beyond a doubt that part of the x rays pass through the skull and brain, and it is fair to assume that more than twice the quantity passes through the middle of the brain, as in light the power diminishes by the square of distance. The rays pass through four layers of compact bone tissue, and through two diploe. This demonstrates the possibility of x ray influence on the brain in epilepsy.

I will leave to you to judge of the value of x rays in locating foreign bodies in the brain or anywhere else in the body, or in diagnosticating fractures, or in setting fractured bones. I believe that no surgeon should, in all cases, depend on his skill alone, without the use of x rays in these conditions. Not long ago I saw a young child who presumably had swallowed a penny. The child was too young to speak; it swallowed with difficulty and suffered from dyspnœa. The x rays settled the diagnosis by demonstrating the presence of the penny in the upper œsophagus, from which region it was removed surgically. The child recovered. X rays are not used often enough in diagnosis. Dr. Weigel, of Rochester, N. Y., demonstrated in this hall that bone tuberculosis in its incipiency could be revealed by the x ray photograph; the tuberculous focus is shown by a dark area in the bone. How easy it is to remove such a focus at this time! At a later stage it may mean the sacrifice of the limb.

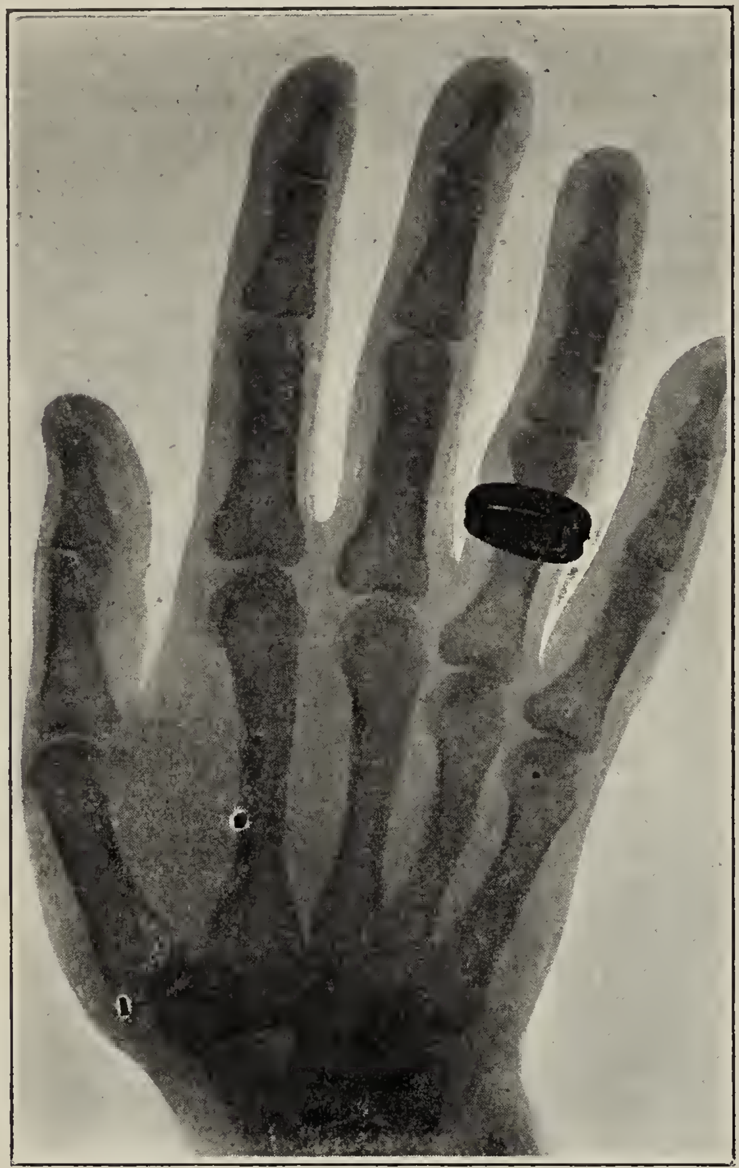

FIG. 10.—Radiograph of living hand.

A short time ago I read in a medical publication that the x rays could be used as a certain test for the existence of the life spark, as they would not pass through dead or lifeless tissue. This is proved to be an error by this radiograph of the hand of an Egyptian mummy (Fig. 9), dead about 3,500 years. Compare with this the picture of a living hand (Fig. 10); in both pictures the bones show almost equally well. The mummy hand is also presented for inspection. Fig. 11 is a radiograph of a six months' fœtus. The ossified condition of the long bones is well shown, also the cartilaginous condition of the joints, cartilage offering no resistance to the x rays.

Something should be said here about choosing an x ray apparatus, whether static or coil. There are many kinds in the field. The coil claims advantage because it works in all kinds of weather, whereas static machines often refuse to work in humid weather. I prefer a static machine, because it gives a steadier x ray light. It should have at least twenty plates of from twenty-eight to thirty inches in diameter. With such a machine I have energized two Röntgen tubes, of five inches vacuum each, in series. The photographs shown were all made with such an apparatus.

Most of my work I have done with Gundlach tubes. The new regulating Müller tube seems to possess points of superiority. The quality of the tube in x ray work is a great factor in attaining success.

X ray photography requires the skill of a photographer aside from the medical acquirements of the operator. To produce exact and trustworthy pictures, experience and judgment are of as much value as in the other points treated of in this paper.

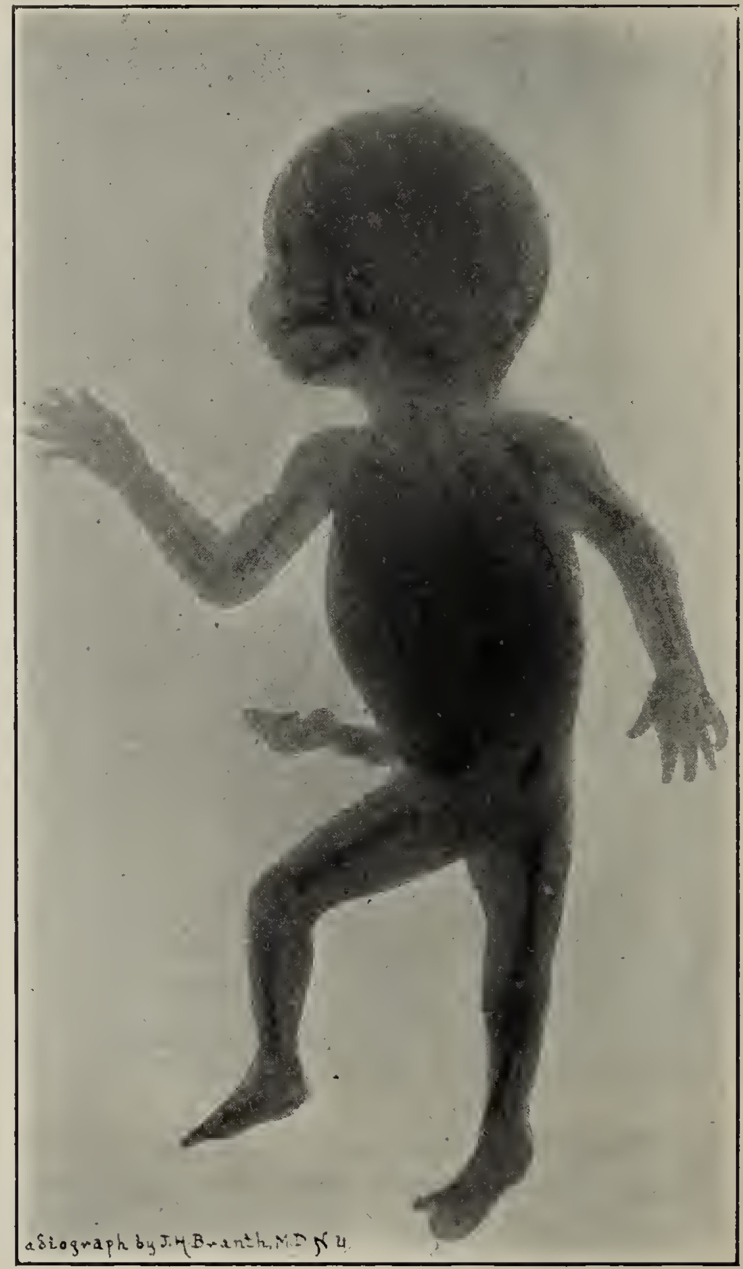

FIG. 11.—Radiograph of a six months' fœtus, showing ossified state of long bones and cartilaginous condition of joints.

183 WEST EIGHTY-SEVENTH STREET.

FRACTURES OF THE LOWER END OF THE RADIUS.*

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(*Concluded from page 1073.*)

In spite of the uncertainty that remains as to the exact ætiology of the fracture, it is certain that some of the factors mentioned, especially the pronator quadratus, the triangular fibrous cartilage, and perhaps the anterior ligament, are factors in preventing perfect replacement of the fragments after fracture, or at least will cause redisplacement, and are potent factors in the formation of the deformity which follows these cases so frequently and which makes them such a source of solicitude to the surgeon. For the one action of the quadratus, if it has any power, is to displace the lower end of the *upper* fragment, as well as the impacted lower fragment, toward the ulna; and if the triangular fibrous cartilage is loosened, its power of holding the lower end of the ulna is gone and the styloid process is displaced forward.

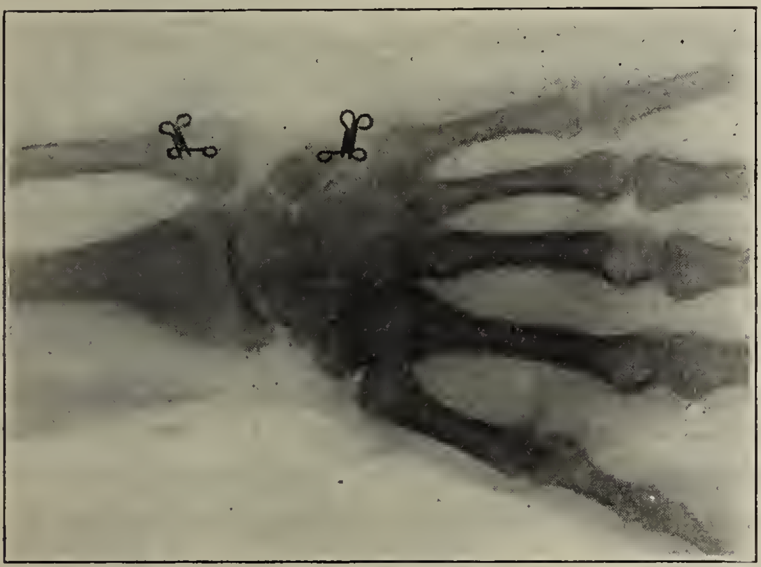

FIG. 9.—Colles's fracture. Result as shown by skiagraph after two years. Some displacement of the upper fragment. Viewed from above, the hand lying on a table. The hooks and eyes were on the sleeve, which was not rolled up before taking the skiagraph.

Inasmuch as the quadratus reaches to *one fourth* of the length of the shaft, and inasmuch as the fracture in most cases occurs in the last *one tenth* of the length of the bone and is never so loosened that it is free, but is always engaged if not impacted (except as we make it free by violent efforts to "free" the ends, as is sometimes done by "breaking" it over the knee), it is evident that the lower fragment is so small and the hold of the quadratus is so limited that the lower fragment is not displaced toward the ulna any more than the upper fragment is. The theory that the fragments are displaced toward the ulna is responsible for the fact that for a long time all the fractures at the lower end of the radius were put up in splints with an adducted angle, supposedly to counteract this tendency, and accounts for, perhaps, a part of the very large percentage of deformity that is seen in the results of the "cure" in these cases.

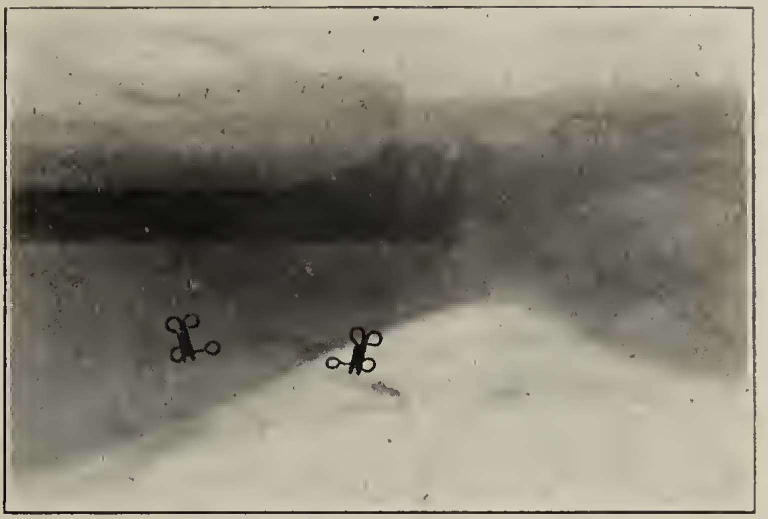

FIG. 10.—Same as Fig. 9, but lateral view. Function in this case good, deformity marked. The hooks and eyes were on the sleeve, which was not rolled up before taking the skiagraph.

Although the one action of the quadratus on both fragments must be as stated, and it was a fact that the acceptance of the theory that the lower fragment alone was displaced caused the pistol splint to be used for many years, yet skiagraphs seldom if ever show any displacement whatever in that direction. Instance Figs. 9, 11, and 13.

Figure 11 is from a case that was diagnosticated as a sprain and was never reduced at all, and in this case there was a break in the continuity on the outer edge and some impaction on the edge nearer to the ulna, but absolutely no displacement.

Figure 13 is from the case of a patient who took

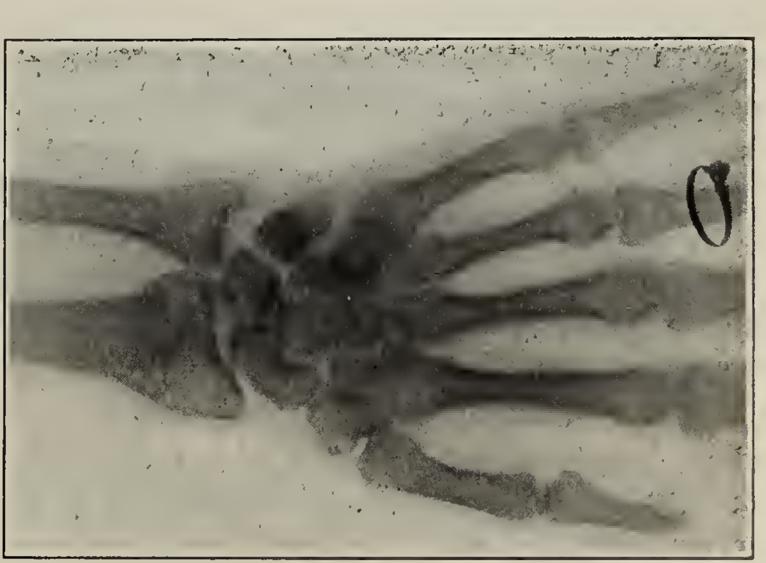

FIG. 11.—Colles's fracture, treated as a sprain. Apparently little displacement of the ends of the radius, but deformity marked.

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* Read before the Erie County Section of the New York State Medical Association, Buffalo, N. Y., March 14, 1904.

care of herself for two weeks and did not consequently have any reduction, and although you may see in Fig. 14, which is from the same case, considerable displacement forward, there is none toward the interosseous space.

In Fig. 9, which is from a case that received competent attention from the first, there was in the result some displacement of the upper fragment, but not of the lower fragment, as the lower fragment is not tilted in such a way as to form fully the cup for the inner edge of the wrist joint.

It is hardly necessary for me to refer to the unsatisfactory results that are secured in these cases, for any one who has not had sufficient experience to have had one in his own practice has surely been afflicted with a story and an exhibition of the bad result of some one's else treatment of such a case. In general, the bad results may be summed up in the description "poor function," more or less silver fork deformity, and displacement forward of the prominence caused in the normal hand by the styloid process, so that the wrist is flattened and widened, and there is a greater or less deformity of the wrist caused by the displacement of the hand toward the thenar prominence. This latter deformity is caused by the tension of the quadratus on both fragments, not one alone, and gives rise to a general sinking in of the outer border of the forearm. It is not an exaggeration to say that, as the fracture is treated by the profession at large, including the general practitioner, the specialist, and the internes at the hospital, by whom no small part of this particular fracture is first reduced and put up, 85 per cent. of the results will be found to show some deformity, and even in the remaining 15 per cent. there may be some doubt of the correct diagnosis when the accident occurred.

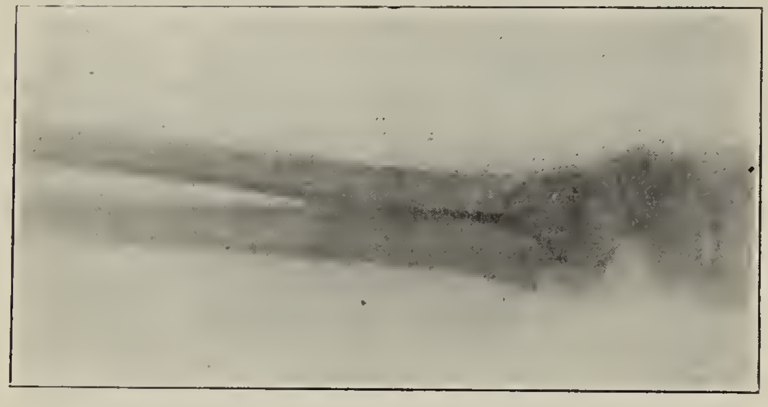
FIG. 12.—Same as Fig. 11. Lateral view.

I do not mean by this to argue that if no deformity results there is doubt of a fracture, but there are certain cases where the result is so perfect, that even Nature could not have done better in the first instance.

For instance, in gathering the figures necessary for the above statement in Hamilton's book which, by the way, is usually catalogued as on "fractures and dislocations" and which really is on "the deformities following fractures and dislocations of the joints," are some statistics that go first to make up a basis for any additions that can be secured from later works and journals and hospital records. Hamilton's book is much more interesting under its true title than as a textbook on fractures and dislocations. He has followed up the treatment of 26 private or hospital cases of fracture of the lower end of the radius, and in his analysis he gives the result as perfect in 9, and imperfect, with degrees of deformity from a marked silver fork of the radius to a very common one—the slumping of the styloid process of the ulna—in 17 cases.

In his perfect results, however, he has some cases that surely would not be received in evidence in a court of record. For instance, he takes as one case a student, undoubtedly from the classroom, where the young man states that he had such a fracture when he was a mere youth, and that his father, "a most competent and illustrious" professional brother, promptly reduced the same, and Dr. Hamilton reports that "you would not know that there ever had been a fracture." I doubt not, and perhaps there never was. But, even taking such evidence as this, which, to say the least, is not scientific, *his* percentage (and each of us gives his own work the benefit of the doubt as far as perfection is concerned) was only 35 per cent. of absolute cures without deformity; and from the description of some of the perfect cases, in the light of strict justice, it must be acknowledged that this must be reduced to a greater or less degree, according to the state of one's dyspepsia, and his mental attitude when gathering the statistics.

It is, furthermore, a fracture that is very easily confounded with severe sprains, and by this I mean such sprains as are only associated with a complete rupture of the "anterior ligament" of the wrist, which may undoubtedly occur under sufficient stress, and that without any fracture. When, however, this particular form of sprain occurs, there is sure to be sufficient effusion of blood to mar the usual contour of the wrist and render it difficult to make out at the time whether there is a fracture of the variety under discussion or not.

Undoubtedly, then, some of the remaining 15 per cent. of perfect results must be considered hazy, so far as regards the evidence to the effect that a fracture must have been present.

It was not until 1850 that attention was called to this form of fracture and sufficient accuracy of description was prevalent, so that in the hospital reports and in textbooks in general it was not classed as a fracture at all, but was included in the list of dislocations.

Dr. Stimson states that, in most of the textbooks and reports of hospital and dispensary practice prior to 1850, this form of fracture was usually included in the number of dislocations of the wrist *backward,* a thing which is seldom reported now, and which is of rare occurrence to say the least. Dislocation of the wrist backward, with rupture of the anterior ligaments and without fracture of the lower end of the radius, is so rare that few surgeons have seen it.

The man whose name this fracture bears did not give his description of the injury until about 1814, but even he did not succeed in impressing the description on the medical readers, for it was about thirty years after this that the classification began to be accepted.

Figures 3 and 4 are from photographs of a man who came under my care a few days ago, and are of importance only to show the well known appearance of the fracture under discussion, and to me personally as this is one of medicolegal importance.

Case of Mrs. G. Two views, Figs. 9 and 10. I saw this patient a year and a half after the accident, which was caused, as is usual in these cases, by falling on a slippery sidewalk. She was taken to a neighboring house and a surgeon was called, who reduced the fracture under chloroform as the patient was not very tractable, and incased the arm in a temporary splint and sent the patient to her home. The arm was examined by the surgeon on the second day after and the position was pronounced good, and two days later a plaster cast was applied. When the cast was removed after two weeks the wrist was in the present condition as to appearance. The deformity appeared while in the cast.

In this case the wrist is useful, function having fully returned. As can be seen, however, by the familiar contour, the styloid process has slipped well forward, and by looking at the lateral view the line of the radius shows a marked flexion at the point where the callus begins. The point of contact with the carpal bones is also moved forward, and as the hand is now used there appears to be a slight dislocation forward. This radiograph was taken without pushing up the sleeve, and the hooks and eyes that show are on the dress and are not in any way associated with the fracture.

The case of Mrs. G., who was cared for, and well cared for, by a very competent man, is such a result as we may expect in a large percentage of our cases. The function is good and she can do all the work she formerly could do, and can move her fingers and bend her wrist in all directions, but there is a marked deformity and she is very sensitive about that.

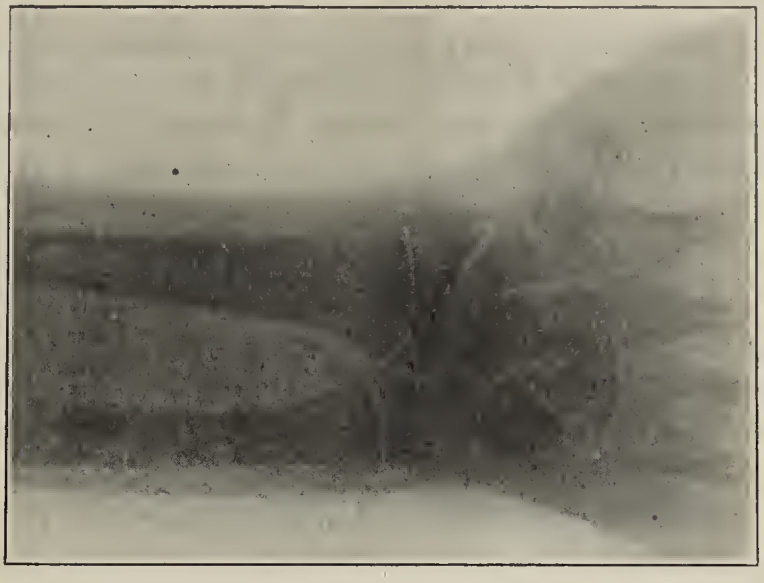

Fig. 13.—Colles's fracture after two years, no treatment, comparatively little displacement in this view.

Miss M. (Figs. 11 and 12) was told that she had only a sprained wrist, and was treated for some weeks for that, until her own doctor returned from a trip and he asked me to make the radiograph herewith presented.

This was a recent case and the callus is still here and displacement appears in the lateral view. The styloid is in this case displaced, but not so much as in the other case.

These four radiographs represent cases in the prime of life, and the deformity is evident but not marked.

The next case, that of Mrs. McG. (Figs. 13 and 14), was sent me by Dr. D., with the history that she fell, but thought she had only sprained her wrist, and did not have the benefit of the advice of a doctor until some two weeks later. This was not reduced at any time and is, so far as the his-

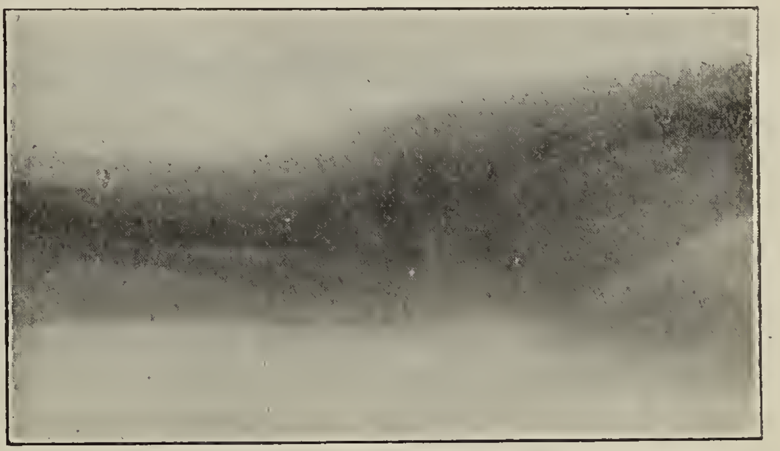

Fig. 14.—Same as Fig. 13, but the "silver fork" deformity is marked.

tory goes, in the same condition as at the time of the accident.

Two views are shown and the contour of the wrist in the lateral view indicates the amount of deformity. The woman was in advanced life. She suffers from a neuritis and has many troubles with the hand, and yet the hand, in spite of this condition, is a useful hand, and she can (with some complaint) do all the ordinary things that she can do with the other hand.

This deformity is, I believe, so far as the failure to have perfect alignment of the radius is concerned, due to the fact that the radius is not in the first instance perfectly reduced. The slumping forward of the lower end of the ulna is due largely to the retaining apparatus.

Many practitioners feel in duty bound to treat all the cases that come to them, and as afflictions come to any family more than they feel they deserve, the conscientious man tries not to multiply the cost of any particular affliction, and many a physician who has felt the sting of a poor result would gladly turn the next case over to some experienced surgeon, only he does not feel at liberty to do so, because the patient was hurt at his door, and to send him to some one else is, if the man is poor, an imposition; if rich, a lost opportunity; and for this reason many undertake to do alone what they have no feeling of confidence that they can do.

In general, it is the practice of the profession to "try" to reduce these fractures of the lower end of the radius without an anæsthetic. After several trials, if the man is tired and "calls quits" the fracture may be left unreduced, but if the patient knows and complains that it is still out, then the practitioner calls a neighbor to give an anæsthetic or sends him, if a poor person, to one of the hospitals, or occasionally a rich man will be referred to a surgeon.

All the methods of reduction yield good results in the hands of the expert; and in the hands of the man who is inexperienced or who has had a limited amount of experience, lead to a certain amount of pain, an incomplete reduction, and a prompt recurrence or a partial return of the deformity as soon as the muscles have yielded up their tension under rest and a comparatively loose splint. The best of these methods of reduction is that known as freeing the impaction of the upper fragment by a sudden wrenching of the hand with the patient off his guard; or, if the patient is given an anæsthetic, the wrist may be taken and bent sufficiently, so that the fragments are loosened one from the other, and then, by applying traction, the wrist may be sufficiently extended, so that the ends can be brought into place and then fixed. There are many objections to this method, because if not done under an anæsthetic the patient always thinks undue roughness was used, and always, if such treatment is resorted to, there is such terrific spasm of the muscles that it is practically impossible to relieve the tension enough so that the fragments can be placed in position and kept there.

The surrounding muscles are, by the very traumatism caused by the fracture and from the so called freeing process, lacerated, and are hyperæmic and shortened by the simple swelling, and they will pull the ends closer together and leave the bone not in good alignment. With the muscles so maltreated it is next to impossible so to reduce the deformity that the bone will, when left to itself, remain in place. This latter condition is very important, and must be considered as the condition that will determine whether any measure is good or bad.

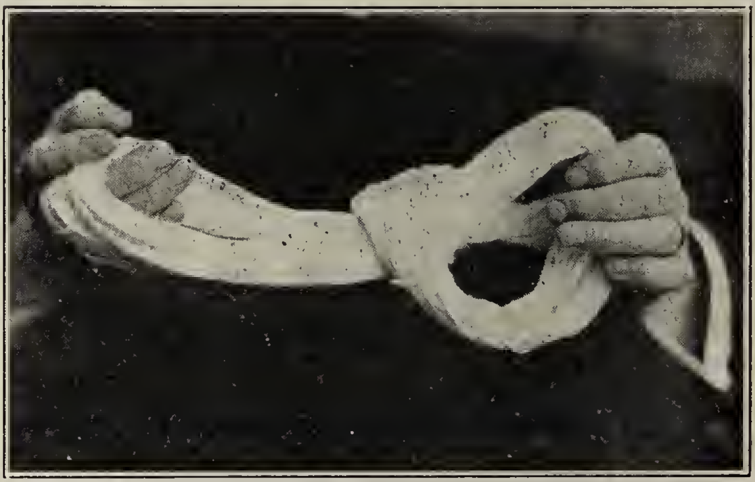

FIG. 15.—A method of reduction of Colles's fracture. Method of preparing the loop of yarn to slip over the hand and arm to be operated upon.

If a fracture is not so reduced that it will of its own accord remain in place when undisturbed—say resting on a pillow—then certainly no splint with which I am familiar will complete the work. The splint put on to keep the bone in place or to finish the reduction if that bone has not been sufficiently reduced so that it will stay without the splint, for a while at least, simply rests the muscles, and the traction will inevitably cause deformity to reappear "while in splints," which means that it was not in the natural place at the time of the application of the splint.

But I have to present a simple method for the reduction of this fracture that will, I think, appeal to all, in that, almost without exception, a practitioner of ordinary strength can use it in any convenient place and use it alone, and can, moreover, if the necessity arises, e. g., with an intractable patient, use it when once started *in spite* of the patient.

Place the patient in a high office operating chair in the upright sitting position, with the hand extended in front, the plane of the hand perpendicular to the floor, and the skein of yarn looped (Fig. 15) over the wrist, with the loop knot fixed at a point on the upper side of the wrist (Fig. 16) as the hand is extended as directed. Fix the free end of the skein of yarn to a post or to the door jamb by means of a staple, at a height corresponding to the patient's shoulder. Then grasp the patient's forearm with the hand opposite to that which is injured in the patient (that is, if the patient suffers from a fracture of the right wrist grasp his forearm with the left hand) and make slow, but steadily increasing, countertraction on the arm (Fig. 17), until the arm is fully extended and the wrist is tired out somewhat, and then there will appear a lessening of the deformity, and usually a complete reduction of the fracture at the wrist, without touching the point of fracture.

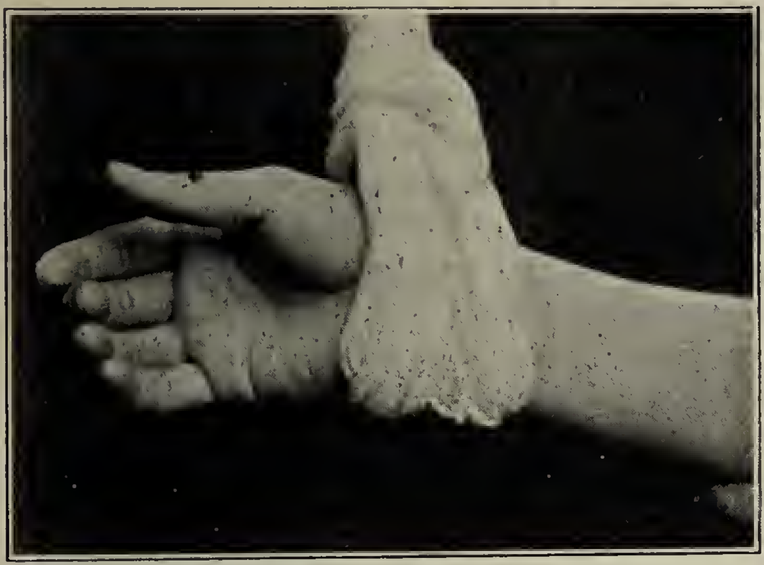

FIG. 16.—Method of reduction of a Colles's fracture, showing the application of the prepared slip noose to the wrist, with the "knot" fixed above the point of fracture at the radial side of the wrist. This must be drawn down very snug to the wrist before traction is begun, as the yarn will give enough for it to slip over the wrist unless it is drawn tight.

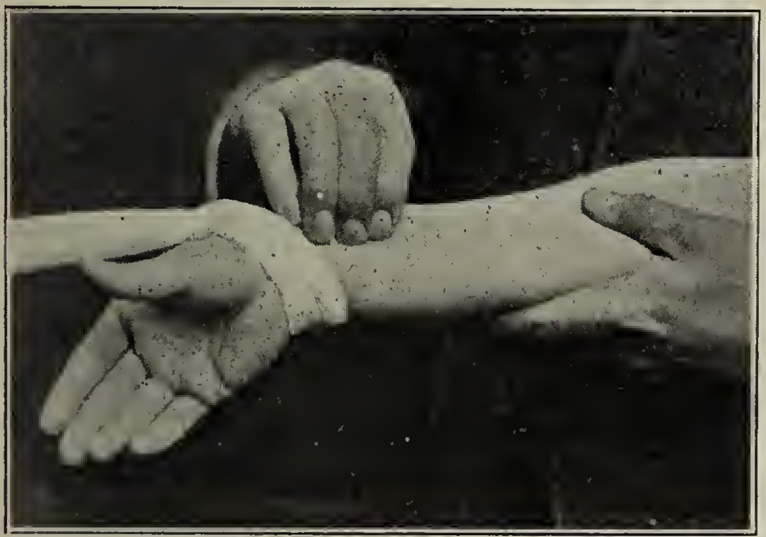

FIG. 17.—Method of reduction of Colles's fracture. Strong traction by the surgeon against countertraction on the yarn affixed to some stationary object.

The lessening of the deformity will not *remain* unless with the fingers of the other hand you "jack back" the fragments of the broken radius, when perfect and permanent reposition can be secured. The hand should then be held in the forced extended position until the muscles have relaxed and then the strain can gradually be lessened and the fragments will stay in place.

I use a skein of white yarn and make a common running "noose" by passing the right hand through the skein held open in the left hand, then grasping both sides of the opened skein with the right hand (opened after having been passed through the opened skein) and then withdrawing the hand. This running noose is fixed as directed above, and then counterextension can be made so gradually that little or no pain, but a sense of relief, will be afforded, and the deformity can be made to entirely disappear under this alone; but it will reappear as soon as the extension is released, unless the bones are adjusted—that is, unless the distal fragment is made to lie in the same plane as the proximal fragment, as this distal fragment, having no muscular attachments, is not affected by the extension.

For the material for the reduction of Colles's fracture as described in this paper, I use the yarn that I ordinarily keep in the office as a sample to show to mothers, in explaining to them how to make a supporting truss for congenital hernias in very young children. The yarn is white and each strand is about the size of the lead in a lead pencil, and, of course, not at all tightly twisted. I have endeavored to get a number to specify the size at the dry goods store. I was informed, however, by the sarcastic young woman in charge that "it did not come in any size but the one I had, and that the name was on it." So the name was, and it read "Flesher's, the best Germantown Zephyr." It furnishes a good, soft medium to pull on and one that will not give way and yet is of sufficient size and firmness not to cut into the skin, and if the knot is placed as suggested it will give the wrist a much desired turn.

The yarn is a pure wool, and a cotton or part cotton would so harden up with the pulling that it would cut.

This method of reduction is applicable to all fractures at the wrist except the interarticular fractures, which are, of course, "Barton's fractures" and not Colles's; those should not receive any extension, but can be replaced usually by forcibly bending the wrist forward—that is, toward the palm of the hand.

The advantages of the plan adopted are that

First. Once carefully arranged, with the skein of yarn adjusted as directed and made fast to the wall or some other convenient standard, and gentle traction having been started, the patient cannot get away from the treatment, and usually if the traction is intelligently applied, will not try to get away. But all manipulations and adjustments of the yarn and the steadily increased traction must be proceeded with methodically and confidently.

Second. Even with a patient of muscular build, and a surgeon of slight muscular power, sufficient traction can be applied so that the reduction is easy and perfect and complete.

Third. It is applicable to practically every fracture of the lower end of the radius ("Colles's") that you meet, the interarticular being represented only by a very small percentage.

Fourth. It is seldom necessary to give any anæsthetic.

Fifth. All the details can be attended to by the surgeon if he is alone; but, of course, it is always convenient to have some one at least to assist in handing the splints that have been prepared before the "setting" of the bone.

Sixth. The manipulation with the skein of yarn meets every anatomical requirement—namely, that the extension be applied so as to pull the hand toward the ulnar aspect of the arm, that the ulna be pressed at its tip toward the median line of the wrist to keep it in proper place so that it will not slump after the setting, and at the same time will leave the hand and the radial side of the wrist free for inspection and manipulation. In this case, or in any other case of reduction, after the reduction of the fracture, it is wise to allow the hand to lie on a pillow for a few moments after the fracture is in place and without any support, and if this is done and the fragments when left to themselves do not again become displaced, you may be sure that they will stay in place after the splints have been applied. It is the fractures that have been partially replaced and then held while some retaining splint has been applied that become displaced and heal with faulty union.

With this method of reduction, as with any other, it is wise to see if you have succeeded in getting the fragments fully back and enough opposed to each other, so that the fragments will remain in place.

If, after a few minutes, the fragments have remained in place, and if the temporary splints have been secured with the adhesive plaster, you may be sure that the deformity will be slight and that at least the radius will be straight. The deformity that results from the slipping of the ulna forward toward the palmar surface of the wrist, so that the ordinary ulnar "styloid prominence" of the wrist on its posterior aspect is lost, is one hard to insure against. If, however, a pad or small roller bandage is *always* affixed to the splint on the anterior ulna side, as described by Dr. Moore, and if that in turn does not displace the fragments of the radius so that it has to be removed, then the percentage of deformity will be much smaller than it is now.

After the bone is reduced in the manner specified, if the case is one in which the patient comes to my office, I allow him to rest the injured wrist on a pillow for about ten minutes, and then with a careful support of the wrist I make an examination with the fluoroscope and by means of the x ray determine whether the bone is in place. Here, it is worth while to note, as every one will see, that it is ncessary to view the wrist in the *horizontal* and the *vertical* planes, or it will not give correct impressions of the condition. If the bones, by feeling and by the fluoroscope, are in place and have remained so during the rest on the pillow and during the manipulation necessary to get two views of the wrist, then I feel safe in putting the wrist up in splints, and am usually able to do so with little assistance from any one, having prepared the splint to be applied before beginning my final examination or during the time I let the wrist rest on the pillow. In regard to splints, it is evident to me that in those cases in which I have failed to secure a perfectly straight radius I have not had the bone perfectly reduced, and such a calamity has not overtaken me since I have been using the method above described, which I have not found described in any of the books on fractures, but which I believe to be of great value in insuring at least a straight wrist. But to prevent the other deformity, which is a sequela of such a large percentage of cases, namely, the slumping forward of the styloid process of the ulna, I am convinced that, however carefully the fracture is reduced, even though it bears the test of allowing it to remain without support and seems to be in place when the splints are applied, yet the splints—and the best is the one with the pad affixed, as described by Dr. Moore—are the important factors in the maintenance of the position. But even this splint, unless the muscles on the back of the hands are in their proper position, will not insure a perfectly placed styloid.

This slumping forward of the styloid process of the ulna is the nightmare of these fractures, and is, of course, in the bone that was *not* fractured at all, but is caused by the loosening of the triangular fibrocartilage and the continued confinement necessary to the firm union.

A temporary splint must be applied until the swelling subsides and some device must be obtained that will furnish a constant pressure on the lower end of the ulna, which is so seldom broken, and that will not at the same time displace the fragments of the radius.

The textbooks and teaching for the last twenty years have directed that a board splint be applied with the posterior splint extending only to the carpus with a straight splint on the anterior side extending to the flexion of the fingers, being careful not to include the fingers, so that the tenosynovitis that follows the traumatism at the wrist would not result in stiffening of the fingers. Some leave the hand in actual contact with the anterior splint properly padded and with the correction roll under the head of the ulna, and some place a roll under the hand, so that the hand is bent back to a small degree on the radius.

The method of reduction above described will be found to be very practical, and will insure, even in the hands of those who see a limited number of cases, a perfect reduction of the deformity without unnecessary force, and will so complete a reduction that the bone will " stay of itself " when undisturbed, and will stay for all ordinary examination, such as x ray and manual, and still will remain while you leisurely apply a splint, and you can insure the patient a *straight wrist* without the " silver fork " deformity.

186 ALLEN STREET.

COMMUNITIES WITHOUT HEALTH DEPARTMENTS IN THE CRUSADE AGAINST TUBERCULOSIS.*

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Prevention of disease as a governmental function is as yet so undeveloped as to find many governments unprepared for it. This, perhaps, is even truer of republican forms of government than of monarchical forms. Where one man power prevails, one man alone needs to be educated for the introduction of new ideas; whereas in governments by the people the masses must be educated.

In the United States little progress has been made as yet in weaving newly discovered truths about the prevention of disease into the fabric of our laws. As a people, we still prefer to look upon disease as a matter between the individual and his God, rather than as a matter between the individual and his neighbor—as something too sacred and personal to be interfered with by any man or by any number of men. We scarcely have begun to get up machinery in any of our forms of government for the prevention of disease.

Until very recently the only kind of machinery which had been created in our governments for the prevention of disease had been what we call boards of health. These are loosely constructed committees or bodies with more or less arbitrary powers, rather legislative in character than executive, and without due responsibility to any one. They have become thorns in the flesh of the people, because they mostly have been in evidence in times of distress and have arrested public attention rather by drastic measures for stamping out epidemics than by preventing such with milder measures beforehand. Only in the United States Government and a few cities of the first class has an effort been made to establish departments of health and to put prevention of disease upon a legal and scientific basis.

Probably all of our States, most of our cities, practically all of our towns and counties, still go lumbering along, either without any machinery for the prevention of disease or with boards of health. Such governments are seriously handicapped in the modern crusade against tuberculosis which is being preached throughout the civilized world. What can the people in communities where such governments exist do to help along the crusade?

In practice, the crusade against tuberculosis means the cure of the disease during certain stages, its prevention in all stages, and by these means its ultimate extinction. On account of the great prevalency of tuberculosis, its chronicity, and its contagiousness, the undertaking touches at many points on sociological, philanthropic, and governmental problems. It is perhaps the greatest task that has ever confronted man. As matters stand, its working out cannot be the same in every place. Ways and means must vary with density of population, standard of intelligence, and grade of prosperity.

The curability of tuberculosis is well established. Skepticism upon this subject must go down before ocular demonstration. Persons cured of tuberculosis are no longer curiosities. They are to be found everywhere, and even can be seen in bunches nowadays in gatherings of many persons. Before long every community will have its fraternity of cured " lungers."

In the early stages of tuberculosis all cases recover under proper treatment. This treatment is so simple that it ought to be within the reach of every one. That it is not, is because the truth is not recognized. Men have not yet freed themselves from the shackles of the past. It is hard to unlearn. In most cases tuberculosis still remains undiscovered until death has a mortgage on the victim. The average physician still clings to cough mixtures and closed rooms, and in doing so abets the disease rather than the patient.

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* Read before the Scranton Society for the Prevention and Cure of Consumption on the first anniversary of its organization, February 20, 1904.

Even in more advanced stages, anywhere this side of consumption itself, many cases can recover. Treatment in these stages, however, is a very different proposition from treatment in the earlier stages. It implies rest, and loss of income if the patient is a working person, and it involves outlay of money for many things which need not be considered at all in earlier stage cases. The treatment, moreover, must be kept up for a very long time. When the disease has developed into consumption, treatment is a matter of prolonging life, rather than of making a cure; and even that is a luxury which can be afforded only by the rich.

Tuberculosis can be cured in any climate. All that is necessary is life in the open air, proper food, well regulated and carefully disciplined conduct, and in more advanced cases properly directed rest and exercise. People who can command these things in their homes can be cured in their homes. People who cannot command them should be treated in sanatoria. Most people can be treated better in sanatoria than in their homes.

Tuberculosis is preventable as well as curable. Of this there no longer can be any doubt. It has been demonstrated that tuberculosis is due to the implantation and growth of a microorganism. The microorganism must be planted, it must grow, it must mature, and it must again be planted. Any break in this chain means a check to the disease. Stop the planting and no new cases of tuberculosis can arise.

Our knowledge of the life history of the tubercle bacillus, the microorganism mostly concerned in tuberculosis, gives us the key to the practical measures for the prevention of the disease. Tuberculosis is a house disease; it depends upon the house for implantation, growth, maturity, and seed scattering. The house is the granary of the bacillus. It is the abiding place of the bacillus while outside of a host. It is the place where a person gets an implantation.

Sunlight, air, and water are the natural enemies of the tubercle bacillus. Sunlight and air kill it, and water dissolves it out of its *cache*, so that light and air may get at it. The bacillus comes out of a host wrapped up in broken down tissue which serves as a *cache*. When this broken down tissue is deposited in a house, it dries and hardens, and the bacilli inside remain alive for a long time. When it is deposited in the open, it is dissolved or becomes disintegrated and soon becomes devitalized. This is why an enclosure of some kind plays such an important rôle in the propagation of tuberculosis. In an enclosure sunlight, air, and water cannot get at the tuberculous matter and it remains vital; out of doors sunlight, air, and water do get at it, and it soon becomes sterile.

Houses of one kind and another are the ordinary means of spreading tuberculosis. The home is the most frequent means and the workshop the next. This is so because it takes prolonged intimate contact with a person, place, or thing that has been intensely contaminated with tuberculous matter to give rise to an implantation. The home and the workshop are the two places where environment of sufficient intensity of contamination, and contact of long enough duration for implantation, most readily can exist. Probably three fourths of all cases of tuberculosis which are conveyed from person to person are contracted in the home, and the other fourth is contracted in the workshop.

The number of people in every community suffering from tuberculosis in various forms and stages is very large. As a rule, the poverty, helplessness, and distress of such people and of their families is great. The more densely populated the community, the larger is the number of those who suffer from the disease and the greater is the poverty and distress of the majority of those who suffer from it. To give aid to those who are struggling for life and relief to those who are suffering from the ravages of the disease is, therefore, a gigantic undertaking in any community, and the smaller the community, the more beset with difficulties it is. Provision should be made for separate treatment of early stage cases, middle stage cases, and advanced cases, and something should be done for those who are dependent upon a stricken down bread winner, for if not aided these will, in the near future, fill the ranks of those who are now going through the struggle.

One of the most serious difficulties in the way of providing treatment for the consumptive poor in small communities, and even in smaller cities, is the unpreparedness of the medical profession for the task. Tuberculosis has been looked upon as an incurable disease so long, that the profession as a body can scarcely be persuaded that it is curable. Very few physicians will even try to cure it. Most of them content themselves with smoothing the path of the victim of the disease in his descent to death and look somewhat askance at the man who asserts that he can cure it. So complete has been the abandonment of the victim of tuberculosis to his fate that, even at this day, medical colleges pay little attention to training men for the treatment of this disease. The result is that experts in the treatment of tuberculosis can be found only in health resorts and in large medical centres.

Experts, moreover, are not easily made. To produce an expert requires ample clinical material and long training. The hospitals connected with medical colleges do not take tuberculous subjects, and are not equipped for the treatment of tuberculosis. Ample clinical material is not available. Not until medical schools have facilities for the treatment of tuberculosis in every stage, according to modern methods, will it be possible for them to turn out medical men capable of diagnosticating tuberculosis in its early stages and treating it with prospects of recovery.

For some years to come, communities which desire to enter upon the crusade against tuberculosis will first have to train their experts. This can best be done by the establishment of dispensaries for the treatment of tuberculosis. Dispensaries, therefore, are the first essential asset in a voluntary crusade against tuberculosis. Such dispensaries will answer a threefold purpose. They will supply material to physicians for equipping themselves as experts; they will give poor people with tuberculosis, who still are able to work, an opportunity for recovery without too much sacrifice; and they will serve as a propaganda of knowledge of the prevention of tuberculosis. Such dispensaries, however, must be equipped to give material aid, as well as medical advice. They must supply medicine, preventive measure supplies, and food when necessary, and they must supervise treatment in the homes of the patients through competent visiting inspectors. They must be equipped to give baths, sterilize clothing, and do laundry work, where these are necessary for keeping the home sterile.

One of the best channels through which education can be carried on in the prevention of tuberculosis is the dispensary. It gives the entrée into the houses of the poor and furnishes opportunity for instruction and control. In it many early cases which have not yet arrived at the contagious period can be cured while at work, and thus be prevented from ever becoming contagious cases. Many tuberculous subjects are compelled to work as long as they can stand up, for the simple reason that they must earn their daily bread. If such patients could only be brought under observation early enough, given a little assistance in the way of extra food, and taught the value of fresh air and cleanliness, they undoubtedly would get well. Through the inspectors of a dispensary many early cases, which otherwise would remain undiscovered, can be brought under observation. Frequently, in families where only one patient in an advanced stage has applied for treatment, a number of other cases are found in various stages of the disease.

Next, communities in a volunteer campaign against tuberculosis must provide hospital accommodations for dying consumptives. A time comes in every fatal case of tuberculosis when carrying out preventive measures becomes very difficult. During the last few weeks of life a consumptive becomes quite helpless. He is no longer able to keep himself clean, and, do what he will, he is bound to soil his clothing, and especially his bed linen and body linen, with the tuberculous matter that he throws off. Usually, at this time tuberculous matter is given off in large quantities, and frequently it comes up, not only with the act of coughing, but also with that of vomiting. Under such circumstances, even a skilful nurse may find it difficult to prevent a patient from contaminating his environment. She cannot prevent matter from getting on the bed linen, body linen, furniture, walls, and floor in the immediate vicinity of the bed. To make such a patient harmless, it is necessary constantly to clean that which has been soiled. This means frequent changing of bed-clothes and body linen, and scrubbing of floors and furniture. Everything must be kept spotlessly clean. In such cases it sometimes is necessary to change the linen two or three times a day. Floors have to be scrubbed daily and sometimes even mattresses have to be sterilized. Such cleanliness cannot be maintained in the homes of the poor, however willing the friends and relatives may be. It is too expensive. Even charity could not afford to go into such homes and keep them sterile. The only practical way in which poor dying consumptives can be cared for is in a hospital, where the work can be done on a wholesale basis.

How small communities are to supply hospital beds for dying consumptives is a practical problem beset with many difficulties. Were it not for the prejudice which exists against consumptives and the unnatural fear which has sprung up bcause of the contagious nature of the disease, it is quite possible that provision might be made for most of them in existing hospitals. Our country is full of hospitals. If our hospital beds were counted and a census taken of our sick people of all kinds who cannot be cared for properly in their homes, it probably would be found that we have ample beds for all. Unfortunately, however, we would rather keep our beds empty than admit cases that do not suit. Formerly, the consumptive was excluded because he lived too long and would not get well; now he is excluded because his disease is contagious. Alas, that our pride should sow cockle in the wheat field of our charity! We like to give aid in distress, but we like to give it where it brings glory. Our charity has built hospitals in great numbers and has provided hospital beds which easily would give relief to all suffering humanity, but we desire to see the people whom we put into these beds get well quickly. For the short sufferer we have a welcome, but against the long sufferer we turn our faces.

In communities where hospitals exist an effort should be made to equip all vacant beds for dying consumptives in separate wards. This can be done without in the least degree prejudicing the interests of other patients and without endangering any one by reason of contagion. A change of this kind does not involve a great outlay of money. It would not materially add to the expense of administration. The charitable instincts of the people which such action would touch would supply the money necessary for maintaining the beds.

In communites where there are no general hospitals, or where existing hospitals refuse to make provision for dying consumptives, effort should be made to get up hospitals for the specific purpose of taking care of such cases. Hospital buildings for this purpose need not be elaborate or ornamental. The simplest construction may be used with plain equipment. All that is necessary is to house those people comfortably under proper supervision and cleanliness. The building must be so constructed that it can easily be kept clean and well ventilated. Everything in it must be plain and easily cleaned.

As a matter of economy and efficient administration, hospitals for advanced cases of tuberculosis should be run in conjunction with dispensaries for walking cases. When the two are combined the medical and nursing staff of the one can be used for the other. This arrangement is of great value in the control of patients in their homes. The doctors and nurses, by reason of their training and experience in the hospital, will be better able to supervise and control patients in their homes, and thus to enforce the carrying out of preventive measures. The nurses, moreover, will likewise profit by the arrangement, as they will be given outdoor employment part of the time of their service, and, by seeing the environments of these poor people in their homes, will be broadened in their sympathies.

The next step of a community in a voluntary campaign is to establish sanatoria for curable cases of tuberculosis which need either comparative or absolute rest. Among the poor a tuberculous subject becomes an impediment to the healthfulness and prosperity of his family the moment he is unable to work. In such families every one contributes his share to the common fund which maintains the family. When one drops out of the earning squad, the earnings of the others must be spread out to help to maintain the one who has dropped out. If this one needs rest, it means taking another out of the earning squad to wait on him. The result is that the stricken one is not looked after in a way that will give results until he is laid low by the disease, and then it is too late for recovery. Hence the vast majority of curable cases of tuberculosis among the poor are curable only in a sanatorium. Conditions for cure are unattainable in the home of the patient.

The treatment of tuberculosis, moreover, is an expensive matter. whether at home or in a sanatorium. It is beyond the reach of the poor. Good food and a comfortable, clean, well ventilated place of abode are necessary for it. The food alone costs about four dollars a week. Care of the place of abode—preventing it from getting contaminated and keeping it clean—even when done on a wholesale basis, costs about a dollar a week. Add to these items, medical attendance, medicine, and nursing, and we get a footing up not far short of ten dollars a week. This expense, moreover, must be borne week in and week out for from six months to two or three years.

When practicable, separate sanatoria should be established for early stage cases and for more advanced cases. Not only would the results be better under such a system, but administration would be cheaper. In early stage cases comparative rest only is necessary. All early stage cases can do some work and gradually acquire a capacity for doing a great deal of work. They need no nursing and comparatively little medical attendance. Under good discipline and management they all can do their own work, and therefore need no servants. If the sanatorium is properly located, they even can contribute something toward their own support by light farming. As all are of a class and progress rapidly towards recovery they exercise a stimulating influence upon each other. With more advanced cases mixed in with other cases, on the other hand, the entire institution has to be run on a basis suitable to the more advanced cases. Nursing and close medical attendance are necessary, and there must be a full equipment of domestics. Those who can work will not want to work, because of the example of those who cannot work. Stationary and retrogressive cases will have a depressing influence on all others.

It is true, many communities are too small to have separate sanatoria for different stage cases, but under such circumstances it would be well for neighboring communities to join forces. Inhabitants in two, three, or four adjoining counties could unite in the support and management of such institutions, and locate them where they would be most accessible to the majority and could be most inexpensively administered. These sanatoria could be located anywhere on dry porous soil irrespective of elevation or climate. Perhaps the best way of uniting the inhabitants of such counties would be by organizing them into societies for this purpose. These societies, moreover, could be used for educational work, such as distributing tracts and giving lectures on the prevention of tuberculosis.

Contaminated houses are a prolific means of spreading tuberculosis. A house which has been inhabited by a consumptive who has disregarded preventive measures may give the disease to a subsequent occupant. An earnest effort should, therefore, be made to prevent contamination of houses, by teaching all consumptives proper preventive measures and showing them how to carry these measures into effect. This can be accomplished in part, at least, through competent inspectors, especially when aid is given, such as food, and preventive measure supplies for convenient and easy practice of prevention. The simpler and easier the prevention of tuberculosis is made for the poor and ignorant, the more likely it is to be carried out.

Where the prevention of contamination of houses cannot be carried out, something must be done toward the sterilization of houses which have been contaminated. Sterilization after contamination is very simple, but somewhat expensive. Often it implies thorough cleansing and renovation. Floors and woodwork have to be scrubbed, walls have to be scraped and repapered or repainted, and everything in the house which has been exposed to contamination has to be thoroughly cleansed. When everything has been well cleansed, the rooms have to be sprinkled with formalin or filled with formaldehyde gas. All this is troublesome and costly, and because it is so it will not be done except under pressure either moral or legal. Where there is no health department legal pressure cannot be brought to bear, but moral pressure may be brought to bear in many instances. When the occupant of the house is the owner a knowledge of the danger from contamination to the other members of his family will be sufficient incentive to make him do what is necessary. When the occupant is merely a tenant, public sentiment may induce the landlord to do what is necessary, if not from a sense of right, at least from a sense of commercial interest. As soon as the public shall have become sufficiently enlightened so that people will refuse to occupy houses that have been occupied by consumptives until the landlord can show a clean bill of health, all contaminated houses will be sterilized.

In communities without departments of health it is somewhat difficult to get at the location of consumptives, and the prevention of contamination of houses, as well as the sterilization of houses which have been contaminated, is for this reason surrounded with unusual difficulties. These difficulties are not insurmountable, however. It is true, compulsory registration of tuberculosis cannot be resorted to, for this is a governmental function which can only be exercised by a health department. Much can be done, however, in the way of bringing to light, through the instrumentality of dispensaries, hospitals, and sanatoria, people suffering from tuberculosis. Such institutions will attract the consumptive poor and will make it possible to get almost a complete census of the consumptives of a community, in the course of time. Through those who come to such institutions others can be reached, and if a community is well organized, in due time every consumptive can be brought under observation and at least be taught what to do to prevent the spread of disease.

A society organized for the various purposes named could also accomplish something toward the prevention of tuberculosis by interesting itself in the sanitary improvement of dwelling houses and workshops. Homes should be made clean, dry, airy, and bright, both among the rich and the poor; and where the homes of the poor do not possess these qualities they should be condemned by public sentiment and prevented from being used any longer. Buildings in which men and women are employed should be made sanitary and brought up to a correct standard of air supply and light supply. Along all of these lines much can be accomplished in any community by the creation of a public sentiment.

A pertinent question that will be asked at once by all people of a practical turn of mind in connection with the scheme which I have outlined will be, Where is the money to come from to do all this with? There are in every community men and women who are willing to do a great deal for charity and philanthropy, *provided it is clear to them that the money which they give is judiciously expended and yields fruit in practical results. If the right effort is made, the money which is necessary can be raised.* Inasmuch as tuberculosis is a disease which comes home to every one, at one time or another, somewhere in his family or among his friends, resources for a campaign of this kind can be drawn from practically every member of a community. Wherever an effort has been made to raise money for such a purpose it has been successful. With earnest endeavor at least enough can be raised to make a beginning, and usually such undertakings grow as people see the good that is accomplished by them.

In conclusion it may not be amiss to call attention to a method of raising money for purposes of this kind which has been tried successfully in another country—namely, Canada—and which might, perhaps, easily be grafted upon our American States. This is the enactment of a State law under which any town, county, or city may get a certain amount of State aid for work of this kind, in proportion to the amount of work which the community itself does. Under such a law, if a community would establish an institution for the treatment of tuberculosis, it could draw from the State a certain amount of money in proportion to the amount of money raised for the purpose by the community; and for every patient treated it would get from the State a certain percentage of maintenance money for each day during which such patient was treated. A State law of that kind in Pennsylvania would enable many of the smaller cities, towns, and country districts to get up institutions for the treatment and prevention of tuberculosis which, without such aid, will not have the courage to begin.

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Hydrophobia.—On Thursday, May 26th, a dog bit two children at Thirty-ninth Street and Armour Avenue, Chicago. The director of the laboratory instructed the physican to have the dog tied up and carefully watched. On Friday night the dog died with all the characteristic symptoms of hydrophobia. The animal was brought to the laboratory on Saturday morning and, upon a post mortem examination, a diagnosis of hydrophobia was verified beyond doubt. This is the second dog in two weeks on which the laboratory has made a diagnosis of hydrophobia. The first one was killed, and it was uncertain as to whether it was hydrophobia. A number of animal experiments had to be made and it took nearly two weeks to arrive at a diagnosis; but the last dog, held according to instructions from the laboratory, died in a few days, and a positive diagnosis was then immediately made without any trouble, and treatment instituted a week earlier than was possible had the dog been killed. Rabies is unusually prevalent throughout the country at present. Seven cases were admitted to hospital in one day recently in the city of Baltimore.

THE FEVER OF THE PUERPERIUM (PUERPERAL INFECTION);

A CHRONOLOGICAL REVIEW OF THE DOCTRINES OF ITS ÆTIOLOGY AND OF THE METHODS OF TREATMENT FROM EARLY TIMES TO THE PRESENT.

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(*Continued from page 1078.*)

OTHER EARLY VIEWS.

It is apparent that opinions differed widely among early English and Continental practitioners as to the importance to be attached to fever during the puerperium and its treatment. The earliest work in English devoted to midwifery was *The Byrth of Mankynde, otherwyse named the womans booke,* by Thomas Reynalde, Physitian, published in 1540. In addition to being the first book in English of its kind, it was the first medical work published in England that contained woodcuts. Legend has it that a beautifully embellished manuscript copy was presented to Catharine, Queen of Henry VIII, and was greatly prized by her. A second edition was brought out in 1560 and a third in 1634. It is said that not more than half a dozen copies of the two earlier editions are now in existence. A copy of the 1634 edition is to be found in the library of the New York Academy of Medicine.

This book is a translation from the Latin, the original having been written in High Dutch by Eucharius Rhodion. About the year 1535 it was translated into Latin and other languages and at once became universally popular among women throughout Europe. Regarding the puerperium the author says:

"It is also to bee understanded, that many times after the deliveraunce, happeneth to women either the fever, or ague, or swelling, or inflation of the bodye, other tumblynge in the belly, or elles commotion or settelinge out of order of the Mother or Matrix. Cause of the which things, is sometimes lacke of due and sufficient purgation and clensynge of the flowres after the byrth, or elles contrarywyse, over muche flowinge of the same, whiche sore doth weaken the woman. Also the great laboure, and styrrynge of the Matrix at the byrth. Nowe seinge then that it ensueth by so manyfolde occasions and causes, it shal be mete that women in this case be nothing ashamed ne abashed to disclose their minde onto expert physitians, shewing them every thynge in it, as they knowe whereupon it shoulde come, so that the physitian understandinge the womans mynde, maye the soner by hys learnynge and experience consyder the true cause of it, and the verye remedye to amende it."

Another interesting volume, now before me, is entitled *Childbirth or, The Happy Deliverie of Women;* and the additional information is given on the title page that it was "Writen in French by James Guillimeau, the French Kings Chirurgion, and Printed in London by A. Hatfield in 1612." The name of the translator is not given. No mention whatever is made of puerperal fever.

In *The Child-bearer's Cabinet,* published at London in 1653, directions are given how to assist a woman in labor by "wringings and pressings of the belly," but puerperal fever is not mentioned.

Dr. Thomas Denman is authority for the statement that Dr. Percival Willoughby, of Derby, afterward of London, prepared a manuscript for the instruction of midwives, the result of his experience from 1640 to 1670. In the preface he offers the following advice:

"An egge representeth the wombe; now the henne with keeping the egge warm doth breed the chicken, which when it comes to maturitie doth chip the shell, and is by degrees hatched without injurie. These signatures may teach midwives patience, and persuade them to let nature alone to perform her own worke, and not to disquiet women by their strugglings, for such enforcements rather hinder the birthe than in any waie promote it, and ofter ruinate the mother and usually the childe."

I have been unable to discover if this author mentioned puerperal fever or its treatment.

The affection is not mentioned in *The Compleat Midwives Practice Enlarged,* by Dr. John Peachey, fifth edition, London, 1698. Strother, in his *Work on Fevers,* 1716, describes the symptoms and treatment at considerable length, and, as has already been said, was the first to give the disease the distinctive name "puerperal fever."

In 1723 Dr. John Maubray published a work, entitled *The Female Physician, or the Whole Art of New Improved Midwifery,* and in 1724, an appendix, *Midwifery Brought to Perfection,* in neither of which puerperal fever is enlarged upon. This Maubray, according to Denman, was the first public teacher of midwifery in England.

Mrs. Jane Sharp, in her *Compleat Midwives Companion,* fourth edition, London, 1725, devotes several pages to the subject, but it is almost ignored in Simson's *System of the Womb,* published in 1729; in Edmund Chapman's *Treatise on the Improvement of Midwifery,* 1733; in William Giffard's *Collection of Cases of Midwifery,* 1734; in Thomas Dawke's *The Midwife Rightly Instructed,* 1736; and in Henry Bracken's *Midwife's Companion,* 1737. Sir Richard Manningham, who, in the year 1739, established the first lying-in ward in England, at the Parochial Infirmary of St. James, Westminster, published a *Compendium artis obstetricæ* and other midwifery treatises during the years 1740-1748, in which considerable attention was paid to the fever. The treatises by Exton, 1750; Pugh, 1754; and Memis, 1765, do not treat of it.

Thomas Denman, in 1768, wrote as follows on the subject: (13)

"It is however observable that inflammation of the uterus is far less dangerous than an equal degree of inflammation of any of the viscera of the abdomen, especially in the state of childbed; because the uterus readily admits of a return of the lochial discharge, which always affords relief, and sometimes cures the disease. But in inflammations of any of the contents of the cavity which have no vent or outlet, the effects of the inflammation become an addition to the existing disease, or a cause of a new disease."

Wise indeed beyond his generation, perhaps, was this able physician when he added, "The knowledge of the causes of this disease, whether occasional or immediate, will be of service rather in enabling us to prevent it, than to leading us to the cure when it is found."

Among French authors the disease was known, but apparently not in its epidemic form. Peu, in his *Pratique des accouchemens,* Paris, 1694, refers to inflammation of the abdomen caused by retained placenta, and reports a series of cases. Jacques Mesnard, in *Le guide des accoucheurs,* Paris, 1753, describes inflammation of the uterus after labor and details its treatment. J. Astruc, in 1765, published *Traité des maladies des femmes,* and in it attributed the fever to obstructed lochia, and the latter condition to one of four causes:

"The first of these causes is the patient's catching cold: whether it be by the cold air getting into the uterus, through the neglect of the nurse, in not keeping the parts covered; or through the patient being exposed to cold at her feet, by not keeping the room sufficiently warm, or from the imprudence of suffering her to drink liquors too cold. The second cause is, any unexpected grief, or fear: the passions of the mind, especially when they are sudden, produce a constriction of the uterus, that wholly suppresses the discharge. The third cause is, a violent supervening diarrhœa; the consequence of indigestion from having eaten too much: the great evacuation, that is made by stool, necessarily diminishing that which should be made by the uterus. Lastly, the fourth cause is, an inflammation of the uterus; which by tumefying its substance, closes up all the veiny appendages from whence the blood of the lochia flows. This inflammation is always the consequence of some hurt, which the interior part of the uterus has received, in a laborious delivery, from the hands of an unskilful midwife. This last cause must produce a suppression of the most dangerous kind; and experience but too much confirms it."

THE GERM THEORY.

It will be remembered that the first mention of putridity as a cause of puerperal fever is to be found in the writings of Mercatus, in 1570. During the middle and last third of the nineteenth century, as the contagious nature of the disease gradually became established, the older doctrines of lochial suppression, milk metastasis, omental inflammation, and the like, were buried for all time, and putridity of the uterine contents was accepted as the prime ætiological factor. The study of the gradual growth of the germ theory is replete with interest, but, as McFarland says (14), it is a mistake to attribute the birth of this theory of the origin of disease to the investigators of the present decade. Though Leeuwenhock, in 1675, discovered the presence of bacteria in saliva, and Henle, in 1821, maintained that a specific *contagium vivum* existed for many diseases, "the controversies and ideas which stimulated the investigations and researches which have brought us to our present state of knowledge were begun hundreds of years before the beginning of the Christian era."

Yet too great credit cannot be given to the painstaking investigations of that group of latter day scientists which, in the face of almost incredible opposition, conclusively proved its theories to be correct and demonstrated them to the utter confusion of its opponents. The strength of this opposition may be inferred when the fact is brought to mind that, although Pasteur and Chevreul, about 1836, had proved that animal solids do not putrefy if kept from the access of germs, "and thus suggested to surgeons that the putrefaction which occurred in wounds was due rather to the entrance of something from without than to some change within;" and that, as late as 1872, when Klebs published his treatise on septicæmia and pyæmia, asserting that the causes of these diseases must come from without the body, Billroth strongly opposed such an idea, asserting that 'fungi had no especial importance either in the processes of disease or in those of decomposition, but that, existing everywhere in the air, they rapidly developed in the body as soon as, through putrefaction or inflammation, necessary feeding grounds were produced."

"In 1875 the number of scientific men who had embraced the germ theory of disease was small, and most of those who accepted it were experimenters. A great majority of medical men either believed, like Billroth, that the presence of fungi where decomposition was in progress was an accidental result of their universal distribution, or, being still more conservative, retained the old unquestioning faith that the bacteria, whose presence in putrescent wounds as well as in artificially prepared media was unquestionable, were spontaneously generated there" (McFarland).

In the limits of this review it is possible to indicate but a few of the results which finally led up to practically universal acceptance of the germ origin of puerperal infection. In 1864 Rokitansky reported that he had found germs in the vaginal discharges of women suffering from so called puerperal fever, and that when these discharges were injected into the bodies of animals abscesses resulted. In 1865 Mayrhofer reported that he had found the *Streptococcus pyogenes* in the lochia of a number of women dead from puerperal fever (15). His investigations were soon confirmed by Coze and Feltz, Recklinghausen, Waldeyer, Orth, Heiberg, and Landau (16). In 1879 and 1880 Pasteur, assisted by Doléris, cultivated the *Streptococcus pyogenes* from puerperal fever cases and termed the colonies "*chapelets en grains*" (17). Doléris continued the experiments and soon demonstrated that the streptococcus was nearly always the causative agent of the infection, but that sometimes the staphylococcus and bacilli were the principal factors in its production. In 1892 Döderlein fully substantiated these findings (18).

Many investigators since Mayrhofer had detected and cultivated the bacilli found in the vaginal secretions of puerperal patients, but their conclusions differed widely. Gönner and Bumm, working independently, decided that the germs were not pathogenic in character, while Winter stated that pathogenic organisms were present, but in a condition of lessened or absent virulence (19).

In 1888 Brieger demonstrated the staphylococcus in the lochia of puerperal fever patients (20); in 1893 Krönig succeeded in isolating the gonococcus in a series of nine cases of mild infection; and von Franque, also in 1893, reported finding the *Bacillus coli communis*. The latter germ was also found by Widal, Krönig, Marmorek, and Williams.

While it is an established fact that puerperal infection in a majority of cases is due to invasion by streptococci or staphylococci, or both, there is little room for doubt that other germs, either alone or in combination, occasionally are the causative factors. Thus, in well defined cases, in which it has been impossible to demonstrate the presence of streptococci and staphylococci, the colon bacillus, gonococcus, *Bacillus pyocyaneus, Bacillus fœtidus,* pneumococcus, diphtheria bacillus, *Bacillus typhosus,* and putrefactive saphrophytes have severally been found. J. Whitridge Williams in his *Obstetrics,* recently issued, states that bacteriological examination of the uterine lochia in a series of 150 cases of his own, in which the temperature of the patients rose to 101° F., or higher, during the first ten days of the puerperium, gave the following results:

	Cases.
Streptococci	31
Streptococci, staphylococci, and bacilli	2
Streptococci and Bacillus coli	5
Streptococci, Bacillus coli, and gas bacillus	2
Streptococci, staphylococci, gas, and typhoid bacillus	1
Streptococci, staphylococci, Bacillus coli, and gas bacillus	2
Staphylococci	4
Bacillus coli	11
Gonococci	7
Gonococci, and Bacillus coli	1
Unidentified aerobic bacteria	4
Unidentified anaerobic bacteria	8
Bacillus diphtheriæ	1
Bacillus typhosus	1
Bacilli seen on cover-slips, but which failed to grow on any of the more usual media	45
Absolutely sterile	25

The question as to how germs cause disease was a debatable one for many years after scientific investigation had established their specific properties. In 1872 Bollinger, whose researches were largely in connection with the *Bacillus anthracis* (21), suggested that they exerted their pernicious action by depriving the red cells of the blood of their oxygen. As it was soon proved that many diseases ran their course without the causative microorganisms being present in the blood, this theory was abandoned. Next it was supposed that the accumulation of the bacilli in large numbers in the important organs of the body mechanically interfered with their action. This theory likewise was short lived. Then it was thought that the germs consumed the proteids of the body and thus deprived the tissue cells of their sustenance. Following this theory it was suggested that the organisms acted directly upon the blood cells and induced their rapid disintegration.

"Seeing the vital deficiencies in these theories, and being impressed by the results obtained in the study of putrefaction, bacteriologists were led to inquire into the possibility of the symptoms of infectious diseases being due to chemical poisons. First it was thought that the microorganisms themselves were poisonous, or that the poison might be an integral part of them; then that they might be intimately associated with or might produce a soluble chemical ferment, which, by its action on the body, caused the accompanying symptoms. Finally, the accepted theory of the present day was born: that an infectious disease arises when a specific, pathogenic microorganism, having gained admittance to the body, and having found the conditions favorable, grows and multiplies, and in so doing elaborates a chemical poison, or ptomaine, which induces its characteristic effects" (22).

In puerperal as well as in other forms of infection a comparatively small number of germs may produce ptomaines of great intensity. In view of the impregnation of the blood and other tissues with these ptomaines, the great benefit to be derived from *lavage du sang* may readily be inferred.

EPIDEMICS.

No more graphic pen picture of the ravages of epidemic puerperal fever is possible than that sketched by Hervieux:

"Les épidémies puerpérales sont à la femme ce que la guerre est à l'homme. Comme la guerre, elles moissonnent la partie la plus saine, la plus vaillante, la plus utile de la population; comme la guerre, elles frappent les sujets dans la fleur de l'âge et répandent dans les localités qu'elles dévastent la terreur et la désolation. C'est à la politique qu'il appartient de nous préserver des calamités de la guerre, mais à la médicine est réservée la tâche de prévenir et d'éteindre les épidémies puerpérales."

That brilliantly keen observer, Nathaniel Hulme, writing in 1772, said, in this connection:

"Nurses, and women in general, seem, in a great measure, ignorant of such a disease as this being incident to lying-in persons. . . . The consequence is, that knowing no danger they fear none; whereas, on the contrary, they should be taught to dread the name of puerperal fever, as they would the name of pestilence, or plague: for I fear the one destroys not more than the other. Like a fierce and untamed enemy, the one spreads his hostile banners in open day, and feasts on carnage and destruction, till, glutted with slaughter, he himself sinks down and dies! But the other, like a secret revengeful foe, stabs in the dark to the very vitals, and though he kills one only at a time, yet he is privately slaying every day, and never satiated: thus making up by length of time what the other does by a sudden devastation!"

As Hervieux says, it would not be difficult to construe certain portions of the works of ancient authors as referring to the existence of puerperal epidemics, but these references are so vague that it is impossible to arrive at a positive conclusion. It is certain, however, that but two or three such epidemics are recorded as having occurred during the seventeenth century, though medical literature is replete with descriptions of those of the eighteenth century and since. According to Hirsh (23), 216 distinct epidemics occurred between the years 1652 and 1862.

The first epidemic of which record exists undoubtedly was that mentioned by Ozanum in his *Histoire medicale des maladies épidémiques,* (second edition, Paris, 1835, Vol. II, page 14). He states that "an unknown affection occurred at Leipsig in 1652 and returned again in 1665. It attacked puerperal women and was so deadly that but one in ten escaped." Lee, in his *Diseases of Women*, London, 1833, quotes Peu as authority for the statement that the first epidemic known to have occurred in France was at Paris, in 1664. Details of this outbreak are very meagre. Hervieux, on the other hand, says that the first appearance of an epidemic in France was at Paris, in 1746. The *Mémoires de l'Académie des Sciences,* Paris, for that year state that an epidemic disease prevailed with great violence at the Hôtel Dieu. During the month of February alone twenty puerperal women were attacked, and not one survived.

(To be continued.)

CONSTITUTIONAL LOW ARTERIAL TENSION.

By LOUIS FAUGÈRES BISHOP, A. M., M. D.,

NEW YORK.

There are some patients who give evidence on the most casual examination of the circulation, that the tension in the arteries is very slight, and in some this will be found to be a constant condition. It is surprising how little tension there can be in the radial pulse without the patient suffering from any symptoms of circulatory disease.

This low arterial tension, in otherwise apparently healthy individuals, is undoubtedly a departure from the normal. It may be due to an unusual relaxation of the peripheral circulation which makes it possible for the heart to do its work with but little effort. Some of these patients are generally feeble, lacking in nerve force and unequal to strains. Others, however, seem to respond to demands for physical or nervous effort, and when so responding there is an improvement in the tone of the circulation.

When seen for the first time during some acute affection this condition may give rise to apprehension on the part of the physician as to the outcome of the illness for which he has been summoned. When, however, the patient can be watched from year to year and is seen to get along perfectly well, even though there is this lack of tone in the circulation, the physician comes to realize that with that individual it is a physiological condition.

There is another form of low arterial tension that is of much more importance, and that is the low arterial tension which succeeds the high arterial tension of chronic Bright's disease. Here we have to deal with a most serious complication of the disease. It means that the circulation is no longer maintained by the heart. Thus, it may be stated that low arterial tension may exist in certain individuals without great significance, but that if it has been preceded by high arterial tension it is a factor of grave import.

With this condition we have nothing to do in the present discussion, but rather with low arterial tension that is a reflex of a constitutional condition.

Experience has shown that nothing is gained with these individuals by the use of drugs to increase arterial tension. It is quite possible to make the pulse for the time being approximate the normal; indeed, this often happens itself when the heart and circulation are physiologically stimulated by exercise or fever.

The condition is in all probability due to an inherent defect in the nervous system, whereby it has not the proper control of the blood vessels. The same patients who suffer from this low arterial tension are very apt to manifest other symptoms of defective nervous control, and the removal of the underlying condition will bring about an improvement in the circulation.

The most important element of treatment is systematic exercise. These patients are often dependent for their well being upon regular physical exertion. Often they feel much better if they can take a brisk horseback ride every day or some other form of stirring exercise. There are other cases in which it is found that iron and arsenic improve the condition when it becomes very marked. In other cases very hot baths take the place of vigorous exercise and improve the tone of the circulation. It should be remarked that this is a secondary effect, because, if the circulation is examined immediately after the bath, it will be found to be more relaxed than usual.

Although one would expect beneficial results from cold bathing, it is found by experience to be unsatisfactory in cases of constitutionally low arterial tension. Such subjects do not react, and the effect is not satisfactory.

These observations refer to a class of patients who are not suffering from any definite disease, but who realize that they are not the same as other people. They have probably been told that they are suffering from a variety of diseases, according as the phenomena were supposedly traced to one or the other organ. To them may be applied the rather trite remark that they are suffering from a condition rather than a disease. Such patients are fortunate if they come under the care of a practitioner who will appreciate the condition and manage it properly. The worst thing that can happen is, that there should be repeated efforts to cure a supposed disease by different men succeeding one another.

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THE ATLANTIC CITY MEETINGS.

It yearly grows more and more impracticable to look upon the meeting of the American Medical Association as an entity by itself. For a number of years past that meeting has drawn in its wake an ever increasing number of subsidiary gatherings, and these gatherings have gained in importance and in the numbers in attendance from year to year. At the risk of appearing invidious in comparison, we may make particular mention of this year's meetings of the American Academy of Medicine and the National Confederation of State Medical Examining and Licensing Boards. Dr. Roberts's masterly address before the body first mentioned we shall soon have the privilege of publishing *in extenso,* also the Report on Curriculum delivered before the second named organization by Dr. George W. Webster, president of the Illinois State Board of Health.

But the meeting of the American Medical Association itself was this year notable for the great number in attendance, a number exceeding that of any previous meeting. There was a noticeable response by New York men to President Musser's courteous and kindly invitation to the members of the Medical Society of the State of New York, as soon as the necessary confirmatory action was taken by the House of Delegates on Wednesday morning, some two hundred and fifty members of the society having registered soon after.

The president's address and the formal orations were all of a nature to command attention and to strengthen the profession in its efforts for its still greater exaltation and to inspire more and more strenuous exertions to attain the end in view. The pathological exhibit showed amply that this comparatively new feature of the meetings is destined to increase in interest and importance as the years roll by. Atlantic City itself maintained its alluring attractiveness, but the seriousness of the occasion was not lost sight of amid the town's multitudinous points of diversion. Again has it entertained the profession most luxuriously, providing alike for real work and for that recreation always needed by men who pursue such a toilsome life as that of the average medical man.

THE GOVERNMENT SANATORIUM FOR CONSUMPTIVE SEAMEN.

We have recently received the published report of the Public Health and Marine Hospital Service for the year 1903. It is a volume of 572 pages, and, as is commonly true of the annual reports of this most excellent branch of the government service, it deals with many matters of professional interest. Not the least important of them, it seems to us, is the Sanatorium for Consumptive Seamen, at Fort Stanton, New Mexico, under the command of Surgeon Carrington.

At the close of the fiscal year, June 30, 1903, there had been admitted during the year 169 new patients, making, with those already resident in the institution at the beginning of the year, 274 under treatment for various periods. The statistical tables deal only with the 169 admitted during the year. In only 34 of these patients was there a history of tuberculous heredity. At the time of their admission, 22 were in the first stage (when no consolidation or excavation could be discovered), and the others were further advanced—in the second or third stage, though no distinction between the two is pointed out. In only 28 were tubercle bacilli found in the sputum. Other organs than the lungs were affected with tuberculous disease as follows: Larynx, 16; intestines, 3; testicles, 2; vertebræ, 2; ribs, 1; lymph glands, 4; inferior maxilla, 1; rectum (with fistula in ano), 4. Among the more important concomitant morbid conditions were syphilis (in 19 cases), valvular disease of the heart (in 6), paraplegia from cerebral hæmorrhage (in 1 case), epilepsy (in 2 cases), nephritis (in 1 case), and chronic pleurisy with effusion (in 1 case).

Of 124 patients in whose cases the results are stated, 48 died, and 76 were discharged—12 apparently cured, 54 improved, and 10 not improved. In view of the fact that patients; especially those whose malady has not yet become pronounced, are prone to leave the hospital after a stay too brief for them to reap the full benefit of treatment, these results seem to us very creditable. This tendency on the part of the patients, which quite materially lowers the proportion of cures, is very properly complained of by Dr. Carrington. The service, he justly says, spends a good deal of money on a man whom it sends to the sanatorium, and it seems only fair that there should be some sort of obligation on his part to stay there until he is cured or his incurability is demonstrated. He suggests some binding agreement of the nature of an enlistment, for which, of course, Congressional authorization would be necessary.

SALUS POPULI SUPREMA LEX.

The truth embodied in this epigram seems hardly to have penetrated the minds of the authorities who are charged with sanitary administration in Bombay, for we find that in a recent popular lecture by Dr. N. H. Choksey, a man of vast experience in the treatment of the Oriental plague, he complained bitterly that the people were deprived of the benefit of a curative serum in the management of this disease, from which they have suffered atrociously. "In New York and some other American cities," he exclaimed, "the State provides an antitoxic serum for diphtheria, and it is so cheap that it is placed within the reach of the poor."

Contrasting this state of things with the supineness of the local administration in the matter of the plague, he contended that the government had but half done its duty by the people, and that the time was ripe for "putting the coping stone over its work" by introducing and encouraging the use of a curative remedy. "It matters not," he said, "where the remedy comes from—be it French or Italian, German or Austrian—so long as we have one and so long as we can rely upon its usefulness. At present but one only is to be had, to wit, the Yersin-Roux, prepared at the Pasteur Institute, of Paris. Let it be made on a large scale in India, or, if that is not feasible, procure it from Paris. I have good reason to believe that Professor Roux would not be averse to coming to our help, if proper arrangements could be made."

It seems that about two years before the time of Dr. Choksey's lecture a meeting had been held in Bombay at which the usefulness of the serum was attested by a number of physicians, and that in consequence of these declarations a representation was sent to the municipal corporation, which communicated with the government. In its reply the government promised certain steps in the direction desired, but thus far there had been no tangible results.

Inasmuch as the meeting before which Dr. Choksey made his address was presided over by a high government official, it is to be hoped that the appeal with which the speaker closed will not pass unheeded. The terrible plague mortality that has visited Bombay year after year, and the failure of all other means of treating the disease when it has once got a foothold in the system, ought not to require any argument to awaken the government to its undeniable duty. If the curative serum is not shortly provided in adequate amount, a heavy burden of responsibility will rest on the authorities.

Since the foregoing was written we have learned that Dr. Choksey has himself been attacked with the plague, the virus of which is supposed to have gained access to his system through a cut on one of his fingers. He was treated with the Roux serum to the exclusion of all other measures, and we are glad to be able to announce his recovery.

"MODERN OPTICS."

I recently received a copy of *Modern Optics,* a journal devoted to the interests of "refracting opticians" in general, many of whom, we understand, have spent several hours daily for two or more weeks in becoming expert in "refracting" the eye. Probably I should not have noticed this periodical if it had not, with monumental impudence referred to an article in this *Journal* by Dr. F. R. Stowell.

and ventured to comment thereupon editorially; the comment being about as valuable as would be that of a layman on a decision of the Supreme Court of the United States. But its receipt has served one good purpose; it directed my attention to the ignorance and unsound reasoning which have been sent broadcast to befog the minds of the unwary.

There is not a line in the paper which can be of use to the optician, not a suggestion in regard to the adjustment of the frames or to any other detail of his work, but nearly every article is along some medical line. Thus, the initial and principal article has at first a medical sound. It ascribes headache to the following causes: "Cerebral disease, congestion and anæmia of the brain, functional nervous disorders, derangements of the stomach and liver; and to reflex causes, such as diseases of the nose, also to the strain (*sic*) which results from imperfectly formed eyes, etc." Which is all true, especially the "etc." Then, after some remarks on headache due to eyestrain, including "muscle fatigue," the conclusion is reached that "a wise thing for any person to do who is subject to headaches is to visit some able *refracting* optician," a conclusion which does not follow from the premises given. A more rational conclusion would be that such a person should be examined by some one competent to ascertain whether the ocular conditions pointed to any of the many other causes of headache, as well as to determine whether the wearing of glasses would be beneficial to the patient or not.

I quote the following curious description of the fundus: "When an examiner looks into an eye by means of a concave mirror having a small hole in it, called an 'ophthalmoscope,' he sees, by means of reflected light, a bright field having red or dark pink threadlike branches emanating from a light pink disc located at one side of the centre, this disc being the end of the optic nerve, while the threadlike branches are veins and arteries. A study of these in health and disease often gives information that is of much importance to opticians, physicians, and patients." An examination of the fundus is of the utmost importance when done by one trained in the recognition of disease, but we never heard of an optician who had received any training, let alone a proper training, to do such work. A "fake" examination may do much harm in lulling to sleep any suspicions which might arise in the mind of the physician or the patient in regard to the possibility of the presence of disease, and as quite a number of the patients who seek the ophthalmologist to be fitted with glasses have unsuspected disease of the eye, every person who complains of his eyes should consult some one competent to find out what is wrong. At the same time this is an acknowledgment on the part of the distinguished "refracting optician" who edits the paper that he recognizes the need of medical training for those who would fit glasses.

Under the headline Cooperation of Physician and Optician occurs the statement that "the more advanced medical men of the day are beginning to appreciate the services that truly modern opticians can render them in reporting upon the optical condition of their patients' eyes." This unfortunately is not criminal libel, it is simply misstatement. Not so many years years ago as to be beyond the memory of the oldest inhabitant, the optician had a monopoly of the fitting, or the misfitting, of glasses. A physician, whether specialist or not, rarely wrote precise prescriptions for them. But those who became specialists in diseases of the eye came to know that if they wished to have their patients furnished with glasses which would approximate the proper correction they must themselves indicate minutely the necessary corrections. The more advanced of their contemporaries recognized the truth of this and began to recommend their patients who needed glasses to visit the specialist and get a prescription before going to the optician, but many medical men declined to believe that a doctor could fit glasses any better than an optician and refused their support to the specialist. This class has probably lost numbers, partly because some individuals have become convinced by demonstration, partly because others have been replaced by younger men of more modern ideas, but it still exists, sends patients for a medical consultation to the optician, and is referred to as "the most advanced medical men." Does *Modern Optics* call them this to flatter and beguile them, or was the writer in an ironical mood? We trust that no practitioner will be misled by the specious arguments in this and kindred sheets into sending his ophthalmic patients to any other than a regularly qualified practitioner of that branch of medicine.

MATTHIAS LANCKTON FOSTER.

SCARLET FEVER PATIENTS AT LARGE IN PHILADELPHIA.

As noted in our news columns, a man was recently fined $6.50 for allowing his child to roam abroad while suffering from scarlet fever. Owing to the publicity given to his case by the press, several good natured people volunteered to pay his fine, which amounted nearly to a week's pay for the man, rather than see him go to prison. This is a case for divided feelings; but it must not be forgotten that while the punishment was great, the offense was also very great. The gravity of the offense in the eye of the law can only be emphasized by gravity of punishment. Such punishment is inflicted mainly for its educational value, and it is necessary to exercise great discretion in adjusting its amount to the capabilities of the offender. If it is too light, its deterrent effect will be small; if too severe, the sympathies of benevolent people will be aroused, and the fine will be paid by others, so that punishment does not fall on the offender and the lesson is lost. Possibly the situation would be best met in such cases by the magistrate inflicting the full penalty allowed, and then on inquiry into the prisoner's circumstances, remitting so much thereof as will make the punishment just, severe enough, yet not oppressive.

DEDICATION OF PENNSYLVANIA'S NEW MEDICAL LABORATORIES.

The dedication ceremonies of the new laboratory of pathology, physiology, and pharmacology, of the University of Pennsylvania, took place on Friday, June 10th. Almost twenty-two thousand invitations were issued, and a large number of eminent men from all parts of the world were present. Members of the American Medical Association attended the ceremonies in a body, coming from Atlantic City in a special train chartered by the university. The laboratories were open for inspection from 10 a. m. to 3 p. m., and interesting exhibits illustrating various subjects in medical science were shown. Light refreshments were served. Mr. J. Vaughan Merrick, one of the trustees of the university, delivered an address presenting the building, which was accepted by Dr. Charles C. Harrison, provost of the University of Pennsylvania, on behalf of the trustees. The guests then assembled in the laboratory of pathological histology, where addresses were delivered by Professor H. P. Bowditch, professor of physiology, Harvard University; Professor R. H. Chittenden, director of the Sheffield Scientific School, Yale University; Dr. George Dock, professor of medicine, University of Michigan, and Dr. Horatio C. Wood, professor of therapeutics, materia medica, and pharmacy, University of Pennsylvania. The buildings afford a striking testimony to the revolution in medical teaching now proceeding, when the didactic lecture is gradually giving way to the practical demonstration in every line of study.

A NON-OPERATIVE TREATMENT OF FISSURE OF THE ANUS.

In cases of anal fissure in which severer measures are declined by the patient it may be well to try a method of treatment recommended by Katzenstein (*Therapie der Gegenwart,* December; *Berliner klinische Wochenschrift,* March 28th), who seeks to soothe the nerve endings and do away with spasm of the sphincter with the aid of the following mixture:

℞ Extract of belladonna..................7½ grains;
Cocaine hydrochloride...............1/20 of a grain;
Ammonium sulphichthyolate,
enough to make 1½ drachm.
M.

This is warmed and applied by means of an applicator wrapped with cotton once or twice a day for a week or two; then sitz baths are used and the bowels carefully regulated.

THE BEST QUALIFIED GRADUATE.

It is the custom of the graduating class of the medical department of Queen's University of Kingston, Canada, to designate by ballot the fellow student who they believe could be expected "to do the right thing under all circumstances." The successful student is honored with a special prize by the faculty. We believe that such a man is really the most capable of his class, and, if not identical with the gold medallist, is probably his superior in all that goes to make up the scientific and successful practitioner.

A NEW JOURNAL OF MEDICAL PHYSICS.

We have received the first number, for April, of the *Physikalisch-medizinische Monatshefte,* edited by Dr. H. Kraft, of Strassburg, and Dr. B. Wiesner, of Aschaffenburg, and published in Berlin. It is a monthly of thirty-two pages dealing chiefly with such subjects as the Röntgen rays, phototherapy, hot air baths, hydrotherapy, and massage. The establishment of such a new journal bears additional testimony to the interest felt in other remedial measures than the use of drugs.

News Items.

Society Meetings for the Coming Week:

MONDAY, *June 13th*.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medicohistorical Society (private); New York Ophthalmological Society (private); Gynæcological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence.

TUESDAY, *June 14th*.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, *June 15th*.—Woman's Medical Association (New York Academy of Medicine); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society; New York Society of Dermatology and Genitourinary Surgery (private); New York Academy of Medicine (Section in Genitourinary Diseases).

THURSDAY, *June 16th*.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, *June 17th*.—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Postgraduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynæcological Society; Manhattan Medical and Surgical Society (private).

Change of Address.—Dr. John K. Mitchell, to 1730 Spruce Street, Philadelphia.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending June 4, 1904:

	Week end'g June 4.		Week end'g May 28.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	1,042	21	1,107	32
Diphtheria and croup	398	51	396	49
Scarlet fever	321	18	312	22
Smallpox	2	..	1	..
Chickenpox	86	..	68	..
Tuberculosis	407	170	403	158
Typhoid fever	34	6	22	14
Cerebrospinal meningitis	..	63	..	80
Totals	2,290	329	2,309	355

An Annex to St. Vincent's Hospital.—A six story fireproof annex is to be added to St. Vincent's Hospital at the northeast corner of Seventh Avenue and West Eleventh Street. It will be the west wing of the hospital. It will adjoin the new main building in Eleventh Street, and will have a frontage of ninety feet and a depth of ninety-four feet, with a façade of brick and stone harmonizing with the main building. It is to have a solarium in the sixth story and quarters for the Sisters of St. Vincent de Paul in the fifth floor. The building will have a veranda at each of the six floors. The cost of the annex is estimated at $250,000.

The Medical Association of the Greater City of New York.—A stated meeting of this association will be held at the New York Academy of Medicine, 17 West Forty-third Street, Manhattan, on Monday, June 13, 1904, at 8.30 p. m. Order of exercises: Report of the Committee on the Death of Dr. John Metcalfe Polk, Henry P. Loomis, M. D., chairman. Discussion on Epidemic Cerebrospinal Meningitis. To be opened with a paper on Clinical Features of Cases in the Present Epidemic, with Remarks on Treatment, by Henry W. Berg, M. D. Continued by Dr. George B. Fowler, Dr. Reuel B. Kimball, and Dr. Andrew Von Grimm. Infant Feeding and Milk Modification, by Ransford E. Van Gieson, M. D.; Cow's Milk for Infant Feeding, by Augustus Caillé, M. D. Discussion by Dr. Henry Dwight Chapin, Dr. E. H. Bartley, Dr. Edward F. Brush, Dr. Charles Gilmore Kerley, Dr. Andrew Von Grimm, Dr. Walter A. Dunckel, and Dr. Theron W. Kilmer. Collation. J. Lee Morrill, M. D., treasurer. P. Brynberg Porter, M. D., recording secretary, 150 West Eighty-fourth Street, Manhattan.

Queens-Nassau Medical Society.—The annual meeting of the Queens-Nassau Medical Society, held at Mineola, L. I., May 31st, was well attended and proved one of the most interesting of the year's meetings. Several important papers were read, Florence G. Emerson, M. D., medical school inspector of Brooklyn, reading one on Medical School Inspection, which was listened to with the closest attention by those present. Dr. R. F. Macfarlane gave an instructive paper on The Law and the Doctor, and Dr. John M. Barry, one on Some Random Notes on Obstetrics. Memorials were read on the late Dr. John R. Hinkson, of Long Island City, and the late Dr. George H. Hammond, of Freeport. At the business session the election of officers for the ensuing year resulted as follows: President, Dr. F. D. De Lano, of Rockville Centre; vice-president, Dr. William J. Burnett, of Long Island City; secretary and treasurer, Dr. James S. Cooley, of Glen Cove. The censors chosen were: Dr. J. W. Durkee, of Sea Cliff; Dr. I. F. Barnes, of Oyster Bay; Dr. M. M. Stevens, of Far Rockaway; Dr. J. Mansfield Foster, of Valley Stream, and Dr. John H. Berry, of Long Island City. Executive committee: Dr. Henri M. Augur, of Jamaica; Dr. F. D. De Lano, of Rockville Centre, and Dr. James S. Cooley, of Glen Cove. Dr. H. M. Warner, of Hempstead, and Dr. William H. Zabriskie, of Glen Cove, were elected delegates to the Suffolk County Medical Society; Dr. John Ordronaux, of Roslyn, and Dr. W. G. Frui, of Long Island City, delegates to the New York County Medical Society; Dr. Joseph H. Bogart, of Roslyn, and Dr. William J. Malcolm, of Jericho, delegates to the Kings County Medical Society. The selection of delegates to the New York State Medical Society was referred to the executive committee, the appointments to be made upon the reorganization of that society. The date for the midsummer meeting was left to the executive committee, with a request that the committee adopt some means for securing a full attendance. Dr. Smuck, of Far Rockaway, was elected a member of the society.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g June 4.		Week end'g May 28.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	10	5	11	2
Diphtheria	62	9	68	9
Scarlet fever	62	12	87	11
Typhoid fever	102	19	120	22
Consumption	..	67	..	62
Cerebrospinal fever	..	..	..	..

Dr. M. R. Dinkelspiel has severed his connection with the *New York Medical Journal and Philadelphia Medical Journal,* and no longer represents the journal in any of its departments.

Wills Eye Hospital.—The permit to finish the building on Cherry Street, near Eighteenth, for this hospital has been granted. The estimated cost is $10,000.

Mount Sinai Hospital.—The association of this hospital has awarded a contract to alter the building at the northeast corner of Fifth and Wilder Streets for hospital use. The cost will be about $10,000.

Reception in Honor of European Visitors.—A general invitation was extended to local and visiting physicians by Dr. H. Augustus Wilson, of Philadelphia, to attend an informal reception, given on June 5th, between 3 and 4 o'clock at 117 South Vermon Avenue, Atlantic City, in honor of Dr. Albert Hoffa, of Berlin; Dr. Hans Spitzy, of Graz, Austria, and Mr. F. Bang, of Berlin.

The Philadelphia Clinics for visitors to the American Academy of Medicine and the American Medical Association have been preeminently successful. A full programme was given in our issue for May 21st. The presence of eminent foreign surgeons and physicians, Professor Hoffa, of Germany; Dr. A. Maitland Ramsay, of Glasgow; and Dr. Logan Turner, of Edinburgh, added interest.

An Illegal Practitioner Sentenced.—"Dr." David Mosier was sentenced on June 3rd, at Philadelphia, to two years and six months imprisonment in the county prison, for criminal malpractice. Application was made for a new trial, but was refused. It is stated that the prisoner was a member of a syndicate of malpracticers who thrive on the misfortunes of young women.

New Home for Women Nurses.—On June 3rd the cornerstone was laid of a Home for Women Nurses at the Norristown Hospital for the Insane. The State appropriated $55,000 for this work, and the stone work was done by male patients of the hospital. Addresses were delivered by the president of the board, Dr. Joseph Thomas: and Dr. D. D. Richardson, and Dr. Mary Wolfe, presidents, respectively, of the men and women physicians.

A Case of Misplaced Sympathy.—A sympathetic woman came recently to the rescue of Patrick O'Byrne, of 3112 North Chadwick Street, who was fined $6.50 by Magistrate Kochersperger for permitting his child to roam the streets while recovering from scarlet fever. When arraigned on the charge, O'Byrne told the magistrate he would pay the amount from his next week's earning, but that it would take about all the money in his envelope. His story of distress, told in the newspapers, caused several persons to write to the magistrate offering to pay the amount rather than see him go to prison. The name of O'Byrne's benefactor is withheld by the police.

Pennsylvania Hospital.—Dr. James P. Hutchinson was elected, on May 30th, to the place on the surgical staff of the Pennsylvania Hospital made vacant by the recent death of Dr. William Barton Hopkins. In the same meeting of the board of directors, Dr. Frederick Sharpless, a son of President Sharpless, of Haverford, and a graduate of the University of Pennsylvania, was elected resident physician at the hospital for a two years' term. Ever since the death of Dr. Hopkins, Dr. Hutchinson has been the most prominent candidate for the surgical place. He has for some time been on the dispensary staff of the hospital, and a year ago was prominently mentioned as a possible successor to Dr. Thomas G. Morton, head of the medical staff, who died about that time.

Philadelphia Hospital.—The following gentlemen have been placed on the eligible list for internes, having obtained the required average in their entrance examinations:

Paul H. Bikle, Paul A. Lewis, Robert L. Gray, Charles L. Billard, John Bernhard Mencke, Jr., Seth A. Light, James C. Markel, Theodore Teah, David H. Davitch, Jacob G. Silverman, James R. Freeland, Horace H. Jenks, Alexander V. McDonald, Robert J. Hunter, George C. Smith, Fred H. Klaer, Charles A. Strickland, Virginius L. Brown, Ross V. Patteson, Walter G. Bowers, Howard E. Dean, J. Fred Wagner, Leonard Bershad, Charles M. Strotz, Arthur H. Dodge, Leonard D. Frescoln, John R. Gillum, James G. McCollin, Edmund B. Sweeney, Warren J. Bieber, Harry E. Kilgus, Stuart S. Jordan, Lester W. Cunningham, Louis Chodoff, Andrew W. Downs, John H. Trinder, Joseph M. Reed, James Paul Austin, Charles K. Ferer, Mary L. D. Bickings, and Wrey G. Farwell.

Bequests of Professor Maxwell Summerville.—Among several bequests of the late distinguished glyptologist is one of $40,000 to the University of Pennsylvania, $10,000 of which is for the hospital, while the museum receives the fine collection of engraved gems, old prints, etc., and $20,000; the Masonic Home gets $10,000, the Hayes Mechanics' Home, $5,000; the Home for Incurables, $1,000; Home of the Merciful Saviour for Crippled Children, $1,000; Philadelphia Rescue Home, $1,000; Home for Training Deaf Children in Speech, $2,000; Industrial Home for Blind Women, $2,000. Bequests amounting to nearly $4,000 were left to various institutions in Paris, where Professor Summerville had many friends.

GENERAL

Statement of Mortality in Chicago, Ill., for the Week Ending June 4, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on United States Census Bureau's estimated midyear populations of 1,932,314 for 1904 and of 1,873,880 for 1903:

	June 4, 1904.	May 28, 1904.	June 6, 1903.
Total deaths, all causes	452	437	461
Annual death rate per 1,000	12.18	11.82	12.82
By sexes—			
Males	277	258	278
Females	175	179	183
By ages—			
Under 1 year	61	82	63
Between 1 and 5 years	32	34	59
Over 60 years	95	96	75
Important causes of death—			
Acute intestinal diseases	21	29	28
Apoplexy	18	14	18
Bright's disease	41	32	31
Bronchitis	6	13	12
Consumption	67	48	63
Cancer	18	21	20
Convulsions	9	8	8
Diphtheria	5	7	14
Heart diseases	33	37	30
Influenza	..	..	..
Measles	2	2	7
Nervous diseases	24	24	26
Pneumonia	67	55	56
Scarlet fever	4	2	10
Suicide	9	5	12
Smallpox	..	..	..
Typhoid fever	8	4	3
Violence (other than suicide)	24	21	29
Whooping cough	0	2	3

For the first time since last October the weekly pneumonia deaths have not exceeded the deaths from consumption. The 67 deaths from each cause represent 14.8 per cent. of the total mortality, instead of, as heretofore, 10.7 per cent. for consumption and 22 per cent. for pneumonia. In New York city the reduction of pneumonia is even greater; at the close of office hours on Saturday, June 4th, there had been 1,265 deaths from all causes reported, of which number only 161, or 12.7 per cent., were from pneumonia, and 172, or 13.6 per cent., were from consumption. The previous ratios had been 20.98 for pneumonia and 11.12 for consumption. The reign of pneumonia is over until next November, and consumption is again the "captain of the men of death."

Dr. Edmond Tusrikai has taken up his medical practice in Marienbad, at the same address as formerly, the Hungaria House.

Pulte Medical College, Cincinnati, Ohio.—Dr. J. D. Buck has resigned as dean of this college and has been succeeded by Dr. C. E. Walton.

Wayne County, Mich., Medical Society.—The election of officers of this society, held on May 20th, resulted as follows: President, Dr. Guy L. Kiefer; vice-president, Dr. W. S. Anderson: treasurer, Dr. W. J. Stapleton, Jr.

Dr. J. A. Guthrie, passed assistant surgeon, of the U. S. R. S. *Franklin,* is, we regret to learn, in very poor health and has been granted three months' leave to permit of his recovery, which we hope to be able to announce shortly.

Cattaraugus County, N. Y., Medical Society.—The annual meeting of the Cattaraugus County Medical Society was held at Salamanca, May 3rd, when the following officers were elected for the coming year: President, Dr. J. S. Wright; vice-president, Dr. King; secretary, Dr. C. A. Tompkins.

Ohio Medical Association.—The convention of the Ohio Medical Association was brought to a close at noon May 20th, by the election of officers: President, Dr. S. S. Halderman, of Portsmouth; vice-presidents, Dr. J. S. Deemy, of Bellefontaine; Dr. W. E. Morris, of Lisbon, and Dr. H. H. McCollough, of Mansfield; secretary, Dr. Frank Winders, of Columbus.

Bequests of the Late Thomas Brenan, of Chicago.—Among a very large number are the following: House of the Good Shepherd, $5.000; St. Vincent's Infant Asylum, $1,000; St. Joseph's Hospital, $1,000; St. Elizabeth's Hospital, $1,000; Mercy Hospital, $1,000; Alexian Brothers' Hospital, $1,000; St. Joseph's Orphan Asylum, $1,000; St. Joseph's Providence Orphan Asylum, $1,000; House of the Good Shepherd, $1,000.

Garfield Hospital, Washington, D. C., Training School.—The following nurses graduated from this school on May 25th:

Mary Crane Feeley, of Massachusetts; Eleanor Maynard, of Maryland; Ellen Caldwell Talbot, of Kentucky; Mary Katherine Strickler, of Virginia; Jessie Stewart Spier, of Maryland; Mary Amelia Harper, of the District of Columbia; Martha Bruce, of Kentucky; Marian Campbell Spier, of Maryland; Carolina Vance Johnson, of North Carolina; Teresa McKimmey, of Virginia; Blanche McKimmey, of Virginia.

Baltimore County, Md., Medical Association.—At the close of the annual session on May 19th the following officers were elected: President, Dr. George H. Hocking, of Govanstown; vice-president, Dr. Harry F. Jarrett, of Towson; recording secretary, Dr. H. A. Naylor, of Pikesville; corresponding secretary, Dr. R. C. Massenburg, of Towson; treasurer, Dr. B. Whiteley, of Catonsville.

Mary Washington Hospital, Fredericksburg, Md.—The Dabney H. Maury Chapter, Daughters of the Confederacy, of Philadelphia, have given $500 to the Mary Washington Hospital at Fredericksburg, Md., the interest on which is to be used each year in caring for the needy Confederate soldiers to the extent of the amount. A room will be furnished by the chapter, to be known as the Dabney and Maury room, to be used for any patients coming under its provisions.

Western Hospital for the Insane, Bolivar, Tenn.—At a meeting of the board of trustees of the Western Hospital for the Insane, on May 19th, Dr. J. J. Neely, former assistant superintendent, was elected superintendent for a term of eight years, and Dr. W. S. Cocke, of Whiteville, assistant superintendent for a like term. Dr. J. P. Douglas, who has served the institution as superintendent for fourteen years, resigned a few months since.

American Dermatological Association.—At the twenty-eighth annual meeting of this assocation, held at the International Hotel, Niagara Falls, on June 2 and 3, 1904, the following officers were elected for the ensuing year: President, Dr. William T. Corlett, of Cleveland, Ohio; vice-president, Dr. Frank H. Montgomery, of Chicago; secretary and treasurer, Dr. Charles J. White, of Boston; member of council, Dr. John A. Fordyce, of New York. It was decided to hold the next meeting of the association in New York city, on December 28, 29, and 30, 1905.

The Baltimore County Medical Society has elected the following officers for the ensuing year: President, Dr. George H. Hocking, of Govanstown; vice-president, Dr. Harry S. Jarrett, of Towson; recording secretary, Dr. H. A. Naylor, of Reisterstown; corresponding secretary, Dr. R. C. Massenburg, of Towson; treasurer, Dr. Benjamin Whitney, of Catonsville.

The Westchester County Medical Society, at its meeting on May 17th, elected the following officers: President, Dr. C. F. Chapman, of Mount Kisco; vice-president, Dr. H. B. Brown, of Mount Vernon; secretary, Dr. C. P. Byington; treasurer, Dr. S. O. Myers, of Mount Vernon; curator, Dr. N. F. Curtis, of White Plains; censors, Dr. H. E. Schmid, of White Plains; Dr. W. S. Fleming, of Tarrytown; Dr. A. M. Campbell, of Mount Vernon.

Orange County, N. Y., Medical Society.—The ninety-ninth annual meeting of the Orange County Medical Society was held, May 3rd, in the supervisors' rooms at Goshen. There was a large attendance. The following officers were elected for the ensuing year: President, Dr. C. I. Redfield, of Middletown; vice-president, Dr. E. Ross Elliott, of Montgomery; secretary, Dr. M. A. Stivers, of Middletown; treasurer, Dr. W. I. Purdy, of Middletown.

St. Francis Hospital Training School of Pittsburgh.—The first annual commencement of the Training School for Nurses, of St. Francis's Hospital, took place May 3rd in the large reception hall of the hospital. There were 14 graduates. Sisters M. Leo, M. Jerome, M. Blanche, M. Adelaide, M. Sebastiana, M. Hilda, and M. Cassilda, and Miss Mary M. Schenk, Miss Mary A. Radley, Miss Elizabeth C. Mullaney, Miss Anna G. Reardon, Miss Mary A. McCarthy, Miss Mary M. Ecker, and Miss Irene M. Mitchell.

Cleveland College of Physicians and Surgeons.—This college, forming the medical department of Ohio Wesleyan University, graduated the following on May 5th:

David Darwin Alsbacher, Norman Almon Burgess, Arthur Carlisle Christies, Clement Nelson Clarke, Ralph Edward Fisher, William B. Glendining, M. D.; Michael Valentine Halter, David Handmacher, M. D.; Edwin Alan Hannum, Walter James Irwin, Joseph Abraham Koppel, Francis Xavier McNamara, M. D.; J. George Mannhardt, Foss Edwin Pratt, John Harrison Quayle, M. D.; Warner Hopkins Tuckerman, A. B.; Rolandus Gehrmann Walker, A. B., and Ivan Isaac Yoder, A. B.

Illinois Medical Society.—This society adjourned at Bloomington, Ill., on May 19th, after electing officers as follows: President, Dr. William E. Quine, of Chicago; first vice-president, Dr. H. C. Mitchell, of Carbondale; second vice-president, Dr. J. F. Percy, of Galesburg; secretary, Dr. E. Weis, of Ottawa (reelected); treasurer, Dr. E. J. Brown, of Decatur; chairman of permanent committee on tuberculosis, Dr. J. W. Pettit, of Ottawa; chairman of permanent committee on medical legislation, Dr. Frank Billings, of Chicago.

Pith of Current Literature.

ZENTRALBLATT FUER GYNAEKOLOGIE.

April 16, 1904.

1. Bilateral Ligation of the Hypogastric Artery in Inoperable Uterine Carcinoma, By G. Koessler.
2. Eclampsia and Bossi's Method, By F. Wolff.
3. Nephrotomy for the Anuria of Eclampsia, By A. Sippel.
4. Accidents with Menges's Pessary, By Hildebrandt.

1. **Bilateral Ligation of the Hypogastric Artery.**—Koessler records six inoperable cases of uterine cancer treated in this way. Necrosis and the profuse hæmorrhage were thus controlled. While this operation is free from danger, its results are no better than those obtained by careful curetting and burning with the actual cautery. The ligation of the hypogastric arteries may, however, be life saving in cases in which an artery has become eroded and is giving rise to uncontrollable hæmorrhage.

2. **Eclampsia and Bossi's Dilator.**—Wolff reports a successful case. He recommends the use of the dilator as a concurrent operation of vaginal hysterotomy in cases in which assistance is lacking, and delivery must be rapidly accomplished.

3. **Nephrotomy for Eclampsia.**—Sippel examined the kidneys of a woman dead of eclampsia with absolute anuria. The kidneys showed the picture of a so called glaucoma. Sippel suggests that in a similar case he would split the renal capsule or the kidney itself to relieve the venous congestion and, in this way, the anuria. These patients are almost certain to die otherwise, and the suggestion, although theoretical, may be useful.

4. **Menges's Pessary.**—Hildebrandt reports the case of a woman who after wearing one of Menges's club shaped pessaries for five months, was found to have had the club shaped end in the rectovaginal sæptum, the vaginal wall having been entirely eroded. The case shows the necessity of frequent inspection of women wearing pessaries.

BERLINER KLINISCHE WOCHENSCHRIFT

April 25, 1904.

1. Hyperalgetic Zones in the Neck After Bullet Wounds in the Head, By R. Milner.
2. Influence of Local Cold Upon the Heart Function, By W. Krebs.
3. Organotherapy in Pancreatic Disease, By K. Glaessner, and J. Sigel.
4. Determination of the Cardiac Boundaries and Sinusoidal Voltaization, By V. Lippert.
5. Social Hygiene, By Ascher.

1. **Hyperalgetic Zones in the Neck.**—Milner reports in detail the case of a young man who received a bullet wound in the right parietal region. The brain was barely touched and no general symptoms ever developed. Later the uppermost regions of the neck became exquisitely sensitive. The author attributes the condition to the dam-

age of some of the sympathetic fibres in the pia mater or in the gray substance.

2. **Application of Cold and the Cardiac Function.**—Krebs says that in some cases of cardiac disease, the action of cold is beneficial, as shown by the improvement and slowing of the pulse and the increase in the blood pressure. In some cases, however, the action of cold is decidedly the reverse, and this agent cannot, therefore, be compared with digitalis as a general therapeutic measure.

3. **Organotherapy in Pancreatic Disease.**—Glaessner and Sigel report a case of pancreatic disease which gave the clinical signs of colic, fatty stools, glycosuria, and imperfect proteid digestion. Various preparations were given the patient, including pancreon, thyreoidin, and sodium bicarbonate, combined with pancreon and pancreatin. The best result was obtained from pancreatin with sodium bicarbonate. The thyreoid preparation had a decidedly bad effect.

LYON MEDICAL.

April 10, 1904.

1. Large Glioma of the Left Frontal Lobe,
By Charvet and Bancel.
2. Imperforate Duodenum in a Newborn Child,
By Voron.
3. Results of Radioscopy in the Prognosis and Treatment of Empyema After Pleurotomy,
By Destot and Violet.

1. **Glioma.**—Charvet and Bancel describe a case of glioma, verified by necropsy, in which a lumbar puncture was made with the result of doubling visual acuity in the right eye (the left was blind), and improving all the symptoms of the patient.

2. **Imperforate Duodenum.** — Voron narrates a case of a child who died five days after birth, having persistently vomited its milk, when the duodenum was found to be firmly implanted in the pancreas, the upper end of the lower intestine being similarly attached. Gastroenterostomy has been successfully performed in four similar cases, and the author recommends that small Murphy buttons be kept at hand for such emergencies.

SEMAINE MEDICALE.

April 20, 1904.

Typhoid Bacteriuria and Its Influence in the Diffusion of Enteric Fever, By Munch.

Typhoid Bacteriuria.—Munch points out that while the saliva and sweat of typhoid fever patients contain bacilli, this is rather of scientific than practical interest, whereas the presence of bacilli in the urine is of capital importance. The bacilli may be present in such numbers as to give a characteristic appearance to the urine, but this is rare. They do not usually appear before the fifteenth day of the disease. Pyuria may or may not be present. Sometimes an acute cystitis is produced. The eberthuria, as the author calls it, seems to have no connection with the severity of the case. Urine stains being less noticeable than fæcal may escape attention and give rise to infection and it is now our duty to provide for the immediate disinfection of typhoid urine, particularly that which escapes during the bath; this may be done with copper sulphate or mercury bichloride. Vesical injections of potassium permanganate should be given, and have been followed by cessation of eberthuria.

BOSTON MEDICAL AND SURGICAL JOURNAL.

June 2, 1904.

1. A Study of Certain Cases of Sarcoma of the Long Bones from the Massachusetts General Hospital Clinic,
By Charles L. Scudder.
2. Disinfection of the Clinical Thermometer,
By Francis P. Denny.

1. **Sarcoma.**—Scudder reports in all 15 cases of sarcoma of the long bones. It is impossible of course to generalize. All the cases but one recovered from the operations to which they were subjected. Eight cases have remained "cured" or have died of accident or unrelated disease. Four cases suffered from metastasis and two from recurrence, one of these cases as late as five years and three months after the original operation. The author lays stress on the varying degree of malignancy to be observed in different types of sarcoma. This difference in malignancy suggests the advisability of making the surgical treatment correspond to the severity of the case. For instance, if a giant cell sarcoma of a long bone is limited to the bone and is localized in the bone, involving only a small area, a resection or partial operation is justifiable; but if the soft parts are in any way involved, or the disease in the bone is extensive and of long duration, then an amputation is the best treatment; an amputation in the continuity of the bone, if the lower end of the diaphysis is involved, or an amputation at the joint above the disease, if the disease is high in the shaft. Exarticulation at the joint above the disease, at the shoulder or at the hip, is indicated only in those cases in which the disease cannot otherwise be completely removed.

2. **Disinfection of Clinical Thermometers.**—Denny advocates Dyer's method of keeping thermometers sterile. If a few drops of formalin are placed on cotton in the thermometer cases and renewed every two weeks there need be no fear that the thermometer is not sterile. The author records about 25 tests that show this to be the case.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

June 4, 1904.

1. Chorioepithelioma Malignum Vaginale Postpartum Maturum. Its Ætiology and Its Relation to Embryonal Tumors, By George Schmauch.
2. Mesenteric Embolism and Thrombosis. A Study of 214 Cases (*To be continued*),
By James Marsh Jackson, Charles Allen Porter, and William Carter Quimby.
3. The Management of Some Forms of Asthma,
By Thomas F. Reilly.
4. The Problem of the Technics of Ureteral Catheterization,
By Gustav Kolischer, and Louis E. Schmidt.
5. The Business Side of a Physician's Life,
By H. Brooker Mills.

6. Surgical Treatment of Pulmonary Abscess,
By VAN BUREN KNOTT.
7. Medical Supply Tables of the Army. V. (*Concluded*).

1. **Chorioepithelioma.**—Schmauch's paper is wholly technical and of interest chiefly to the specialist. He summarizes his conclusions as follows: (1) The syncytium is of fœtal origin. (2) The syncytium and the Langhans cell are different stages of the same cell, the trophoblast. (3) The chorioepithelioma malignum is a growth consisting of fœtal cells only. As a growth, built up of epithelial cells without blood vessels and connective tissue, it has to be placed in a class by itself. (4) The chorioepithelioma of the woman is always a consequence of pregnancy; it has nothing to do with teratomas, as these are inborn growths. (5) The chorioepithelial formations in teratomas of the testicle and the ovary are proving the fœtal origin of the syncytium, but are totally different from them. The chorioepithelial masses in these tumors proceed from the ectodermal cells and are in their histogenesis equal to all other ectodermal products in teratomas, as the neuroepithelium, etc. (6) The deportation of parts of villi and their epithelial layer is a physiological fact and probably takes place during the whole period of pregnancy. (7) The epithelial layer of the villus preserves its embryonal energy of proliferation until birth. Therefore a chorioepithelioma may arise at any time of pregnancy, when the natural protective forces of the maternal organism become deficient.

3. **Asthma.**—Reilly holds that in many cases of asthma the paroxysm is brought about by irritation of certain sensitive areas of the mucous membrane of the nose and pharynx. Whatever be the cause of these paroxysms, it has been repeatedly shown that relief can often be obtained by remedies that reduce the œdematous condition of the mucous membrane of the nose. The author has had excellent results by using a spray of suprarenal extract.

4. **Ureteral Catheterization.**—Kolischer and Schmidt assert that much has been written on ureteral catheterization by physicians little qualified to express an opinion on the subject. They have had a large experience with all the best instruments and believe it well to give their experience. They describe and illustrate ten of the best known instruments and call attention to the advantages and disadvantages possessed by each. The paper is a very practical exposition of the subject of ureteral catheterization and is full of minute and painstaking details and directions.

6. **Pulmonary Abscess.**—Knott confines his remarks to the treatment of pulmonary abscesses due to pneumonia, to ruptured abscess of the liver, and to those of appendicular origin. The author does not think that the diagnosis of these abscesses should present any difficulties. The absolute location of the pus is hard to determine. The aspirating needle is indispensable for this purpose. It should be used under local anæsthesia after the patient has been prepared for operation. If the needle reveals the presence of pus it must not be removed, but left as a guide. The author reports four cases operated on by him for pulmonary abscess. He gives his technics in detail.

MEDICAL RECORD.

June 4, 1904.

1. Some Thoughts Suggested by the Statistics of the Health Department, Especially Concerning Typhoid Fever and Smallpox, By GEORGE L. PEABODY.
2. Pathological Distinctions Discernible in the Radiograph in Certain Diseases of the Long Bones,
By EUGENE H. EISING.
3. The Treatment of Epidemic Cerebrospinal Meningitis by Intraspinal Antiseptic Injections,
By CHARLES E. NAMMACK.
4. Myocardial Change from the Clinical Side,
By JOHN W. BOYCE.
5. The Use of Rubber Tissue and Boracic Acid in the Treatment of Surface Granulating Wounds and Especially of the Varicose Ulcers of the Leg,
By W. SCOTT SCHLEY.
6. A Case of Bilharzia Hæmatobia Infection,
By T. N. RAFFERTY, and H. N. RAFFERTY.
7. X Ray Diagnosis of an Interesting Case,
By L. D. WEISS.

1. **Some Thoughts Concerning Typhoid Fever and Smallpox.**—Peabody's remarks on smallpox will be of special interest. He makes a strong plea in favor of allowing smallpox patients to remain in their own homes when suitable provisions can be undertaken for their care. He asserts that the present methods in vogue in New York for the control of this disease tend to cast doubts on the efficacy of vaccination as a protection against infection and make the temptation to conceal the disease almost irresistable.

2. **The Radiograph in Diagnosis.**—Eising calls attention to the aid that may be obtained from radiographs in making diagnoses in such diseases of the long bones as sarcoma, carcinoma, and subacute osteomyelitis. The paper is illustrated with a number of cuts which serve to emphasize the author's contention.

3. **Epidemic Cerebrospinal Meningitis.**—Nammack asserts that of the first twenty-seven cases of cerebrospinal meningitis admitted to Bellevue Hospital during the present epidemic 90 per cent. died. The importance of an efficient treatment is evident. He experimented on five cases with lumbar puncture followed by an injection of a germicide. Four of the cases died and one recovered. The case that recovered seemed to have been greatly benefited by the injections. The author, however, is in doubt as to whether the apparent improvement was not due to a remission in the disease rather than to a cure.

5. **Rubber Tissue in the Treatment of Granulating Wounds.**—Schley advocates treating leg ulcers as follows: Fill the ulcer with finely powdered boric acid and cover it and about one inch of the surrounding skin with rubber tissue. Apply over this plain gauze and a neat bandage. This dressing should not be applied oftener than once in five days. The author has observed that when ointments, after being applied to the skin, are covered with rubber tissue they act better than when covered with gauze.

6. **Bilharzia Hæmatobia Infection.**—T. N. and H. N. Rafferty have had the opportunity to

continue the study of the case of bilharzia hæmatobia infection that was reported by Walker in 1900. The peculiarities of the case are: (1) Its occurrence in this country, when there has been no residence abroad; (2) the almost universal distribution of the organism throughout the patient's body, it being accurately demonstrated in blood from the left lung, from the stomach, from the lower bowel, probably from the pelvis of the left kidney, from the peripheral circulation (finger), and in the urine and fluid from a cyst in communication with the urinary bladder; (3) the excessive hæmorrhages over a long period of time (more than a year) and (4) the wonderful resistance of the patient—a woman weighing but 90 pounds, who had undergone two successful abdominal operations, and had been a semi-invalid for ten years.

MEDICAL NEWS.

June 4, 1904.

1. Some Considerations on Infection and Immunity, By Thomas E. Satterthwaite.
2. Notes on the Epidemic of Cerebrospinal Meningitis, By Henry Dwight Chapin.
3. The Clinical Features of Cerebrospinal Meningitis, or Cerebrospinal Fever of the Epidemic Type, By Henry Koplik.
4. A Plea for the Organization of a Society of Sanitary and Moral Prophylaxis, By Prince A. Morrow.
5. The Management of Occipitoposterior Positions of the Vertex, By James D. Voorhees.
6. Scurvy in Infants, By William Fitch Cheney.

1. **Infection and Immunity.**—Satterthwaite attempts to give, in a very condensed manner, an idea of the extent and limitation of our knowledge of infection and immunity. A sketch is given of the origin of bacteriology and six of the best known theories of immunity are discussed. By far the most space is devoted to elucidating Ehrlich's side chain theory.

2. **Epidemic Cerebrospinal Meningitis.**—Chapin gives health department statistics which show that from March 19 to May 21, 1903, there were, in New York, 64 cases of cerebrospinal meningitis and that during the same period of the present year there were 498 cases. In the present epidemic the pulse, while variable, has not shown the tendency to intermit which is so marked in other forms of meningitis. The respiration is not apt to be so irregular and sighing, and the purpuric rash is extremely rare. The present epidemic, while most prevalent among the poor, is not confined to any part of the city. As previous epidemics have usually disappeared with the advent of warm weather, there is ground for hope that the present visitation will soon be over.

3. **Epidemic Cerebrospinal Meningitis.**—Koplik bases his remarks on the study of 77 cases of meningitis, 37 of which were of the epidemic type and 35 of the tuberculous. The author has not utilized any of the cases he has observed in the present epidemic. He covers the subject quite fully, but we will summarize only what he has to say with regard to treatment. Epidemic cerebrospinal meningitis, like pneumonia, is probably a self limited disease and all we can do in the way of treatment is to relieve the suffering of the patient and treat the complications. Lumbar puncture, in the author's opinion, is not curative though it is a very valuable means of relieving the symptoms due to pressure. The injection of antiseptics into the spinal canal has not resulted in any decrease in the mortality of epidemic meningitis.

6. **Scurvy.**—Cheney asserts that just three measures are indicated for the cure of scurvy: (1) Discontinue the proprietary food. Substitute for it a mixture of fresh milk diluted with water or with oatmeal water. (2) Give fresh orange juice, in dose of one or two teaspoonfuls three times a day. It is surprising how babies with scurvy take to this and seem to enjoy it. (3) Give freshly expressed beef juice, squeezed from rare steak, in doses of one or two teaspoonfuls three times a day. (4) Give no drugs at all.

AMERICAN MEDICINE.

June 4, 1904.

1. The Conservative Treatment of Acute Appendicitis, By A. W. Morton.
2. The Leishman-Donovan Blood Parasites (A Synopsis), By Joseph McFarland.
3. Varicocele, By Henry Dawson Furniss.
4. The Results of the Röntgen Method in the Diagnosis of Renal Calculus, By Charles Lester Leonard.
5. Neuroses of Nasal Origin, By G. Hudson-Makuen.
6. The Care of the Insane, By W. J. Howells.

1. **Appendicitis.**—Morton pleads for conservatism in the treatment of acute appendicitis. If the leucocytosis is below 20,000, the pulse below 116, and the general symptoms favorable, an operation is indicated at once. If, however, the patient is septic, with a rapid pulse, tympanitic abdomen, exaggerated local symptoms, vomits, and has a leucocytosis of over 20,000, it is better to resort to the Ochsner method of treatment and defer operation until the pus becomes encapsulated. If such a method of treatment is adopted the author believes that the mortality of acute appendicitis can be reduced to about four per cent.

2. **The Leishman-Donovan Parasites.**—McFarland's paper, as the title implies, is a synopsis of our knowledge of this recently discovered blood parasite. The organism was first observed by Leishman in India, in the splenic pulp of cases of "dumdum fever." Dumdum fever bears a strong resemblance to severe malaria, exhibiting, however, a much more profound cachexia. Nothing is known of the life history of this parasite and its place in the scale of life has not as yet been determined.

3. **Varicocele.**—Furniss asserts that the high operation for varicocele is the operation of choice. Neither the high nor the low operations should be undertaken lightly, as they are both attended with considerable danger of complications. Two precautions are essential; strict asepsis and a reduction of traumatism to the minimum. The author briefly reports a number of cases in order to illustrate how serious may be the consequences of defective technics.

5. **Neuroses of Nasal Origin.**—Hudson-Makuen concludes: "To sum up briefly, I beg to

offer the following conclusions: 1. It is reasonable to suppose, though not absolutely proved, that some of the more serious mental and cerebral diseases may be of nasal origin. 2. Many of the so-called reflex nasal neuroses may best be explained on the theory of faulty respiration and impaired cerebral circulation, due to direct intranasal pressure and the absorption of toxic catarrhal products through the blood and lymph circulation. 3. A careful examination of the nose is imperative in all doubtful cases of diseases of the nervous system."

LANCET.

May 21, 1904.

1. The Future of London Medical Education, By SIR I. OWEN.
2. Some Disorders of the Blood and Blood-forming Organs in Early Life. (Goulstonian Lectures. III), By R. HUTCHISON
3. Acute Infective Gangrenous Processes (Necroses) of the Alimentary Tract. (Erasmus Wilson Lectures. II), By E. M. CORNER.
4. Some Experiences in the Surgical Treatment of Suppurative Lesions of the Nasal Accessory Sinuses, By H. TILLEY.
5. Note on the Value of Hot Water Injections as a Substitute for Nutrient Enemata in the Treatment of Gastric Ulcer, By W. PASTEUR.
6. Ankylostomiasis, By J. CHRONNELL.
7. Transplantation of Tendon for Musculospiral Paralysis, By H. M. W. GRAY.
8. The Results of Treatment of 301 Cases of Phthisis by Open Air Methods, By D. LAWSON.
9. Geographical Distribution of Harelip and Cleft Palate, By R. W. MURRAY.
10. Cases of Congenital Deformity in the Fœtus, By H. C. LAWRENCE, and C. BRAINE-HARTNELL.

2. **Infantile Blood Diseases.**—Hutchison, in the third of his Goulstonian lectures, discusses the affections of the thymus, and lymphatic glands, Hodgkin's disease, lymphosarcoma, and chloroma. The blood disorders of early life differ from those of more mature years mainly in exhibiting less definition of type. Clear cut disorders, such as chlorosis, pernicious anæmia, and myelogenous leucæmia, occur rarely, if at all, in infancy and early childhood. Splenic anæmia is the only type of anæmia peculiar to infancy.

3. **Intestinal Gangrene.**—Corner, in the second Erasmus Wilson lecture, brings forward examples of the action of microorganisms in producing gangrene or necrosis of the gut. The pathological process is in all probability the same whether it is in the appendix, the stomach, the duodenum, strangulated herniæ, or elsewhere—a necrosis of the walls of the gut due in the main, or entirely, to the action of microorganisms.

4. **Suppuration of the Nasal Sinuses.**—Tilley reports a few selected cases of suppuration of the nasal accessory sinuses which illustrate some of the chief symptoms, the diagnostic features, and the method of treatment of such lesions. Primary infection may arise from local or general causes. Septic inflammation around the roots of dead bicuspid and molar teeth is very frequently the cause of antral suppuration. The septic discharges from suppurating lacunæ of old adenoid growths and hypertrophic rhinitis are also ætiological factors. Many cases date from attacks of the various specific fevers—*e. g.*, influenza. Suppuration in the antrum, apart from the ill effects of swallowing septic matter, is not dangerous to life, even if untreated. But fatal meningitis often results from neglect of empyemata of the frontal, ethmoidal, and sphenoidal sinuses. The risk to life when operative treatment is undertaken depends on two factors: (1) the sinus involved; and (2) the abilty of the surgeon. The "regrettable occurrences" usually follow radical operations upon the frontal ethmoidal sinuses, and are genrally due to deficient drainage. Only complete obliteration or destruction of the bony cavities offers any prospect of a permanent radical cure. But free, unhindered, spontaneous drainage is a *sine qua non.*

5. **Gastric Ulcer.**—Pasteur treats all cases of gastric ulcer requiring rectal feeding by enemata of plain water at the temperature of the body. By substituting ten ounce enemata of plain water at 100° F. for the smaller nutrient enemata at present in general use, it is possible to prevent thirst altogether in the great majority of the cases and to do away entirely with the unpleasant taste in the mouth so frequently complained of. In most cases it is possible to supplement the enemata by giving small quantities of peptonized milk by the mouth before the end of a week. But in several cases the patients received nothing by mouth for a fortnight, and gave no indication that their prolonged abstinence did them any harm.

8. **Pulmonary Tuberculosis.** — Lawson publishes the results of the experience gained during the past three years of sanatorial treatment of phthisis at Banchory, Scotland. Out of a total of 302 patients coming under treatment, 84 died—a mortality of 28 per cent. But 77 per cent. of the fatal cases were admitted during the first year. Eight cases derived no benefit from sanatorium treatment, and 13, although improved, still showed signs of active disease on discharge. Of the remaining cases—those in which the disease had been arrested—111 (or 36.7 per cent.) had returned to their ordinary work. The average term of residence in the sanatorium was approximately five months, and the average weight gained 16 pounds. All the cases of tuberculous laryngitis seen were secondary to pulmonary phthisis. In four cases tuberculous ulcers healed and remained well under systematic local application of lactic acid.

9. **Harelip.**—Murray thinks it probable that harelip and cleft palate occur with varying frequency amongst all nations of the world, and that the frequency with which it is seen amongst uncivilized natives depends very largely upon their religious belief, which would determine whether a child born with a harelip should be put to death or allowed to live.

BRITISH MEDICAL JOURNAL.

May 21, 1904.

1. The Future of London Medical Education, By Sir I. Owen.
2. Hæmatoma and Hæmatocele, a Study of Two Cases of Early Tubal Pregnancy, By A. Doran.
3. An Eighth Series of Cases of Total Extirpation of the Prostate for Radical Cure of Enlargement of that Organ, By P. J. Freyer.
4. Total Prostatectomy: Deductions to be Drawn from the Presence of Striated Muscle Fibre in the "Capsule" of the Parts Removed, By C. S. Wallace.
5. The Relative Advantages of Suprapubic and Perineal Prostatectomy, By E. Deanesly.
6. Remarks on a Series of 120 Operations for Vesical Calculi, By F. A. Southam.

2. **Extrauterine Pregnancy.**—Doran, from a study of two early cases of extrauterine pregnancy, concludes that hæmatoma is not a rare result of that conditon, and that it may be mistaken for hæmatocele. It is, however, decidedly less frequent than hæmatocele in relation to ectopic gestation. Such a hæmatoma, even when developed early, is not so innocuous as is generally believed. The peritoneal capsule may yield and dangerous intraperitoneal hæmorrhage result. Hæmatocele is undoubtedly a frequent result of interrupted tubal gestation: at the same time its perils have been overrated. It often signifies that the issue of blood from a tubal mole has permanently ceased.

3, 4, 5. **Prostatectomy.**—Freyer reports an eighth series of twenty cases of hypertrophied prostate treated by total extipration. He has latterly been extending the operation to the removal of much smaller prostates than previously attempted, and to patients more advanced in life than he at one time thought it safe to deal with. Wallace, in discussing the pathological anatomy of the hypertrophied prostate, states that the presence of striped muscle fibre in the "capsule" of an enucleated prostate is not to be taken as an irrefragable proof that the line of enucleation has passed outside the confines of the gland, and that therefore the prostatectomy is complete. The completeness, as in other cases, can only be established by a microscopic demonstration of the absence of gland tissue in the parts left behind. Deanesly summarizes the principal advantages which prostatectomy by the perineal method appears to possess, compared with the suprapubic method. It is anatomically more direct; it does not inflict a double wound in the bladder, and does not open the prevesical cellular tissue. The whole operation can be performed deliberately and under the direct guidance of sight and touch, and permits the operator to remove as much or little of the prostatic overgrowth as the circumstances of the case or the nature of the enlargement render desirable or feasible. The drainage of the bladder and subsequent wound treatment are much facilitated by the dependent opening. The conspicuous merit of Proust's operation compared with previous perineal methods is the accuracy and certainty with which each step of the operation is performed, and the admirable access to sight and touch which it gives to the prostate and base of the bladder. Its greatest merit is that it permits a precise examination of the whole prostate, both within and without the bladder before the question of removal of the organ is finally decided. The preliminary stages of the operation offer a method of exploring the bladder which for many purposes is much superior to suprapubic cystotomy.

6. **Vesical Calculus.**—Southam reviews a series of 120 operations for the removal of vesical calculi. The operations were performed on 110 patients, of whom 8 were women and 102 men. The ages varied from 3 to 78 years: 47 were between 10 and 50, and 44 were over 50. In 7 of the 8 females the calculi were extracted through the dilated urethra; in the remaining case vaginal lithotomy was performed. In 49 of the male cases the calculus was removed by lithotrity, and in 63 cases lithotomy was performed, the lateral operation in 17 patients, and the suprapubic in 46 patients. In 12 patients the operation was followed by a fatal result—a mortality of 10 per cent. One of the 49 lithotrity cases proved fatal —mortality 2 per cent. In 7 patients there was a recurrence of the calculi in the bladder, necessitating further operations. In one case lithotomy was performed three times and lithotrity once in the course of eight years. In two instances only was the nucleus of the calculus formed by a foreign body. In one instance there was a good example of so called "spontaneous fracture," the patient having frequently passed by the urethra irregular fragments of fractured phosphatic calculi. A typical example of encysted calculi was met with, a number of small calculi being contained in a saccule the size of a pigeon's egg, situated at the base of the bladder, with which it communicated by an opening just large enough to admit the tip of the little finger.

Growth of Chicago Polyclinic Hospital.—A new hospital, to cost $150,000, and to be conducted entirely on business lines, is the plan of the physicians of the Chicago Polyclinic and Hospital. The building is to be erected at Oak Street and LaSalle Avenue, where ground with a frontage of 200 feet was purchased two years ago. These physicians will issue bonds for the amount needed, and they and their friends will purchase these bonds as a business investment. No endowments are sought, and there will be no mortgaging of house or ground. The hospital will be one of the best equipped in the country, with accommodations for about 150 patients. Plans for the building are in the hands of an architect, but, as they are subject to change, they will not be made public until definitely decided on. The Chicago Polyclinic and Hospital has been established for eighteen years, at 174 and 176 Chicago Avenue. Dr. Fernand Henrotin is president, Dr. R. D. McArthur vice-president, Dr. John H. Chew treasurer, and Dr. Malcolm L. Harris secretary. Dr. Nicholas Senn is one of the professors of surgery. If the new hospital should prove the success anticipated another issue of $150,000 in bonds will be made after a few years and an addition built that will double its capacity.

American Medical Association.

Fifty-fifth Annual Session, Held at Atlantic City on June 7, 8, 9, and 10, 1904.

The fifty-fifth annual session of the American Medical Association opened under the most favorable auspices on Tuesday morning, June 7th. A severe thunderstorm on Monday night had cleared the muggy atmosphere somewhat, and the day was fine and not too hot, though the sultriness recurred later in the day, and a very heavy thunderstorm set in about 5 p. m.

Upwards of a thousand had already put in an appearance, and accommodations have been booked in advance for fully two thousand more. The registration bureau, which was open at 8 a. m., at the entrance to Young's Pier, with its staff of lady clerks, had its hands full all morning attending to the registration of members, who came almost in battalions. Never was there such a thoroughly representative gathering of the medical profession of the United States. The ladies, too, were largely to the fore, the "ladies' badge" being conspicuously evident everywhere, on the hotel piazzas, on the piers, at the meeting places, and on the Board Walk.

Every convenience was afforded the members and ladies at the registration bureau, Young's Pier, a writing room, telephone, telegraph, stenographers, messenger boys, etc.

In the evening a reception and *musicale* were arranged for the visiting ladies of the American Medical Association in the Music Hall on the Steel Pier, from 8.30 to 10.30 p. m., by the ladies' committee, of which Mrs. Walter Reynolds was chairman; Mrs. A. D. Cuskaden, secretary; and Mrs. Theodore Senseman, treasurer.

The representation of New York at this meeting of the association has undoubtedly aided to swell the attendance to its present unprecedented extent. A large number of physicians who have for years been excommunicate, are by the gracious act of the president of the association and the New York State Medical Association restored to practical membership, and at the opening of the registration bureau on Wednesday morning no less than 212 New York physicians had registered.

For the smoothness with which so large a meeting has on the whole gone off, great praise is due to the various Atlantic City committees. When all were so good it would be invidious to particularize, and we have not space to name all the members of the various committees.

A meeting of councillors and others interested in organization took place at the High School at 3.30 p. m. on Wednesday, June 8th.

The thunderstorm on Tuesday evening cleared the atmosphere for Wednesday, which proved a delightful day. Atlantic City was truly, as the local press announced in flaring headlines, "Captured by the Doctors."

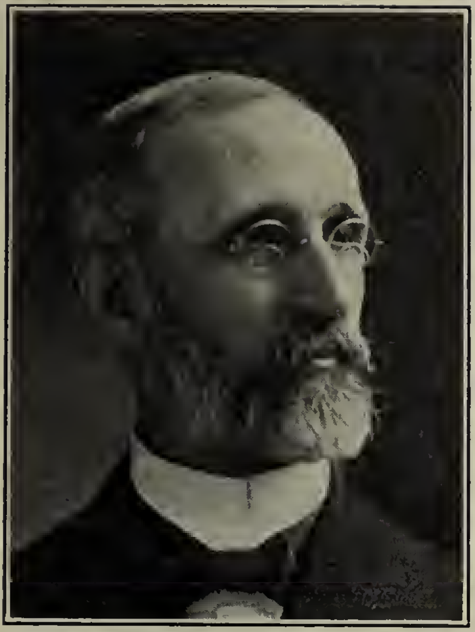
The rapprochement between the profession in Canada and the United States is evidenced by the increasing attendances of Canadians at the meetings of the association. Among the Canadians present at the meeting were: Dr. Bruce Smith, associate superintendent of the Hospital for the Insane, Brockville, Ont.; Dr. C. J. Hastings, of Toronto, Ont.; Dr. W. A. Young, of Toronto, Ont.; Dr. Alexander McPhedran, professor of medicine, Toronto University; Dr. N. A. Powell, professor of medical jurisprudence, Toronto University; Dr. B. E. McMenzel and Dr. H. P. Galloway, of Toronto Orthopædic Hospital.

Registration.—The total registration in 1900, when the association last met in Atlantic City, was 2,035. Up to 10.30 a. m. on Wednesday, June 8th, this year, the second day of the meeting, the registration had already amounted to 2,437, or 400 in excess of the entire registration of 1900, and there are still three days of the meeting to run, and at least 500 more members known to be coming. This will make the present meeting the largest ever held in the history of the association.

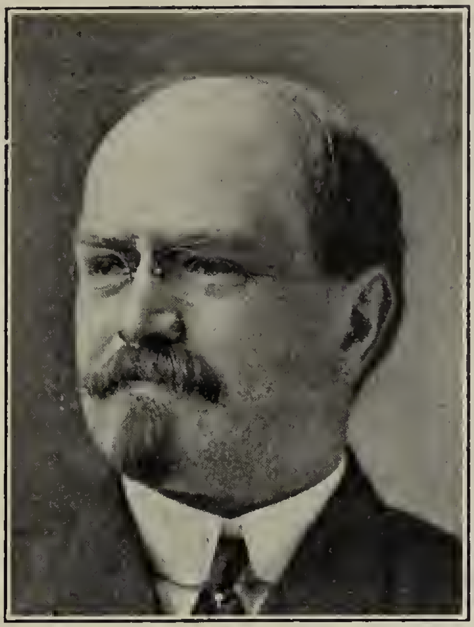
THE HOUSE OF DELEGATES.

was in sesion on Monday morning and afternoon, June 6th, and again on Tuesday afternoon, June 7th. Its proceedings contained several matters of great importance, viz., the reports of the secretary, the Committee on Medical Legislation, the Committee on Revision of the Constitution and Bylaws, and the Provisional Committee on Establishment of a National Bureau of Medicines and Foods.

The President's Address.—Dr. Billings said

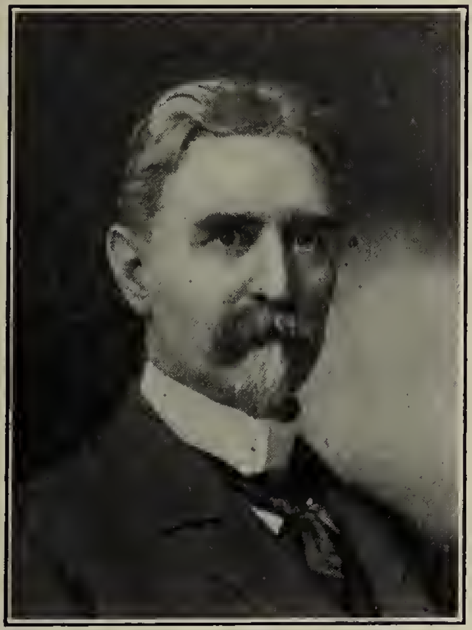


G. C. SAVAGE, M. D.,
First Vice-President A. M. A.

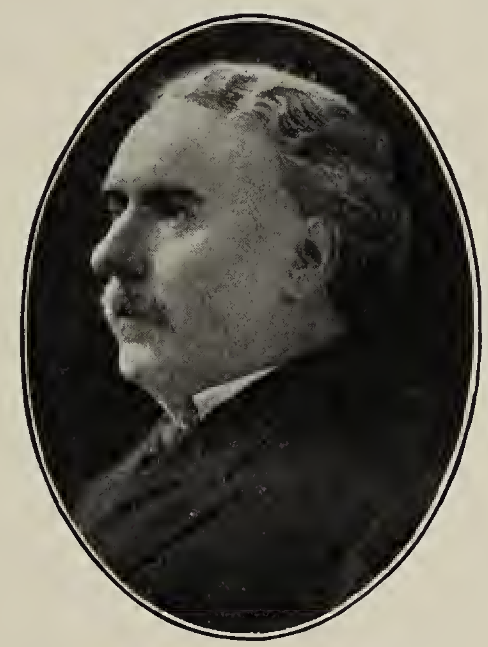


JOHN H. MUSSER, M. D.,
President A. M. A.

ISADORE DYER, M. D.,
Second Vice-President, A. M. A.



C. LESTER HALL, M. D.,
Third Vice-President A. M. A.



GEORGE F. JENKINS, M. D.,
Fourth Vice-President A. M. A.

WALTER P. CONAWAY, M. D.,
Chairman of Committee on New Membership.

WILLIAM EDGAR DARNELL, M. D.,
Chairman of Committee on Hotels.

E. A. REILLY, M. D.,
Chairman of Subcommittee on Registration.

that he had not expected to preside again, but that his last experience had been so pleasant that he was glad of this opportunity. He was occupying the chair because of a resolution which had been adopted to the effect that the retiring president should officiate until Tuesday noon, when his successor should assume the duties of the office. They had succeeded in transacting a great deal of business at their last meeting. He thought that they might have been too precipitate, but he regretted nothing that had been done. It was much easier to legislate than to remove legislative work. As the business committee had been overworked, he thought it advisable to appoint a number of reference committees instead. This plan was acted upon by the house.

The Report of the Secretary.—Dr. George H. Simmons, of Chicago, reported that the membership of the association in June, 1903, was 13,545; during the past year 2,413 new members had been added and 919 had been dropped on account of death, non-payment of dues, etc. The membership at present was 15,039. The total membership of the State societies was about 44,360.

The Rush Monument Fund.—Dr. James C. Wilson, of Philadelphia, gave an itemized account of the finances of this committee, which showed that they had at present funds at their disposal amounting to $15,969.

Report of the Committee on Medical Education.—Dr. Arthur D. Bevan, of Chicago, said that the object of the committee was to carry out the suggestions of the association for raising the standard of medical education. From the very nature of our government we could expect no help from that source of establishing a uniform standard, such as was the rule in European countries, but all efforts in this direction must be dependent on the work of some such organization as this association.

The Association and Senn Medals.—Dr. Lewis S. McMurtry, of Louisville, Ky., reported that, after having had the conditions of competition printed in all the principal medical publications, and after having given the competitors the opportunity to choose their own subjects or to take a subject suggested by the committee, only one paper had been received, and that had not come up to the standard set; the standard set being that the paper should contain some definite addition to our present knowledge of medicine or surgery. After discussing the matter it was voted to abolish the prize and to discharge the committee. The committee on the Senn prize had received no paper whatever, but it was decided to allow this medal to stand for competition, as it was costing the association nothing.

Revision of the Constitution and By-Laws.—Dr. J. N. McCormack, of Bowling Green, Ky., submitted a revised constitution and by-laws of the American Medical Association to the House of Delegates for adoption. This constitution met with approval, but action was deferred until a future session.

Medical Legislation.—Dr. C. A. L. Reed, of Cincinnati, Ohio, reported that the committee had arranged to have a correspondent in every county in the United States. They had received the hearty cooperation of almost all the State societies, and now had 1,940 such correspondents and had issued commissions urging them to use all means, both personal and political, to secure such legislation as the association should desire. An effort had been made to secure the appointment of a physician on the Panama Canal Commission, but owing to the fact that the President could appoint only one member and that member had already been appointed, they had failed to obtain the desired appointment, but the general response of the correspondents in the various counties showed what an influence could be brought to bear in such cases. Their request that a representative of the medical corps of the army be detailed to serve on the general staff of the army had been granted. An urgent appeal was made to have all physicans exert their influence to have physicians nominated and elected to congress, as the lack of such representation was a most serious obstacle in the endeavors of the association in behalf of the public welfare and of the profession.

The Report of the Provisional Committee on the Establishment of a National Bureau of Medicines and Foods.—Dr. E. Eliot Harris, of New York, reported that his committee had met five delegates appointed by the Pharmaceutical Association and had conferred with Dr. Wiley, of the Bureau of Agriculture of the United States. They could hope for no help from the United States Government; the work would have to be undertaken by the two national societies. Either the Department of Agriculture would make the analyses or they could have a laboratory under the direction of the two associations. Such a bureau, while under direction of the members of the American Pharmaceutical and the American Medical Associations, would really be a separate entity, and neither association would be responsible legally. While ascertaining the actual value of foods and drugs, and being in a position to protect physicians, druggists, and the general public, they need not necessarily make a public condemnation of an article unless they thought such a course wise. It was recommended that five members should be elected to confer with five members from the Pharmaceutical Association, and that they should act as a distinct body, and that permanent directors should be appointed.

Report of the Committee on National Incorporation.—Dr. Joseph D. Bryant, of New York, reported that they had secured the advice of Judge Jay, who, from his experience, was in a position where he could give a very accurate opinion on the subject, and after giving his reasons he concluded that there was no legal obstacle interposed to securing actual incorporation under act of congress of the American Medical Association. The proposed special congressional charter was drawn up and presented to the house for approval.

The Committee on Organization.—Dr. J. N. McCormack reported that great progress in organization had ben made. He said that 1,600 counties out of the 2,830 in the United States were more or less completely organized.

The Sections and Section Work.—Dr. L. S. McMurtry, of Louisville, Ky., reported that the heads of the various sections had held a meeting in Chicago and had mapped out the work and systematized it so that the work of the sections no longer overlapped, and the papers were read in the sections where they belonged. Every effort was being made to elevate the standard of scientific work.

Second Day, Tuesday, June 7, 1904.

Dr. J. B. Roberts, of Pennsylvania, called the meeting to order.

Committee on National Incorporation.—This committee presented the following resolutions: First, that the board of trustees be empowered to make the present charter correspond with the changes in constitution and by-laws. Second, that the board of trustees should endeavor to secure from Congress a suitable and desirable national charter.

Adoption of the New Constitution and By-Laws.—The new constitution and by-laws, as presented at a former meeting, were adopted after a few insignificant alterations and additions had been made.

Report of the Board of Trustees.—This report contained an extensive and detailed account of the finances of the association. It showed that the association owned real estate valued at over $100,000, and that it had other investments in more convertible securities, to the amount of $40,000, which almost provided for the reserve fund of $150,000, which the association desired should be set aside for use in emergency before any change should be made in its fiscal policy. This fund, however, was not to be made up at the expense of the *Journal*—that was, by curtailing in any way that would effect its ideals. This report also showed that the average weekly circulation of the *Journal of the American Medical Association* was 28,615 copies weekly, which indicated an increase of 3,615 copies for the past year. The appropriation of $500 for the Rush Monument Fund was ready for the committee when needed. The treasurer, Henry P. Newman, of Chicago, who had held this position for the past ten years, relinquished the funds in his possession and tendered his resignation. In February, 1903, Dr. J. N. McCormack was appointed national organizer. Nearly every State has accepted the plan of organization proposed and was complying with every requirement of the constitution and by-laws adopted at St. Paul, in 1901. The work had been so completely done that it could now be left in the hands of the several State associations to complete, by organizing a county society in every county in each State and Territory in the Union.

Report of the Committee on Branch Associations.—Dr. J. N. McCormack, to whom was assigned the duty of reporting on the advisability of dividing the country into branch associations, begged leave to recommend that permission be given for the creation of seven branches at the discretion of the governing authorities of the State associations composing them, and so arranged as to cover the entire country. A provisional division was made and a form of constitution and by-laws was submitted, under which the presidents of the respective State associations became vice-presidents of the branch associations; and the presidents of these larger bodies in turn became the vice-presidents of this association. It was also provided that membership in the branch associations should be voluntary. It was recommended that the branch associations hold their meetings at the same time with that of the State associations of the jurisdiction in which the meeting is held. Instructions were given at the last meeting to the Committee on Organization to confer with the governing authorities of the various State associations and to formulate some general plan for holding the annual meeting of these bodies in the fall, or at a time which would least conflict with the attendance of members at the sessions of the association, and in pursuance of this it was recommended that all State associations hold their annual meetings during the fall and the winter months.

Third Day, Wednesday, June 8th.

Various committees reported to the House of Delegates on Wednesday morning, as follows:

Committee on Organization.—Dr. J. N. McCormack's plan for the formation of seven branches, which was submitted by Dr. McCormack as chairman of the Committee on Organization, met with considerable opposition, and after much discussion was referred back to the Committee on Organization with instructions to obtain an expression of opinion from the various State societies and to report next year.

Committee on Sections and Sectional Work.—Dr. Elmather recommended that a permanent committee for this work, whose experience would be effective in maintaining reforms, be appointed.

Committee on Prophylaxis of Venereal Diseases.—Dr. Henry D. Holton, of Brattleboro, Vt., said that since the attention of the profession and of the public had been drawn to the fact that the effects of venereal disease upon public health and social and moral conditions was as far reaching as that of alcoholism or tuberculosis, the national, State, and municipal authorities would be willing to cooperate in securing legislation for the prevention of the spread of this class of diseases. At present 33 States had no laws whatever on this subject except municipal ones. All the large cities were deficient in hospital accommodations for this class of patients. The Maine society had agitated the question of reporting such cases to the boards of health. Michigan had a law forbidding the marriage of persons affected with this class of diseases and fixing a fine of from $500 to $1,000 for its violation. In these cases a physician who had attended such parties was compelled to testify. The influence of the association in assisting the study of venereal diseases and in securing legislation for the prevention of their dissemination was urged.

Committee on Scientific Work.—Dr. Alfred Stengel, of Philadelphia, reported that the association was contributing funds to several members for the purpose of carrying on promising researches, and some satisfactory results had been obtained.

Dr. H. Woods, of Baltimore, recommended that recognizing the deleterious effects of wood alcohol and liquors containing it the federal authorities be invoked to designate this substance a poison and to formulate regulations regarding its sale.

Dr. E. E. Harris, of New York, requested that as the New York association and society had affiliated the members be allowed to register as guests of the association.

It was resolved that the association endorse the action of the postmaster-general in regard to the use of mails for the distribution of quack medicines and appliances, and obscene literature.

GENERAL MEETING.

First Day, Tuesday, June 7, 1904.

Dr. Frank Billings, of Chicago, in the chair.

The Reverend William Aikman, of Atlantic City, opened the meeting with prayer.

The Honorable Franklin P. Stoy, mayor of Atlantic City, welcomed the American Medical Association to the city and formally presented the assembly with the freedom of the city. He said that he had had the privilege of welcoming them four years ago and hoped that he might again have the privilege when they next returned, as the association was always welcome to Atlantic City.

Dr. Theodore N. Reed, of Atlantic City, welcomed the visiting association on behalf of the local profession.

Dr. G. C. Savage, of Nashville, Tenn., the first vice-president, responded to the addresses of welcome on behalf of the association. He called special attention to the fact that the American Medical Association of to-day was a very different, and a much more powerful, body than that of four years ago, and took this occasion to give Dr. McCormack credit due to him for this advance in organization.

The Major Walter Reed Monument.—Dr. W. W. Keen, of Philadelphia, informed the association that the committee of which he was chairman had been incorporated in the District of Columbia, and was thoroughly equipped to take care of any funds that might be raised for the purpose of creating a memorial to Major Walter Reed. After referring to Major Reed's services to humanity he asked that the association contribute $10,000 for the proposed memorial.

Dr. Welsh, of Baltimore, said that this was a matter which should awaken the enthusiasm of the association, as Major Reed's discovery was one of the first magnitude, greater than any other that had been made in this country. He had practically eliminated yellow fever from the island of Cuba and from other sections of the West Indies and South America. The yellow fever epidemic of 1888 had cost over $1,000,000, so that aside from the saving of human life the commercial value of his work was untold. He hoped that the association would respond to the demands of the committee without further urging.

The California State Society subscribed $500 to the fund and a number of physicians subscribed $100, so that at the close of the meeting Dr. Keen announced that $7,500 had been subscribed, and he hoped to raise the remaining $2,500 before Friday.

The retiring president, Dr. Frank Billings, then introduced the president-elect, Dr. John H. Musser, of Philadelphia.

SOME ASPECTS OF MEDICAL EDUCATION.

THE PRESIDENTIAL ADDRESS.

The subject of the president's address was Some Aspects of Medical Education. After some introductory remarks, Dr. Musser made appropriate mention of the distinguished members who had died during the year, spoke of the efficiency of the work of the House of Delegates, and made suggestions with regard to some of the sections. With particular reference to one of them, he said:

The Section in Hygiene and Sanitary Science should receive greater support from the organization. It is the section which must bring us in closer touch with our national life. Through it and those devoted to it we ought to secure greater respect from the body politic, and hence more wholesome power for the welfare of the community. Through it the profession should learn to take greater interest in the work of sanitary officers throughout the country. The valuable address of Billings on The Relation of Medical Science to Commerce and that of Thompson on The Economic Value of Medical Science indicate the opportunities and responsibilities of the profession.

[After diverging to mention the scientific exhibits, the Association of Librarians, and the Rush Monument, the president resumed the special theme of his discourse as follows:]

There is talk about maximum and minimum requirements, about laboratory and hospital courses, the merits of didactic and clinical teaching—a mass of material brought forth from the viewpoint of the educator, or looking to the welfare of the medical profession. We do not minimize the value of such lines of discussion. It has brought us to the position we have attained. But what of the medical student? Should we not look at education from his point of view? Is he quite able to decide whether he should take up the profession of medicine? We hold that a great duty is due the aspirant for medical honors from teacher and practitioner. It is a kindness due him to point out the best methods of securing such education as will yield him results commensurate with the time and expense required. It would be a greater kindness to show him that by reason of intellectual temperament or of physical or moral qualities he is not likely to reap the rewards he is anticipating.

If there were any doubt about the value of a college degree to a man entering the medical profession it could be set at naught since the report of the Mosely Education Commission. Quotations like the following, while not pertaining to medicine alone, the result of extensive inquiry and mature deliberation, supported by the statistics they give, uphold the contention of a large employer, that "for 99 per cent. of the non-university men, it is hopeless to expect to get to the top." One opinion they express is that "there is still room for the boy of marked ability 'to come through,' but that his difficulties are greatly increasing, and that, useful as he is, his usefulness would have been greatly enhanced had he had the benefit of a college training." Still another commissioner reports that while only "1 per cent. of the entire population of America has received a higher education in her colleges and universities, this 1 per cent. holds more than 40 per cent. of all positions of confidence, of trust, and of profit." It is well known that the "Geist" of the individual brings success, for which they say "it is recognized that the educated man takes in a wide horizon and puts more 'soul' into his work."

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* For advance proofs of the President's address and of the orations we are indebted to the secretary of the association, Dr. George H. Simmons, of Chicago.

To the plea that the acquirement of a college degree takes up too much time and requires too much money, the material answer can be given from other sources to the effect that "the men whom you are surprised to find holding such important positions in factories, though not much over thirty years, are the very men who did not leave the technical college till they were twenty-three or twenty-four; the graduate may have been twenty-five before he donned a jumper, but in five years he learned more with the college training he had as a foundation than the regular journeyman of fifteen years of actual work in the shop." The experience of teachers who have watched the alumni agrees that the college graduates get quick returns and soon acquire a position of independence.

The poor boy, therefore, need not be deterred, for if he has the spirit and energy to work his way through four years, two years or three years more will be but very little in the final summing up. If the student only knew that the purchase of the best education, whether reckoned in time or money, was the most economical investment, in that, as to the former, a thorough education at first is time saving in later years, and as to the latter, the money outlay is returned more quickly, in more immediate work and larger pay.

After entering the medical school with, it is presumed, the proper educational attainments, his career the first year should be closely watched. That school has too many students if it does not have enough instructors in the first year to be able to judge with a reasonable degree of accuracy of the character and moral stability of the men. This is not to be taken in a prudish sense or with too critical a scrutiny of habits which are the overflow of the animal spirits or the expiring exuberance of the boy approaching manhood. This can be said that a student who does not play fair in his exercises, who cheats in one demonstration or evades another, who does not show manliness, frankness, and truthfulness in his first year duties, will not be a good diagnostician. He will cheat himself; he will cheat his patient.

It is in the first and second years of his career that the foundations are laid whereby the student becomes the medical thinker. To quote again: "The power of thinking should not be of a base and barren character. The thinking should represent and be concerned with a fine and rich content of knowledge. It should have the exactness of intellectual discrimination; it should have the fullness of noble scholarship; it should embody a culture which is at once emotional and æsthetic and ethical, as well as intellectual."

That a desire to relieve suffering, to extend sympathy, to save life, is the impulse of the physician, we all admit, but where is the man among us who will not also admit that a scientific habit more quickly brings it about and more surely sustains and fortifies the humane instinct through the trials and tribulations of exacting practice? That prosecution of professional duties soon becomes commercial that does not have for its basis a true spirit of scientific inquiry. How miserable must that life be which conducts an exacting, drudging, daily routine with only material reward in view. Few are the practitioners who have this sordid view; we can be sure medicine would soon be forsaken if this viewpoint alone were considered. Hence in the laboratory of the first two years must be aroused and fostered the stimulus for lifework.

The final years should be clinical years, and the last should be in a hospital. The medical school that allows its students to think such opportunity is not due them is most unfair to them. As our schools are now constituted, most of them cannot give such requirements. The students should know, however, such requirement is necessary. What has been said regarding the preliminary college education applies equally forcefully to the hospital training. He is thrice armed who enters the arena thus equipped. Medical schools that cannot give such education are cruelly unkind and unjust to the students by having them think it is not essential. Medical colleges that pass off a hospital training for one that is not truly such, "fake" their students. The student who pays well for his training has the right to demand such as to fit him for immediate action.

It is not the fault of the medical school alone that he cannot get it. The public that cries out when there is mistake in diagnosis, fault in treatment, and that shakes its head at the deficient education of our students, must share the blame with the medical school. The public admits that its individual members may at any moment almost be at the mercy of a half-educated physician.

We believe, personally, if a decree should be issued that no medical school, including its hospital, should exist except on the fees derived from students, but little hardship would follow. The lessened supply of students would increase the demands on the practitioner, so that larger returns would follow. The poor student would sacrifice and strive to get a degree, knowing then he had a good asset.

With the same indifference that the public views an epidemic's march they allow hospitals that are engaged in teaching to suffer for the want of funds. Moreover, they close their doors to the advent of teaching in the hospitals under their control. We must admit those who do not appreciate the true function of a hospital have some ground for their contention. Ruled by sentiment chiefly, unfortunately an impracticable master, they sympathize with the patient who still harbors the belief of old that the medical student is one of a class that prowls about not unlike harpies. The public does not realize the difference in the student of to-day and the student of tradition. We cannot hold to account the governing body of the hospital who has the point of view that it is harmful to a sick person to have them under the surveillance of an alleged student rabble. We must admit some patients become alarmed, particularly in institutions where they know they will have the sympathy of the governing body. An analysis of motive will show that the usual patient who will not allow a judicious amount of clinical demonstration when the sense of delicacy is not offended, is truly selfish, in that there is prevented that increase of knowledge and development of skill whereby suffering of others may be alleviated. A little encouragement from the officials would allay alarm on the part of the patient. The desire to help others is infectious, and when one yields in a ward, others vie in the work.

The truth of the matter is that in hospitals in which teaching is carried on, rarely, if ever, do the patients complain. Let us organize such association of prominent people in our teaching centres who will agree to have any operation, any feature of disease witnessed by medical students, at the judgment of their attending physician. It would be well if the individuals of such an organization would agree, first, to undergo hospital treatment; second, to be the object of observation by students; third, to have an autopsy performed in case of untimely end. We feel sure that it would be wholesome individually and publicly if each would agree to ward treatment. Such association would rob hospitals of their terror and teaching of its dread. No one can deny that on the whole the public would be benefited from whatsoever point of view we look at it. Indeed, the public ought to learn that disease is an enemy to themselves and their country. Just as we make sacrifices in time of national warfare, so we should be willing to make sacrifices in the daily battle for life. Just as aristocrat and plebeian, landlord and tenant, fight side by side in the former, so they should array in solid phalanx in the latter.

But there are hospitals willing to admit students, and yet the privilege is not availed of. This arises because the teaching force of the medical college is not willing to sink its personality and allow the student to go wheresoever he will for his instruction. Courage and some sacrifice are required perhaps. But, when one thinks of the mighty opportunity and the frightful waste, it is saddening. Every hospital should be a school. The fourth year should be so arranged that the student could avail himself of the advantages of hospitals in the immediate vicinity. Let each teaching body have the students understand what he must see and do, and trust you the true student will see it at the best place and with the best men. He must be accountable, of course, with a rigidity that means the exact acquirement of knowledge. To this end the first two years could be well spent in the properly equipped laboratory, whether in town or country, the third in the authorized hospital of the school, the fourth in extramural hospital work.

Is it not anomalous that the hospital boards give to the nurses who are to act as aids to the physician the highest opportunities, and yet deny it to those who are to give orders to the nurses? This, of course, arises because training schools are the product of modern thought and have not been trammeled by tradition.

But all this talk of the primary education avails but little if we do not see to it ourselves that education is continuous; that from the day of our graduation, forwards, we do naught but toil, toil, toil. It should go without saying, as a mere business proposition, that unless we unceasingly labor, but little of the fruits do we pluck. It is demonstrated in a practical manner, for when we look about us and find the methods of those of our brethren whose labors are not in vain each one bears the scent of midnight oil.

EVENING MEETING.

First Day, Tuesday, June 7, 1904.

The Oration on Medicine was delivered by Dr. George Dock, of Ann Arbor, Mich.

THE ORATION IN MEDICINE.

The title of this oration was Prognosis: Its Theory and Practice. After alluding to the treatment of the subject by Hippocrates, Dr. Dock proceeded substantially as follows.

GEORGE S. DOCK, M. D.,

Orator in Medicine.

Within the last century prognosis has lost some of its relative importance. Unlike ætiology, diagnosis, prophylaxis, and treatment, it has no special literature, and is only occasionally the subject of addresses or essays. But much of the so called prognosis of the earlier periods was really diagnosis, as in Hippocrates's vivid description of empyema and his remarks in regard to other diseases of the respiratory organs. It also seems a mistake to assume that practical prognosis was more accurate at any period than in later ages of equal enlightenment. While we may admit that great masters, like Hippocrates himself, Galen, Sydenham, and Boerhaave, were remarkably accurate in their prognostications, there is no reason for thinking that the rank and file, following their rules without having their keenness of observation and precision of reasoning, were more accurate than physicians of a later period when the formal study of prognosis was neglected, but when other means of knowledge were greater than before, or as accurate. We must bear in mind a fundamental difference in methods.

Older prognosis it was possible to collect into fairly circumscribed space, but this is no longer true. In proportion as diagnosis has become subdivided, specialized, and enlarged, and as knowledge of morbid processes has become more complex, so prognosis has become more intricate. Older prognosis was based on broad symptomatic lines, qualified in practice, we may be sure, by a consideration of the patient's constitution. The present basis is diagnosis, but of a different kind. It means not merely a recognition of the name of the disease, but a knowledge of the nature of the disease, still incomplete, but rapidly gaining in fulness and accuracy. In many cases we know the causes and a good deal of the nature of the causes; in many more we know the seats of the disease and the anatomical, chemical, and functional changes that result directly and indirectly. It is by the study of the altered functions that we can make a prognosis and plan useful treatment without knowing the name of the disease. Clinical and anatomical investigations have been aided by experiments and observations on lower animals, without which our knowledge would have been much less certain than it is. Scores of technical methods have been devised for reactions and explorations; natural forces previously unknown, such as the x rays, have quickly been pressed into service. Long and painstaking observations have thrown much light on complications and sequels, their nature and detection. From all these things the prognosis proceeds naturally in most cases, but here again an indispensable part is a just recognition of the patient's constitution. It is probably true that in this connection we unduly neglect some prognostic aids furnished by the patient, such as changes of the physiognomy. But, on the other hand, we have much more accurate methods of ascertaining the constitutional factor than were formerly available. Constitution is still a somewhat vague term, but we can speak of it here as the result of the functions of all the organs. While the method of representing these functions is still inadequate, we can safely assert that we have much more accurate means of determining the condition of the heart, arteries, and veins and the force of the circulation than we had before; we have gone considerably beyond the recognition of the apoplectic habit in foretelling the danger of vascular disease.

In the practical use of prognosis the first to profit by that function is the physician. With an accurate prognosis, based on exact and thorough examinations, knowledge of the natural course of the disease and of the patient, the physician foresees the course of the malady and is prepared for changes, emergencies, and complications. He is thus enabled not only to preserve his imperturbability, so essential in carrying out necessary measures of treatment, but he can also prepare the patient to meet coming events in better physical and mental condition than otherwise, and, what is often of even greater importance, the self-confidence thus shown stimulates the efforts and the compliance of others concerned in the case.

It is not easy to say how much the patient should share this foreknowledge, and how it should be conveyed to him. In many cases the patient does not ask an opinion, and in many others, either because the present disease seems too slight or for other reasons, the physician does not proffer one. Yet it is good mental discipline to work out the prognosis in every case, as a complement to the diagnosis, and in many the results should be stated to the patient. Many things may conspire to make such statements act either favorably or unfavorably on the patient as on the physician.

No disease should be looked on as insignificant. Nothing seems less becoming than to hear medical men speaking lightly of disease in general, or of any disease in particular.

In acute diseases the best general rule is still that of Hippocrates: "In acute disease it is not quite safe to prognosticate either death or recovery." In a case of this kind, however, the patient should not be considered likely to die unless from a complication, or from the effect of a preexisting disease, though in certain diseases, such as scarlet fever and diphtheria, the danger of a sudden change and of death should be made known in the beginning. Of course, in cholera and plague, and even in cholera infantum, such information is rarely necessary.

In chronic diseases there are few exceptions to the rule that the patient should be told the nature of his case as fully as possible. At least, in patients who can be made to understand, and who have a possibility of recovery, of definite improvement, or of long duration, there are only individual exceptions. Patients with tuberculosis, heart disease, kidney disease, and disease of the alimentary tract cannot get the best possible results unless they understand why and how they should do certain things and why they should avoid others. Tact and patience and a knowledge of human nature are essential in this. The statements made should be as simple as possible, as brief as definiteness permits, without pathological explanations. Better no statement than an unconsidered or an unintelligible one.

In talks of this kind we too often forget how different are the ideas of non-medical persons, even those who have studied physiology in the public schools, from our own, regarding the body, its functions and diseases. I am always interested in seeing how soon medical students lose the lay point of view, just as one forgets an unused foreign language, and how sometimes they never recover it. Yet unless they do, they lack valuable means of giving aid.

It is much easier to advise in cases that have a strong tendency to recovery than in those that have not, and there is room for difference of opinion and of practice in the latter, because the conditions vary with patients according to individuality and accidental factors. A number of aspects present themselves for consideration. In the first place, there is often an element of diagnostic or prognostic uncertainty, where the prospects are better than they seem. . . . The tendency to take the less hopeful alternative is still shown in some cases of tuberculous disease in stages not far advanced, though it is not so common, fortunately, as it was not many years ago, to see such patients given over either to a life of dissipation or of abject despair. The prognosis of valvular disease of the heart is also in a much more optimistic vein than it was fifty or even twenty-five years ago.

Improvement in methods of treatment has an important relation to prognosis, in that many diseases considered hopeless at one stage of knowledge, may in another offer many chances for recovery or alleviation. In this connection a critical knowledge of current medical literature is necessary, and a realization of the value of medical evidence. Few things can be more disastrous to the physician's mental development—never completed—than constant change of therapeutic method, but there are differences. One need not try every drug proposed for the treatment of typhoid fever or pneumonia, nor every new antipyretic or hypnotic. But the physician who does not inform himself quickly of the value of surgical treatment in various diseases as it is developed, in pelvic diseases, brain diseases, disease of the appendix, biliary tract, stomach, and pancreas, comes very near deserving the reputation of an unscrupulous practitioner. In these departments, too, mistakes are made and exaggerations are inevitable concomitants of progress, but the gain is often distinct and unmistakable, and often changes the prognosis from one extreme to the other.

The truth is not always so alarming to the patient, painful as it often is to the physician. In fact, it seems to me this is one part of our duties that does not become less trying with increasing experience. To the sick man, whose thoughts have been turned toward the end longer than others suspect, intimation of a fatal end often brings no shock, but rather relief from the ending of a painful uncertainty. According to the rules of the Roman Catholic Church, a timely announcement should always be given, and those who have witnessed the last days of members of this faith can confirm the statement that good often follows, speaking merely from the medical standpoint, and rarely harm, while the same thing is true of many of other faiths or of no faith. Even where we have to give a fatal prognosis there are certain mollifying influences that can be introduced, aside from those that spring from a tender heart. A hope can be expressed based on the fallibility of human knowledge in general and medical knowledge in particular.

Of course, this part of the subject is closely related to the theory of ethics, and many writers on this subject have touched directly on the question of medical veracity with, as one might anticipate, diametric differences of opinion. Some moralists of the strict school of Kant and Fichte insist that any deviation from the absolute truth is wrong in medicine, as they assert that it would be wrong even for the purpose of saving the whole race. Others believe with Paulssen, who says: " There is not a physician in the world who does not give deceptive answers to his patients, who does not excite hopes that he does not share. He does not blame himself, nor do others, for every one does the same." Johnson, " the stern old moralist," in his remarks on the subject, laid open a serious flaw in his own logic: " You have no business with consequences, you are to tell the truth." But surely the physician's chief interest is with the consequences, and if he thinks the patient can gain only by misrepresentation, it is just as proper for him to use it as it would be to give a medicine that in other cases might be quite improper. But the physician in such a dilemma would do well to bear in mind the next sentence in Johnson's *ipse dixit:* " You are not sure what effect your telling him that he is in danger may have. It may bring his distemper to a crisis, and that may cure him." Jonathan Dymond, as strict as any one in his morality, threw a gleam of stern humor into the discussion: " Persons frequently employ falsehoods to the sick man who cannot recover, lest it should discompose his mind. This is called kindness, though an earnest preparation for death may be at stake on their speaking the truth. There is a peculiar inconsistence sometimes exhibited on such occasions. The persons who will not discompose a sick man for his interest in futurity, will discompose him without scruple if he has not made his will."

Accidents that follow an unfavorable prognosis occasionally suggest a revision of methods. I have already alluded to the error formerly not uncommon in the treatment of tuberculous patients. More acute results sometimes follow a fatal prognosis, as in two of my patients who resorted to suicide. One was a man with far advanced carcinoma of the stomach, to whom I recommended palliative treatment and advised against a useless effort at radical treatment. The patient left for his home, but threw himself from a fast train and was killed. In another patient, a man with a large kidney tumor, apparently with many adhesions, my surgical colleague and I advised against an operation. The patient went to another hospital, and apparently received similar advice, for he shot himself through the tumor, and died in a short time. From a broad biological standpoint, it does not, of course, make any difference whether an individual organism dies as either one of these, or as it would if left to its fate. But no matter how one may feel on the subject of suicide, I have always thought these men less fortunate than another patient with carcinoma of the stomach, also far advanced. To him, in advising against an operation, I added that if he could find a good surgeon who was willing to operate, he might submit. He underwent the operation at the hands of one of the most distinguished surgeons in the country, and died on the table. In such a case the result is often unfortunate, because it prevents operations in other and more promising cases, but for the man himself, fighting to the last, it seems to me one can have only respect.

This brings up a question on which a few words may be proper—the question of euthanasia. Every few months some one—usually not a physician—proposes that people with incurable diseases should be killed by some painless method. The plan offers so many opportunities for crime that it would be difficult to carry out, but aside from that it involves important principles. The difficulty of telling when the proper time had come would often be insuperable. Aside from examples of fortitude and other virtues exhibited by the dying, how much the world would have lost if a chronic invalid like Stevenson had had the cord of his life snapped at one of the times when the *æs triplex* of his soul seemed battered through! To take a less selfish view, we can think of the "pictures of human patience, the visions of ripened character, which have been revelations and inspirations to generations of mankind" (Phillips Brooks), and see these repeated daily in sick rooms of all degrees, while the self-sacrifice and kindness developed in others at such times cannot but be of untold benefit to the race. To most physicians the suggestion of any planned shortening of life must be abhorrent. For countless generations they have been doing their utmost to lengthen life and lessen disease. They have shown how to prevent the plagues that formerly made life almost as bad as a perpetual illness for the survivors, and they have also shown how many deaths can still be prevented. On the other hand, they can, in most cases, so treat the dying man that the bitter anguish often associated with death is absent, that life is not only less painful, but actually longer, so that they will continue to follow the rule of the Father of Medicine, and "give no deadly medicine to any one, even if asked, nor suggest any such counsel."

SYMPOSIUM. INSTITUTIONS DOING RESEARCH WORK FOR THE SCIENCE OF MEDICINE.

The Carnegie Institution.—Dr. John S. Billings, of New York, said that Andrew Carnegie had given $10,000,000, and had appointed a board of directors himself, for the purpose of founding an institution for research on the broadest and most liberal lines, the general object of which should be the increase and diffusion of knowledge. Part of the funds had been set aside for buildings in the future, while $300,000 was allowed for annual expenses. The persons interested in the institution had spent one year in studying what lines of work would be most desirable. The two objects were to promote individual research and to find the exceptional man. Such research was now being made in anthropology, in archæology in Central Asia, Nubia, Babylon, and Assyria; in astronomy, the most interesting research here being in regard to the eruptive phenomena of the sun—sun spots. These were interesting because they were supposed to affect terrestrial magnetism and meteorological phenomena, factors which influenced physical conditions. The department in botany had a laboratory in the desert of Arizona, where the changes induced by the absence of moisture on certain plants were being studied. In chemistry unknown atomic weights were being sought. Original researches were being carried on in economics, sociology, and engineering, as well as in history and geology. In biology the subject of evolution and heredity was being studied. Mosquitoes in their relation to various diseeases were being investigated. In physiological chemistry the nutritive values of foods were being investigated, as well as the action of some drugs, such as adrenalin. About $10,000 had been contributed to the *Index Medicus*. The workers here had advantage of the books in the surgeon-general's office, which offered better facilities for this work than any library in Paris or Berlin. It was not the object of this institution to undertake work that would be likely to be done by other institutions or such work as promised to be of commercial value. It was their endeavor to find the exceptional man, and to that end amounts of from $900 to $1,500 were allowed to some twenty-five men, who might prove to be exceptional each year. A few exceptional men were found in this way, but there was still plenty of room for the exceptional man, and it might be a fitting task for the institute to take up the study of how he might be produced.

The Rockefeller Institute.—Dr. L. Emmett Holt, of New York, said that the story of the discovery of the diphtheria antitoxine had interested Mr. Rockefeller, and he thought that such work could be done in this country, that the ability was here if the opportunity was provided. A board of directors was appointed, and a fund of $200,000 given, and the institute was incorporated in 1901. The stated object was the study of the causes, prevention, and treatment of disease. At first a number of fellowships were given out in existing laboratories. The scope of the work was varied, embracing not only bacteriology and pathology, but even the milk supply in the tenements and its effects on the health of the children living there. It seemed that centralization was necessary, and a gift of $1,000,000 from Mr. Rockefeller made possible the purchase of a plot of ground in New York, where a laboratory would soon be in process of construction, which would be equipped for work in bacteriology, pathology, physiological chemistry, and pharmacology. Plans were also being formulated for the building of a small hospital adjoining the laboratory, in order that clinical advantages might be added and that the work might be kept along the lines of practical medicine. The member of the board of directors were all physicians, so that they were free to organize and direct the work along the most desirable lines.

The Memorial Institute for Infectious Diseases.—Dr. Frank Billings, of Chicago, said that this institution was small, compared with the others just described. It had been founded by Mr. and Mrs. McCormack as a memorial to their son, who had died of scarlet fever, and they had wished to make the study of scarlet fever the chief object, but had been induced to broaden the object so as to embrace all acute infectious diseases, with the exception of smallpox, especially those of childhood. A hospital had been incorporated, and they had started with two houses and ten beds. Last year ground had been given worth $150,000 and enough money to build a pavilion which should contain fifty beds. A

Journal of Infectious Diseases was also endowed; this was the only endowed journal in the country. They had treated and investigated 125 cases of scarlet fever; the real object of the work was to find the cause of scarlet fever, and, if possible, its specific treatment.

The Harvard Research Work.—Dr. Thompson, of Harvard, read Ernst's paper, which was a detailed account of the various departments of Harvard University as related to their researches and their facilities for carrying on such work. There were in all 14 departments and laboratories, 91 instructors and others interested in research work, 128 places in which such work could be carried on, but only five of the departments had funds for such a purpose. The facilities of all the departments were extremely good. Library facilities were also good. They encouraged this kind of work, as its value in the development of the individual could not be overestimated and their chief object was the development of the individual.

The William Pepper Laboratory of Clinical Medicine.—Dr. Alfred Stengel, of Philadelphia, said that the institution that he represented was a small one, but that its influence had been very far reaching. The object of William Pepper in founding this institution was to establish a bond between purely scientific and essentially practical work. Undergraduate work was forbidden, but the institution was open to any physician who might want to carry on research work and who had the necessary preliminary training. It had been in existence for about ten years and would accommodate from fifteen to twenty-five workers at one time. This was the first clinical laboratory founded in this country, and the third one in the world. Those at Munich and Leipsic had been established a short time before. This clinical laboratory had been the inspiration that had led to the establishment of a number of others in various parts of the country.

O. T. OSBORNE, M. D.,
Chairman of Section of Materia Medica, Pharmacy and Therapeutics.

Presentation of President's Portrait.—Dr. J. R. Pennington, of Atlantic City, stated that they had secured another portrait which Dr. Wyeth would present to the association.

Dr. Wyeth said that twenty-eight years ago Dr. Sims, whose portrait he now presented, had presided at the meeting of the association, and that twenty-one years ago he had died. His personal friendship for Dr. Sims was such that he could not trust himself to speak of his noble character, and he preferred that another should trace the wonderful career that began so modestly in a log cabin in the woods, progressed to the metropolis of the nation, and ended in Dr. Sims being received as the guest of kings and courts. The portrait was the gift of one of his children. If three men were named who had done most for humanity, the names would be William Jenner, George Washington, and Marion Sims.

EVENING MEETING.

Wednesday, June 8th; 7.30 P. M.

THE ORATION IN SURGERY.

The Oration in Surgery was delivered by Dr. William J. Mayo, of Rochester, Minn., on the subject of The Association of Surgical Lesions in the Upper Abdomen. After some introductory remarks, he said in substance:

Certain parts of the body are so closely related in their anatomy, function, and pathology as to be almost necessarily considered as part of the same system. . . . . In the upper abdomen we have attempted to study the stomach independent of the associated organs, the liver and bile passages, the duodenum and pancreas. The result has been a confusion in diagnosis and treatment. The palm of a hand may cover a serious lesion of any one of these organs, and that, too, at the point of greatest liability; not only so, but any one of this group may start a pathological process which may extend to any one of the others, and with fully as great frequency as occurs under similar conditions in either the generative or urinary system.

Let me call your attention for a few minutes to the anatomical diagram, showing the nearly vertical position of the stomach with the pylorus in the middle line of the body, and but little elevated above the lowest point of the gastric cavity. It is turned upward and to the right just enough to prevent the weight of the gastric contents bearing directly on the sphincter apparatus. The only portion of the duodenum in which we are interested is the four inches lying between the pylorus and the papilla of the common duct of the liver and pancreas. This may be called the vestibule of the small intestines. Its position subjects it internally to the perils of ulcer from the acid gastric juices which its thin tunics but inadequately resist. Externally its function is often interfered with by adhesions to the gall bladder and bile tract, secondary to gallstone disase. This unoffending bit of intestine is so often offended against as to cause it to become the most frequently diseased portion of bowel of the same length. The remaining eight inches of the duodenum is protected by the alkaline secretions of the pancreas and liver. Its fixed position and peculiar horseshoe shape, with its delivery point

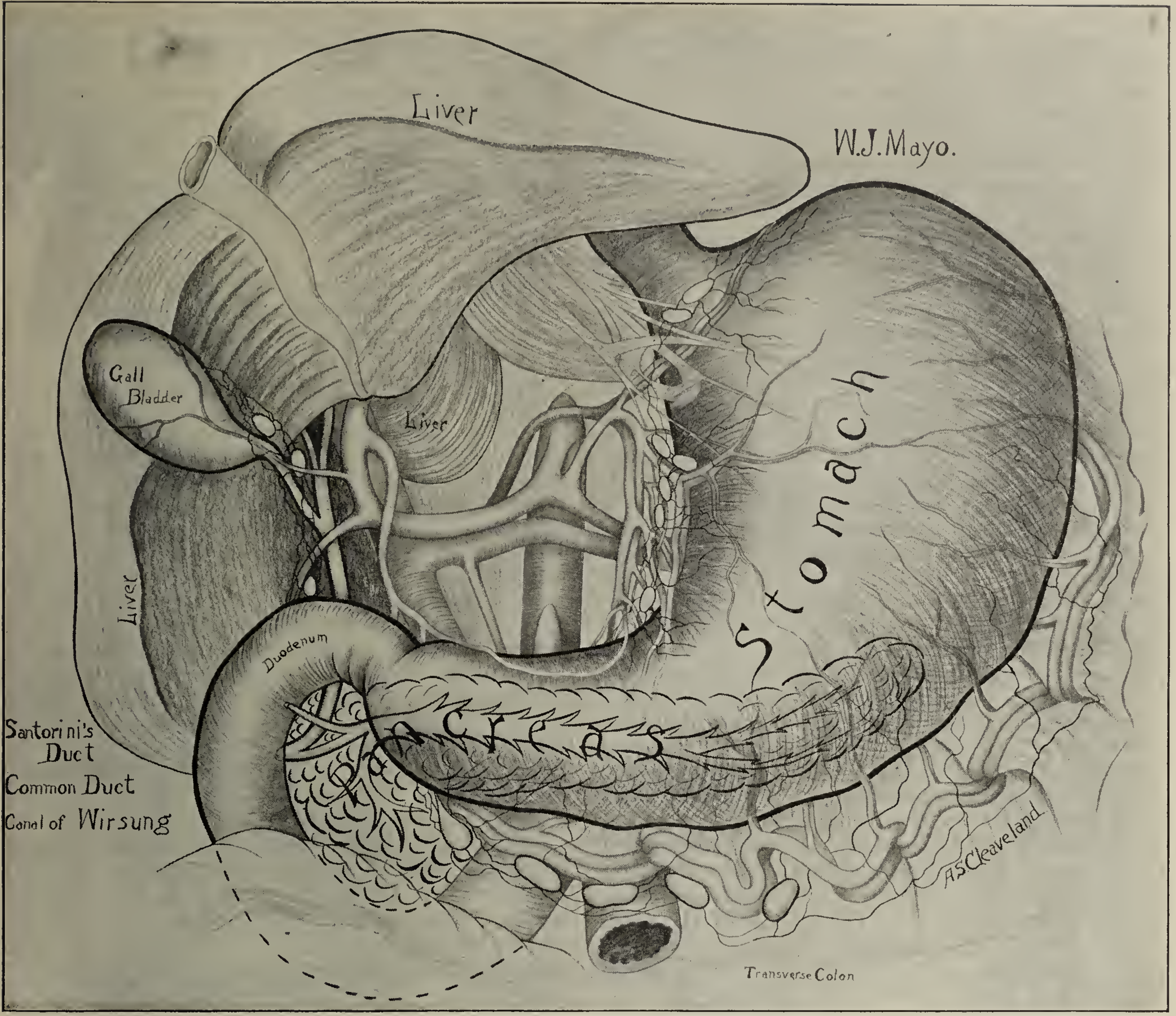


Figure Showing Vertical Position of Stomach, etc.

nearly as high as its origin, enable it to mechanically slow the ingested material during the mixing process for which its large calibre affords accommodation.

The anatomy of the bile tract is equally interesting, and especially the relations of the common liver duct to the pancreatic duct and the duodenum. There is continuity of mucous surface, each protecting itself from the secretions of the others by the mechanical washing effects of its own secretion, the joint discharge and a feeble sphincter apparatus preventing entrance of the duodenal contents.

The gall bladder, as it furnished the initial lesion in more than one half of the diseases of this group, is of great interest. . . . The pancreas, composed of two originally separated parts, has in nearly half of the specimens which have been been examined two patent ducts, that of Wirsung, which is the important one, uniting with the common liver duct. The minor duct of Santorini, however, has a possibility of useful function in certain diseased processes, as pointed out by Opie. The pancreas was originally an intraperitoneal organ, becoming retroperitoneal by a later evolution (Huntington), and in this anatomical peculiarity Brewer believes lies one of the reasons for the diffusion of fat necrosis resulting from acute pancreatitis. Mikulicz has called attention to the fact that adhesions to the pancreas in gastric cancer gave a mortality of 73 per cent. in his resection cases. Robson also notes the pancreatic mischief occasioned by perforating gastric ulcer on the posterior wall.

The blood supply of this group of organs is almost entirely from a single source in the cœliac axis. It has been experimentally developed that the severance of all connections of the pancreas excepting its blood supply does not check secretion if food is placed in the gastrointestinal tract. In the nerve supply from the pneumogastrics and sympathetic ganglion we find the same direct relationship involved. If we study the function we see the same association. The stomach can be compared to a mill, the fundus the hopper, in which the food is macerated in a weak solution of pepsin and hydrochloric acid, and the muscular pyloric portion the grindstones in which the masses are broken up into a homogeneous whole. The entrance of food into the duodenum causes the outflow of biliary and pancreatic secretions, the absorption returning to the liver by way of the portal vein. This is so elementary that you wonder that I should refer to it, yet the causation of the common surgical lesions lies in perversion of these fundamental functions, and is just as simple. Mechanical injury of the pyloric portion and excessive acidity of the gastric secretions, under anæmic conditions, give rise to ulcer and lie behind the precancerous lesions which, Ochsner notes, are found in the history of cancer of the stomach in the majority of cases. The acidity of the gastric secretions renders the contents of the stomach, when turned into the intestine, relatively sterile, but increases the liability of ulcer of the duodenum. The sterility of the upper intestinal tract is still further increased by intestinal absorption, as shown by Adami, the bacteria being picked up and destroyed in part by the glands. Many germs are, however, carried to the liver, and here either annihilated or screened out of the blood in the portal vein and discharged with the bile. We must look on the bile as always containing a few bacteria, and it is probably this attenuated infection of bile retained in the gall bladder which gives rise to gallstone disease, which in turn is the chief factor in the production of duct inflammation of both the liver and pancreas.

These considerations, so briefly outlined, taken in conjunction with the embryological origin, justify the grouping of *the surgical lesions of the upper digestive tract,* and at once enable the diagnostician to associate the symptoms and the surgeon to direct his attention, not to one, but to the entire group of organs. The burden of proof lies with the practitioner, not only to demonstrate that the disease rests in one organ, but to differentiate and show that no other is involved.

The art of the diagnostician lies in the proper valuation of the signs and symptoms of disease in organs of associated function and pathology. The instinct which seems to lead some men to a correct conclusion, and by a mental process they could not themselves analyze, usually depends on few things, the immaterial or inconclusive evidence being unconsciously discarded. For instance, note the value of the colic in the diagnosis of gallstones. The typical attack comes on and stops abruptly, is relieved by vomiting or a feeling of movement of gas, is irregular in time, in regard to food, and not accompanied by temperature or pulse elevation, and leaves the patient able to attend her duties almost immediately after cessation of pain. While the pain lasts, it is excruciating, felt in its greatest intensity in the epigastrium, radiating upward behind the sternum and into the back. The distress penetrates to the right side, but occasionally to the left, and lasts from a few minutes to six or eight hours. When the patient comes to the physician it may have been years since the typical attacks; he may have forgotten them, the present trouble complained of being pain, digestive disturbance, and tenderness on deep pressure over the gall bladder region. The history of the early attack is worth more than the physical examination in many cases. Compare it with the pain in gastric or duodenal ulcer, which may be just as severe, but lasts a day or two longer, especially when due to regional peritonitis, and is accompanied by gastric symptoms and local tenderness. The patient diets, which means he reduces his food supply. The symptoms last more or less for some days or weeks, and the interval of apparent cure gives some weeks or months of comparative health.

Acute perforations of the organs of this group are relatively common and give rise to symptoms which would be at once recognized if they occurred in the region of the appendix, but occurring in the upper abdomen too often go to a fatal issue.

To be successful, operation must be immediate; the condition is as imperative as hæmorrhage from an artery of the third class. Few recover operated on later than ten hours after perforation. The conditions simulating perforation in the upper abdomen, such as thrombosis of the mesenteric or splenic vessels, diaphragmatic and duodenal hernia with strangulation, and so forth, are rare, and likewise call for early operation.

As a rule, the history and location of the early acute pain will furnish evidence as to the origin of the trouble. Preceding perforation of the gall bladder there are often symptoms of several days' duration with a history of gallstones. The acute pain occurs in the gall bladder region. Early drainage with removal of the gall bladder should give a mortality not to exceed ten per cent.

Duodenal perforation usually occurs in cases of chronic ulcer with years of symptoms preceding; but the immediate onset is exceedingly acute, and not ushered in by a few days or hours of prodromes, as is often the case with the gall bladder. The location of the early pain is just to the right of the median line. The liquids gravitate at once to the appendiceal region and simulate perforated appendix. The rapid diffusion of escaping contents is fatal to delay. Operation for acute perforation of the duodenum is rarely successful after eight hours. Suture of the perforation with suprapubic pelvic drainage, and after-treatment in the sitting posture (exaggerated Fowler's) in early cases should give eighty per cent. or more of recoveries. . . .

The group of acute perforations gives an unsatisfactory mortality, with a prolonged period of disability from drainage, and without a certainty of permanent cure of previous underlying conditions. This will not long continue. Like acute gangrenous appendicitis, the condition will be recognized early with corresponding improvement in results.

. . . The gastroduodenostomy of Finney is a most excellent operation, and we would predict a wider field of usefulness than it has enjoyed. . . . The theoretical objection is that in open ulcer the food must pass the ulcerated area before reaching the widened pylorus, and obstruction has no part in the production of ulcer, as is shown by the development of duodenal ulcers. Pyloroplasty must be discarded. . . .

Cancer of the stomach is the most common type of malignant disease in the human body, constituting one fourth to one third of the total number. The radical treatment of gastric carcinoma is now on assured ground, with a mortality of ten per cent. or less in favorable cases, to twenty per cent. in late but still operable disease. The only necessary thing for success is an early diagnosis, and this must be on clinical grounds, supplemented by early exploratory incision.

THE MUTUAL RELATIONS AND DUTIES OF THE GOVERNMENT MEDICAL SERVICES AND THE PROFESSION.

After the oration on surgery, by Dr. W. J. Mayo, a symposium followed on the mutual relations and duties of the government medical services and the profession. What can the Medical Departments of the Army, of the Navy, and of the Public Health and Marine Hospital Service do for Medical Science? Dr. Victor C. Vaughan, of Ann Arbor, Mich., spoke for the profession. He said that the history of what the medical corps of the army had given the profession in the past would serve as an indication of what might be expected from them in the future. He gave a résumé of the contributions to medical knowledge that had been the result of the work of surgeons in the United States army, navy, and marine hospital service. The library of the surgeon-general, which was the most complete in the world, was at the disposal of members of the profession. He commended General Sternberg's work in bacteriology and yellow fever, and that of Carter, who had done much to put Reed on the right path to the discovery which has resulted in such a remarkable change in Havana and several other fever infected districts. He spoke of the wonderful administration of this work under Dr. Wood. He hoped for much from the consumptive hospital established by the government, and said that scientific research should be stimulated in the army by the provision of all facilities and sufficient leisure to carry on research as well as by a reward of merit. He thought a man should be breveted for meritorious scientific work as well as for other marked service for his country. Some men should be detailed to studying the best laboratories in this country and in Europe. Special committees should be sent to study tropical diseases. The Public Health and Marine Hospital Service at Washington should be equipped with the best apparatus and the best men. A research laboratory should be established in the South that could be thrown open to competent men in civil life. The naval service should equip a complete clinical laboratory. He thought the medical profession had a right to expect that the government services would be the birthplace of knowledge in the future, as they had been in the past.

The discussion of the question, What can the medical profession do for the army? was opened by Major Surgeon William C. Bordin, of the United States Army, who said that the fact that this subject was brought up was evidence that the medical profession had a comprehension of its broader duties, and was ready to try to meet its responsibilities. Success in war depended on preparation beforehand. It was quite as necessary that the medical department should be ready for service as that any other department should be, for victory or defeat might depend upon the health of the men. If the medical corps was not sufficient to do the work in time of peace, it could not be expected to meet the demands made upon it in time of war. The medical profession could, as the teachers and leaders of the people, show the necessity and importance of the work of the medical corps of the army, not only in professional duties, in times of war, but also in solving the sanitary problems that were constantly arising in times of peace. A properly trained reserve corps should be established to take the place of the contract surgeon, as aside from the question of fitness, a surgeon could not perform his duties satisfactorily unless he had rank. This question was before congress, and the influence of the American Medical Association might assist in furthering this reform.

The question of What can the medical profession do for the navy? was answered by Surgeon C. F. Stokes, of the United States Navy, who said that provision had been made for 150 additional men in the medical department of the navy and 25 additional surgeons would be appointed annually. The best service the medical profession could do for the navy was to acquaint its promising men with the inducements that the navy offered to its men, and by sending at least a part of its promising men before the examining board. The work in the naval hospital was superb and the idea that a surgeon hibernated while on board ship was a very false one. He related his own experiences, showing that his work was as broad in its scope as that of the busiest practitioner on shore, embraced practical work in bacteriology and pathology, as well as work in sanitation. The surgeons of the navy had contributed but little to medical literature, because their duties gave them little or no time for such work, and because they had no time to specialize.

What can the medical profession do for the Public Health and Marine Hospital Service? was answered by Surgeon-General Walter Wyman, United States Public Health and Marine Hospital Service, who said that this service now had about 300 medical officers, 22 government hospitals, 125 relief stations, and 37 quarantine stations in the United States. It made visual examination of pilots, physical examination of life savers and immigrants, established detention camps in times of epidemics, delved into the causes of disease in laboratories, settled disputes in diagnosis, and passed on the purity of vaccine and serums. It also prevented the entrance of sick aliens into the United States and had stations all over the world where emigrants were examined and warned if they could not be accepted in this country, and quarantined. The members of the corps considered themselves a product of the medical profession in this country. The profession could assist them by considering them a part of itself. By maintaining a high standard of medical education and of professional excellence they could help in furnishing desirable men for the service. By supporting the officers of the State boards of health, who were associated with the Marine Hospital Service, they could assist the Marine Hospital Service in its aspirations for a slumless country. They could also aid by educating the public in sanitation and hygiene. This address completed the Wednesday evening session.

THE ELECTION OF OFFICERS.

The following officers have been elected for the ensuing year: President, Dr. L. S. McMurtry, of Louisville, Ky.; first vice-president, Dr. Edward Jackson, of Denver, Col.; second vice-president, Dr. J. H. Bell, of San Antonio, Tex.; third vice-president, Dr. F. C. Shattuck, of Boston, Mass.; fourth vice-president, Dr. B. C. Pennington, of Atlantic City, N. J.; secretary, Dr. George H. Simmons, of Chicago; treasurer, Dr. Frank Billings, of Chicago.

Dr. T. J. Happel, of Trenton, Tenn., and Dr. W. W. Grant, of Denver, Col., were reelected as members of the Board of Trustees. Dr. Philip Marvel, of Atlantic City, N. J., was elected a new member of the board.

Portland, Ore., was selected as the next place of meeting.

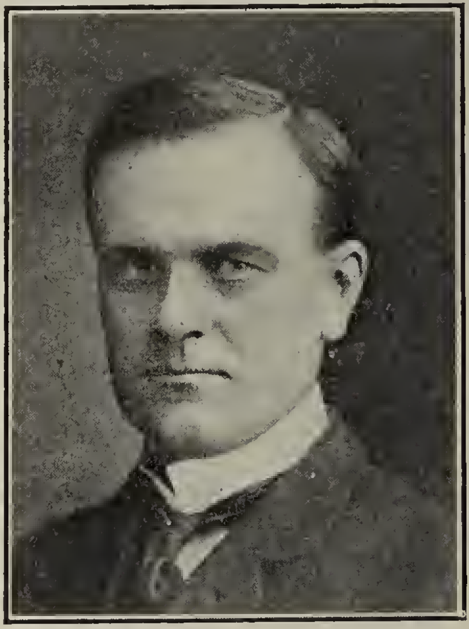
SECTION OF PRACTICE OF MEDICINE.

First Day, Tuesday, June 7, 1904.

Dr. ALEXANDER LAMBERT, of New York, in the chair.

Chairman's Address.—The Adaptation of Pure Science to Medicine. Dr. ALEXANDER LAMBERT, of New York, read this paper. He said the most complete adaptation of scientific work to clinical medicine was the work of Behring and others in the antitoxic sera for diphtheria and tetanus, conceived and worked out completely in the laboratory before it was applied to medicine. The preventive inoculation against typhoid fever, plague, and cholera was the practical application of our ideas of immunity and the success so far obtained seemed to be that about 50 per cent. of those inoculated were protected against these diseases, and of those who acquired these diseases after being inoculated the mortality was about 50 per cent. less than in the uninoculated. The practical value of the study in the variations of blood pressure was just beginning to be recognized. The knowledge obtained by the use of blood pressure instruments would increase our therapeutic capabilities, for they gave valuable indications of the variations in the vasomotor control, and they seemed to promise a distinct gain in a more intelligent treatment of cardiac and renal diseases and would give valuable indications in infectious diseases, of when to give and when to withhold stimulants. The closest cooperation between clinicians and laboratory workers, unfortunately not always present, was a thing to be desired. One often saw the worker in the laboratory failing to appreciate the clinical situation and the difficulties of the clinician. On the other hand, clinicians were often prone to throw the responsibility of a difficult diagnosis on the worker in the laboratory, and when he failed, to criticise the result and in turn throw discredit on all laboratory results.

Pernicious Anæmia and Its Relation to Gastric Digestion Based on Twenty-five Cases.—Dr. CHARLES G. STOCKTON, of Buffalo, read this paper and gave the following summary: Of the 24 cases here reported, the youngest was thirty-two years of age, the oldest seventy; average forty-five years; there were 20 males and 4 females; 13 had outdoor occupation and 11 indoor; the longest duration of illness was in one five years, the shortest six months and fatal; 12 were known to be dead, 5 living, the others unknown. All had dyspnœa on exercise; all suffered from faintness and weakness; 16 had the gaseous pulse; 16 had a heart slightly enlarged; 16 had systolic apical bruit; 6 had *bruit du diable;* 8 had other bruits; 22 had a distinct lemon colored tint of the skin; 15 had a tongue strikingly denuded of epithelium; 10 had good appetites, 7 capricious, and 7 anorexia; 18 complained of symptoms of stomach trouble; 10 had constipation, 8 diarrhœa, and 6 irregularity of the bowels; in all, the liver was enlarged; 1 had four periods of improvement, 3 two periods, 8 one period, and 8 no period of improvement. After his attention was called to the subject by Billings's paper, he found signs of spinal cord involvement in six out of nine cases. Nine cases showed slight dilatation of the stomach; in 13 the gastric digestion was absent, in 8 it was very low, and in 3 it was fairly good. Five showed evidences of gastric catarrh. Six showed no acidity of the gastric contents, one (the highest) showed a total acidity of 46, one 26, and the average about 10. Four showed the presence of combined chlorides. One showed free hydrochloric acid 0.05 per cent., one 0.06 per cent., and one 0.022 per cent., in all the others it was absent. Six showed lactic acid present; four showed other organic acids. The acid salts were very low, 18 being the highest, five having none whatever; seven showed the biuret reaction; six showed rennet present. The digestion of starch was poor in all save two cases.


J. L. MILLER, M. D.,

Secretary of Section of Practice of Medicine.

The Diagnosis and Treatment of Perforation in Typhoid Fever; With a Report of Nineteen Cases, of Which Sixteen Were Operated Upon

With Five Recoveries.—Dr. Morris Manges, of New York, read this paper. He said that in drawing practical conclusions from this analysis of the varied clinical features of perforation as it occurred in the series presented it would at once be seen that there was no symptom or group of symptoms which was pathognomic. In suspected perforation the condition of the abdomen as regarded tenderness, rigidity, distention, respiratory excursions, and liver dullness should be routinely observed. The leucocyte count was of little value. He said that most physicians expected too many and too pronounced symptoms for an early diagnosis of perforation. Granting the possibility of spontaneous cure, the best results ever claimed for Nature's method had been 5 per cent.; contrast this with the latest statistics published by Hare and Ashhurst, of 362 cases which they had collected with a recovery of 26 per cent. with operation. The only exception to the rule of early operation was that moribund patients could not be operated upon.

A Case of Typhoid Fever With An Unusual Complication.—Dr. William Edgar Darnall, of Atlantic City, reported this case. The case reported was a very mild one and was known as "walking typhoid" up to the time the patient came to Atlantic City. The case seemed peculiar in that there was a uterine flow which assumed the proportion of a hæmorrhage and only packing the vagina with gauze succeeded in checking it. He said that hæmorrhage as a complication of typhoid fever presented some interesting phases. No mention was made of uterine hæmorrhage as a complication of typhoid fever by most authorities. Osler, however, mentioned "a rare and fatal form of typhoid fever characterized by cutaneous and mucous hæmorrhages." In the case reported, the hæmorrhage did not usher in the attack, but occurred in what must have been the third week of the trouble. The normal monthly period did not figure in any way in the case because the menstrual epoch occurred two weeks previous.

Dr. William Osler, of Baltimore, said that the essential and most important thing was intelligent watchfulness on the part of the physician. In hospital directions can explicitly be laid down and specific instructions be given the house physician who should be on the alert for certain changes in the typhoid cases pointing to the possibility of intestinal perforation.

The Mortality and Management of Pneumonia.—Dr. Edward F. Wells, of Chicago, said that pneumonia was responsible for an annual morbidity of about 0.7 per cent.; a mortality rate of about 0.13 per cent., and it caused about 8.1 per cent. of all deaths. In New York there was an annual mortality of about 1.3 for 1,000 of the population in the decade 1804-1813 and rose to about 2.5 per cent. per 1,000 during the terminal decade of the century. He said (1) that pneumonia was a very prevalent disease, and its prevalence was increasing; (2) that this increasing prevalence was probably due to the wider diffusion of the more vigorous strains of the pneumococcus, made possible by the increasing commingling of people; (3) that the pneumococcus was to be found in the upper respiratory passages of a very large proportion of healthy persons, and it was the migration of these ever present germs into the pulmonary alveoli which caused pneumonia; (4) that pneumonia was a very fatal disease and its mortality was increasing; (5) that the increasing mortality was probably due to the greater average virulency of the pneumococcus. The following prophylactic measures were offered for consideration: (1) Pneumonic sputum should be destroyed before it had become dry. (2) The nostrils, mouth, and throat should be kept as clean as possible. Taking a drink of water after eating is a habit which should be formed and cultivated. (3) The room occupied by a pneumonic patient should be afterward disinfected. Remaining unnecessarily in a room occupied by a pneumonic patient should be avoided. (4) Respiratory catarrhs should be avoided, and if contracted should be relieved. (5) Physical and mental exhaustion, privation, undue exposure to cold and inclement weather should be avoided. In the ordinary cases he supplemented the efforts of Nature by giving during the first few hours only three to five drops of tincture of veratrum viride every two or three hours until nausea had been produced or the initiatory surprise of the attack had passed. To combat temperature he used the ice cap and the external application of fifteen to twenty drops of guaiacol. Pulmonary œdema was treated by energetic stimulation of the nervous system by strychnine, of the capillaries by adrenalin, and of the heart by small doses of morphine. Oxygen inhalations met with his approval.

The Study of a Series of Cases of Pneumonia, With Special Reference to Diagnosis and Complications.—Dr. Joseph Sailer, of Philadelphia, read this paper. He based his study on 65 cases in the Philadelphia Hospital during the past winter. Nearly 40 per cent. of the patients were over sixty years of age, and the mortality was correspondingly high, 35 patients dying and 30 surviving. The distribution, as determined by physical signs and confirmed where possible by autopsy, was: Left lower lobe alone, 16; left upper lobe alone, 2; right lower lobe, 12; right upper lobe, 13. In 5 cases a diagnosis was made of involvement of the right upper and middle lobes. The entire left lung was involved in 4 cases and the entire right lung in 3 cases. It had been asserted that leucocytosis rendered prognosis more favorable. In the cases in which recovery ensued there were less than 10,000 leucocytes in 3 cases and between 10,000 and 20,000 in 10 cases; between 20,000 and 30,000 in 5 cases; between 30,000 and 40,000 in 5 cases; between 40,000 and 50,000 in 1 case, and between 50,000 and 60,000 in 2 cases. Of the cases in which death occurred the leucocytes were: Between 10,000 and 20,000 in 11 cases; between 20,000 and 30,000 in 4 cases; between 30,000 and 40,000 in 1 case, and between 40,000 and 50,000 in 1 case. It did not appear that any definite conclusions could be drawn from the leucocytic count. The quantity of chlorides in the urine was not an indication of the subsequent course of the disease, but the comparison of the excretion of chlorides in pneumonia and in other febrile diseases had shown that in the latter states the reduction was comparatively insignificant, and in pneumonia always considerable, so that we could place the highest value upon it in the diagnosis of pneumonia. Of late years we had practically forgotten the importance placed upon Skoda's sign, the indeterminate, or indefinite, respiratory murmur characteristic of consolidation of the lung. Two forms of bronchial breathing could be distinguished to which the names of loud and faint could be given. The difference was one of degree; the faint bronchial breathing, although occurring more often in the early stages of the disease was not by any means limited to the stage of congestion. Wooden tympany was only observed in 2 cases. Herpes was observed 4 times, icterus 3 times. Feeble heart action and albuminuria were comparatively common. Profound cyanosis was present in 2 cases, and in one was temporarily relieved by venesection. If severe abdominal pain was present it was associated with tenderness in the hypochondrium on the same side as the pneumonia. This happened in 4 cases. The complications were numerous. Chronic nephritis usually of advanced type was found in 17 of 25 austopsies. Pleurisy, either chronic or acute, was present in all cases. In two there was empyema, in one gangrene of the lung and in two acute fibrinous pericarditis, in one acute obliterative pericarditis and in one acute ulcerative endocarditis, and in one pneumococcus meningitis. In four cases tuberculous lesions were present. The treatment consisted of expectant stimulation with occasional resort to hypodermoclysis. Ten cases were treated with antipneumococcic serum. These cases were selected, part being favorable subjects and part unfavorable. There were three deaths and seven recoveries. Of the fatal cases one was distinctly unfavorable, and one practically moribund when the serum was used. Of the cases in which recovery ensued three were regarded as severe. On the whole, the results of the serum were regarded as distinctly encouraging.

Appendicitis from the Standpoint of a Physician.—Dr. S. G. BONNEY, of Denver, said that the responsibility of the physician in appendicitis was far greater than that of the surgeon, because early diagnosis was a factor of supreme importance and afforded solution of the problem as to time of operation. A report of selected illustrative cases from the author's personal experience was appended.

Suicide, With Some Illustrative Cases.—Dr. JOHN L. DAVIS, of Cincinnati, read this paper. He said that in twelve years there had been over 77,000 suicides recorded in the United States, the number increasing annually from about 3,500 in 1891, to 8,600 in 1903. The greatest number of suicides was credited to middle life. Our American strenuous life he believed to be having a disastrous result on the physical conditions of our people; they were becoming physically unbalanced and this feverish intensity and eagerness to excel began almost at the cradle and ended only at the grave.

(*To be continued.*)

SECTION OF OBSTETRICS AND DISEASES OF WOMEN.

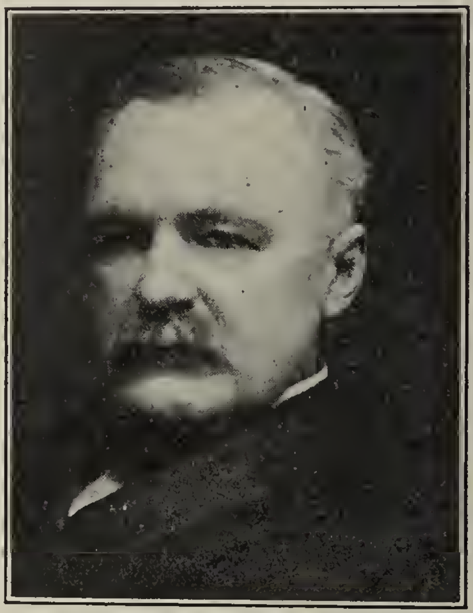
First Day, Tuesday, June 7, 1904.

The section was called to order at 2.20 p. m. by Dr. L. H. DUNNING, of Indianapolis, the chairman. After several announcements had been made by the secretary, Dr. C. L. Bonifield, of Cincinnati, Dr. I. S. Stone, of Washington, was called to preside, while the chairman delivered the annual address.

The Address of the Chairman of the Section, Dr. L. H. DUNNING, of Indianapolis, was entitled:

Last Year's Progress in Gynæcology. Senile Endometritis, and was, in part, as follows:

Regarding senile endometritis, the speaker said that about 3 per cent. of all cases of diseases of women which he encountered in private practice were of this nature. The condition was attended by purulent, mucopurulent, or sanguinopurulent discharges which were often irritating to the vagina or vulva and not infrequently of a very offensive odor. Pain in the uterus was a very constant symptom and usually of a burning or sore character. Backache and nervous symptoms were quite common and in rare cases a mild form of sepsis might be present. The predisposing causes were retroversion of the uterus, prolapsus, laceration of the cervix, a sloughing fibroid, and various forms of infection, especially gonorrhœal. Probably most of the cases were those in which the patient had had endometritis before the menopause, which had not been cured by the changes incident to that period, but had been modified and lessened so that the disease had become dormant or latent and required the action of an exciting cause to awaken it into activity.



L. H. DUNNING, M. D.,

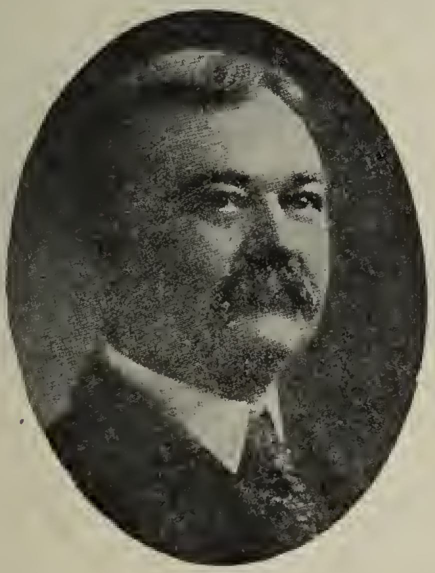
Chairman of Section of Obstetrics and Diseases of Women.

The disease was not self-limited but prone to persist even under the most painstaking treatment. The complications were marked and characteristic. Vaginitis, kraurosis vulvæ, urethral caruncle, pruritus vulvæ, cystitis, and proctitis were common.

The treatment might be carried out on similar lines to that for anteclimacteric endometritis. In cases of continued hæmorrhage probably no measure short of hysterectomy would be considered. The same was true in cases of long continued senile endometritis due to gonorrhœal infection and in those of mixed infection in which suppurative lesions of the appendages developed.

When it was found necessary to dilate the os and cervical canal, unusual care must be exercised because of the inelastic condition of the walls of the cervix. For this purpose the speaker preferred the slippery elm or sea tangle tents to the steel dilator. As applications to the interior of the uterus he had found carbolic acid, followed by alcohol, preferable, and this followed by 5 or 10 grain solutions of silver nitrate. Curettage was often beneficial and should be employed in suitable chronic cases. The complications must be appropriately treated. When all other means failed to cure and the patient was an invalid on account of the endometritis, hysterectomy was indicated.

Further Experience in the Use of the Electrothermic Clamps in the Treatment of Cancer of the Uterus, the next paper, was read by Dr. Charles P. Noble, of Philadelphia. The accepted treatment of to-day for malignant disease of the cervix uteri or body of the uterus was hysterectomy, the only procedure which promised an extension of life to the woman so afflicted, yet statistics, even of the most careful and thorough operators, showed recurrence in contiguous structures so frequently that it was debatable whether the operation was justifiable except in the very early stages of the disease. This applied especially to the clamp or ligature technics. Continued experience with the electrothermic clamp, however, led to the hope that a new era was approaching, and that no longer would this disease be a reproach to the gynæcologist. No operator had presented such favorable statistics as Dr. John Burns, of Brooklyn, whose electrothermic operation was so well known. The author had operated in ten cases of advanced cancer of the womb during the past year by this method, and in each the disease had progressed to such a marked extent that interference by the ligature or clamp technics would have been unjustifiable. Of these patients 4 had died, 5 were still living, without recurrence, after periods varying from 5 to 12 months since the operation; and 1 had a recurrence. There was a larger percentage of sequelæ to the electrothermic operation than to the others, in his own practice there having been several cases of ureterovesical and ureterovaginal fistulæ, but in every instance these had closed spontaneously after a few weeks. The great advantage of this method was that hæmorrhage from small vessels was absolutely guarded against; that the lymphatics were sealed, thus preventing the spread of cancerous elements through these channels; and that the tissues were thoroughly cooked for a distance of at least one third of an inch beyond the original site of the disease.

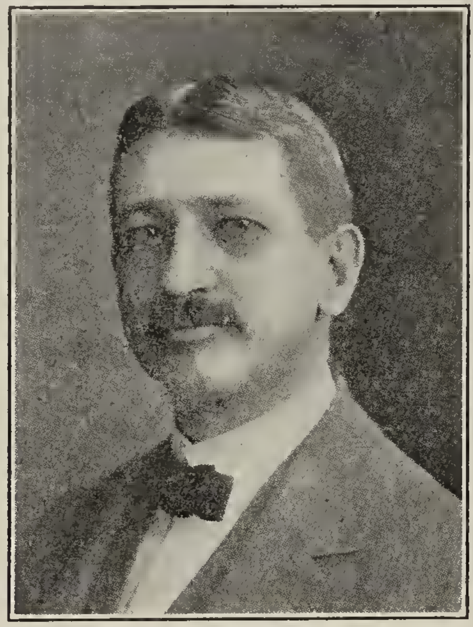


C. L. BONIFIELD, M. D.,
Secretary of the Section of Obstetrics and Diseases of Women.

Primary Chorioepithelioma Malignum Outside of the Placental Site was the title of the next paper, read by Dr. Palmer Findley, of Chicago. He said that but 20 cases of this affection were to be found reported in literature during recent years. These he briefly reviewed, and reported in detail a case of his own in which the disease originated in the uterine wall and, by metastasis, spread to the vagina. He operated during December, 1903, and there had been no recurrence to date. A second case which he had intended to report as having originated in the cervix and involved the vaginal wall proved, on more careful microscopical examination, to be carcinoma.

The Technics of Wounds Incident to Laparotomy was read by Dr. Henry O. Marcy, of Boston. He said that the currents and counter currents of surgical opinion have nowhere better illustration than in the treatment of wounds. The Egyptians, the Greeks, the Romans, all used antiseptics of varying degree of value. More or less obscurely, also, they recognized the value of drainage and cleanliness in wounds. In turn, the speaker referred to the surgery of Bigelow, Mussey, Otis, McDowell, Young, and Sims, and referred to improvements in operative technics during the period of each. For a very long period the best operators in the world used the clamp and cautery in the treatment of pedicles, experience having taught them that there was a very considerable danger from hæmorrhage when the ligature alone was relied on. This obtained prominence especially from the teaching of Sir Spencer Wells, whose experience was far greater than that of any contemporaneous operator and whose results were equalled or surpassed by no other, except, perhaps, Keith, of Edinburgh. During all this time the abdominal wound was closed by deep through and through silk sutures, usually tied very tightly. The profession was indebted especially to Sir Spencer Wells for pointing out the importance of including the peritonæum in the grasp of the suture. It seemed to the speaker a safe deduction, based on the experience of Mr. Lister, that if an artery could be occluded by an animal suture, cut short, and the wound closed by primary union, the ligature being absorbed, it would be equally safe and advantageous to close all aseptic wounds with buried absorbable sutures, the subsequent danger arising from infection. Therefore, as a result of his studies with Mr. Lister, in 1870, he carried this plan into effect and advocated its adoption generally. Drainage tubes, in all aseptic wounds, were not only useless, but dangerous; their use should be limited to septic cases. In order to avoid adhesions, all pelvic lesions should be covered, so far as possible, with healthy peritonæum, which usually lent itself easily to intrafolding by fine, continuous absorbable sutures. The wound should be sealed with iodoform collodion, reinforced with a few fibres of absorbent cotton. It was worse than useless to punish a patient with a bandage, since the restoration will be complete and permanent.

A Series of Mistaken Gynæcological Diagnoses.—This paper was read by Dr. THOMAS S. CULLEN, of Baltimore, and consisted, for the most part, in the relation of mistaken diagnoses in his own experience, as follows:



CHARLES A. POWERS, M. D.,
Chairman of Section of Surgery and Anatomy.

Case I. Clinically, it presented nearly all the classical signs of a large multilocular ovarian cyst, but at operation proved to be a partially parasitic myoma receiving nearly all its blood supply from the omentum. The abdominal cavity contained 51 litres of free ascitic fluid.

Case II. On examination the uterus was found to be globular, twice the natural size, and on its surface were two subperitoneal nodules, each about 1.5 cm. in diameter. On account of the general history of the case no examination of scrapings was thought necessary; at operation advanced adenocarcinoma of the body of the uterus was found. The two subperitoneal nodules were points at which the growth had penetrated the entire thickness of the uterine wall.

Case III. Projecting from the right side of the uterus was a globular mass about 8 cm. in diameter and apparently from the vicinity of the right cornu a subperitoneal nodule about 4 cm. in diameter. The uterus and nodules were movable. Intraligamentary and subperitoneal myomata were diagnosticated. At operation the subperitoneal nodule proved to be a dense and kinked hydrosalpinx; the intraligamentary growth an adenocarcinoma of the ovary invading the bladder wall. On account of partial intestinal obstruction hysterectomy was performed and about 8 inches of small bowel removed. The patient greatly improved, but the extension to the bladder was too great to render entire removal of the carcinoma possible.

Case IV. Patient 60 years of age, recently had a temperature of 100 to 103° F. Marked pain in the pelvis; slight discomfort in defecation. Occupying the vaginal vault and apparently attached to the posterior surface of the uterus was a slightly irregular but globular mass. The diagnosis lay between an adherent subperitoneal myoma glued down to the pelvic floor, and a pelvic abscess. On opening the abdomen an irregular globular tumor involving the sigmoid flexure was found. This had dropped over to the right side and had then become adherent to the pelvic floor. Between the growth and the floor was a small abscess, due to rupture of a diverticulum from the gut. End-to-end anastomosis was practised, and the patient recovered.

(*To be continued.*)

SECTION OF SURGERY AND ANATOMY.

Tuesday, June 7th.

Dr. CHARLES A. POWERS, of Denver, in the chair.

President's Address.—Dr. CHARLES A. POWERS delivered the opening address. He said that the tendency of the day, particularly among the younger surgeons, was to forget that a great deal of good surgery was done by the preantiseptic masters, and that a reading of these old writers would do much to broaden and increase the value of the extremely technical knowledge of the day. He traced the evolution of the surgeon most interestingly. Twenty years ago Gross affirmed that we had reached the end of surgical development. What was unsafe to predict then was doubly so to-day. The modern surgeon had every reason to be forged out of the best element in the land. He was obliged to assume greater responsibilities than any other class of man. It was therefore essential that one element in his training should be a well developed judicial instinct. Again, he must be a man of true scientific attainments. Surgery was too apt to be looked upon as the mere art of executing technical work. It was, however, far beyond that, and those who never rose beyond technics could never become great examples in their profession. So much of the danger has been taken from operative procedures that there was a tendency to establish diagnosis by exploratory incision. This was most emphatically to be deprecated, and from the old writers already referred to much could be learned along this most important line.

EDWARD WYLLYS ANDREWS, M. D.,
Secretary of Section of Surgery and Anatomy.

The Danger of Allowing Moles and Warts to Remain, Lest They Become Malignant.—Dr. W. W. Keen, of Philadelphia, presented a purely clinical paper on this important subject. He said that at the present state of our lack of knowledge there existed no means of telling whether a certain mole or wart was liable to malignant change or not. A very small proportion of such growths only became malignant, but when they did, the patient was placed in jeopardy. Although many of the growths reported occurred in positions where it would seem difficult for them to be more than occasionally injured, it was evident that traumatism played a most important part here, as elsewhere, in depressing the balance in favor of malignancy. No person, however patient, could be expected to withstand the perfectly natural desire to pick little scabs off these usually harmless growths, and thus it happened that often the patient himself was the direct cause of the traumatisms. This, he said, often took forty, and in some cases, seventy, years. Malignant change might, however, occur within a few months. Malignancy might be considered as established beyond peradventure the moment there was the slightest increase in size, a birth mark or a mole which previously had been quiescent. Some pathologists held that these growths always, when malignant, yielded a degeneration of an epitheliomatous rather than of a sarcomatous type. In the author's clinical experience, however, they were mixed. Although many writers held an opposite view, there could be little doubt that many sarcomata began in the skin as pigmented moles. Thus moles were probably somewhat more apt to give rise to general sarcomatosis, while warts degenerate into the usual epitheliomata. Obviously the sole manner of treatment for these distressing cases was immediate and thorough removal with the knife. This, if possible, should be done during the harmless or quiescent stage of the growth. It should be practised, no matter whether the offender occurred on the foot, the leg, the body, or the upper extremities. Location had nothing to do with prognosis. The author believed that the 25 cases which he cited was a series large enough to be offered as a warning to the profession that they should protect the public along these lines in a manner not heretofore done. The appalling history of most of the cases in almost every one of which recurrence occurred very shortly after the operation, ought to be sufficient to warn the profession against negligence in the future.

Starvation. Operation for Malignancy in the External Carotid Area; Its Failures and Successes.—R. H. M. Dawbarn, of New York, said that the method devised by him some years ago for the treatment of otherwise inoperable malignant growths in the neighborhood of the carotid area had not received so much attention either at his hands, or at those of the profession at large, as it deserved to do. New York surgeons had not utilized the method freely, for the probable reason that in the ten cases in which they had used it very little success had been reached. The reason of this was that each of the ten had unfortunately been done on well advanced cases of carcinoma, no sarcomata having been operated on. In uncomplicated and reasonably safe cases, the author's sixty odd operations had led him to be able to state that the mortality of double carotid excision should not exceed 5 per cent. As was well known, carcinomata spread by the lymphatics, while sarcomata were diffused through the bloodvessels. Inasmuch as but few lymphatics could be occluded at the time of removal of the bloodvessels, it was easy to see that the growth which was disseminated largely by the lymphatics would be to a less degree affected by the operation. The method of inclusion by injection, as originally suggested by Wyeth, might, under certain conditions, be a very valuable adjunct to the excision operation. It was the author's custom to plug either the occipital or the terminal branches of the external carotid. Formerly it was his custom to obliterate both, but this was in several cases by sloughing of healthy parts.

Operators should be most careful to determine that the distribution of the external carotid was normal. In many cases it did not follow the ordinary course, being a small vessel entirely secondary to the internal carotid, which under these conditions gave off branches in a measure corresponding to the usual divisions of the external carotid. The operation should always be done on the sound side first, for the reason that if the sick side was excised before the sound, the growth would promptly shrink and the patient would probably refuse a secondary operation. In conclusion, he said that the starvation plan had cured a small percentage of chosen cases of inoperable sarcoma of the lower portion of the external carotid region. Despite the type of the malignant tumor, the moral effect of the operation was good, because it infused the element of hope. Again, pain was invariably stopped by the procedure, even in carcinomatosis; as much as a year might be added to the patient's life. In any case moral and physical comfort are certain to be added.

Surgical Treatment of Suspicious Tumors of the Breast After the Menopause.—Dr. J. C. Stewart said that the danger of grafting malignant tumors could not be overestimated, and every effort should be made to prevent this dreaded complication. He regarded as most dangerous the recommendation that all cystic tumors of the breast should be aspirated by the family physician. In women over forty years of age the breast was useless, and there was no economic reason for saving it. If exploratory incision was made into it, the body should be protected against infection by a careful clamping of the pedicle and an avoidance of all pressure upon the tumor.

Dr. William Jepson said that the border line between clinical and benign growths was still wide. Cyst formation is of no possible value or assistance in diagnosis.

Dr. Bloodgood said that the hope for increasing the number of permanent cures depended entirely upon establishing an early diagnosis. The laity should be instructed to seek advice as soon as a tumor was found, and every physician should be taught how to treat them. He gave the statistics of the Johns Hopkins Hospital, and stated a most interesting fact. The fact that benign tumors were on the increase was due to the fact that more tumors came into the hands of the surgeon earlier than formerly, and he thus had an opportunity to prevent them from becoming malignant.

Pathology of the Knee Joint.—Dr. Hoffa, of Germany, said that he had been much interested in the pathology of a class of tumors which often entered into the ætiology of loose bodies in the joints. They were of the nature of lipomata which had undergone fibrous degeneration, and were to be differentiated from floating bodies and torn meniscus.

Surgical Lesions of the Axillary Plexus.—Dr. John A. Wyeth said that permanent operative paralyses were rare. He reported a case, however, in which after the arm had been over extended there was total paralysis for five months. Neuromata of the brachial plexus were not common. He reported a case in which the tumors had evolved so much of the nerve roots that total paralysis would have resulted from their excision. He divided the clavicle and placed it in such a position as to relieve the pressure.

Dr. J. B. Murphy said that overextension of the arm during anæsthesia is extremely dangerous, and that the paralyses produced were occasionally incurable.

Matas's Operation for Popliteal Aneurysm.—Dr. J. F. Binnie cited a case in which this easy simple method had proved most efficacious. He said that one very important factor in the technics was its elasticity, there being many opportunities to vary it. He reported a case in which the sac had measured six by four inches, and which although it became infected, went on to perfect recovery.

(*To be continued.*)

SECTION OF DISEASES OF CHILDREN.

First Day, Tuesday, June 7th.

Dr. Charles G. Kerley, of New York, in the chair.

Chairman's Address: The Demands of the Child by Virtue of Right.—Dr. Charles Gilmore Kerley said that among mammals, animals of the higher development, helplessness and dependence were characteristics of the young. Until able to care for itself, the young mammal's wants were supplied by those responsible for its existence—a duty which was instinctively assumed. For the growth and development of mammals, of which man was the highest type, there must be means of nutrition and surroundings suitable to the habits of the animal, conditions ordained by nature, which, when not followed, invariably produced inferior growth and physical degeneration.

The child was a young animal, so far as its physical characteristics were concerned. In order that a vigorous adult might be produced, suitable nutrition, plenty of fresh air and cleanliness were absolutely necessary for the child. In his daily life, there must be an absence of worry and anxiety; an absence, to a great degree, of responsibility; an absence of work of an exhausting nature until the adult period was reached. A child should make its first year's growth and development during the first year; its second year's growth and development during the second year, and so on. In order to make the best adult, both physical and mental, every year of the growing period must supply its quota of physical and mental development. The child would never do its first or second year's growing satisfactorily during the fifth or sixth year, or its fifth or sixth year's growing during its tenth or twelfth year. Protracted faulty nutrition, overwork at school, employment of an arduous nature in mines, stores, or factories, during the developmental period left their indelible stamp on the adult, as evidence by stunted growth, lack of endurance, lack of resistance to disease, lack of capacity for work, together with an absence of a high order of mental capacity and force—a condition so often found in the weak.

C. F. WAHRER, M. D.,
Secretary of Section of Diseases of Children.

SECTION OF NERVOUS AND MENTAL DISEASES.

First Day, June 7th, Afternoon Session.

Owing to the death of Dr. F. Savary Pearce, there was no address by the chairman.

Dr. Howell T. Pershing, of Denver, Col., was elected temporary chairman of the meeting.

A committee composed of Dr. Charles K. Mills, of Philadelphia, Pa.; Richard Dewey, of Wauwatosa, Wis., and P. W. J. Herdman, of Ann Arbor, Mich., was appointed to draw up resolutions on the death of Dr. Pearce; a similar committee to draw up resolutions on the death of Dr. Orpheus Everetts, of Cincinnati, Ohio, was appointed, and composed of Dr. F. W. Langdon, of Chicago; Dr. Hugh T. Patrick, of Chicago, and Dr. Brainerd.

The Report of Committee on the Collection of Information Regarding Public School Methods and Their Effects Upon the Mental and Physical Health of School Children was read by Dr. W. J. Herdman, of Ann Arbor, Mich. This committee, which was appointed at the last annual meeting, consisted of Dr. F. Savary Pearce, Dr. James McBride, Dr. Hugh T. Patrick, Dr. C. H. Williams, and Dr. W. J. Herdman. The reader stated that the data upon this subject were as yet very incomplete, and considered the medical examination, 1, at the time the child entered school; and, 2, during its years of school life. Before the school methods could be charged with affecting the health of the children, he believed there were many other factors that should be eliminated, principal among which were named hygiene and sanitation, both in the schoolroom and buildings. He reviewed at considerable length the work which had been done in the medical inspection of schools in both this and foreign countries, and classified the subject under the following headings: 1. Inspection of the pupils and teachers, with a view to detecting any contagious or infectious disease; 2, investigation of the sanitary and hygienic conditions of the school buildings, rooms, equipments, and environment; 3, examination of individual pupils, especially those who have attracted attention by deficient eyesight, hearing, etc. He called attention to the fact that the health records of New York, Philadelphia, and other cities showed a marked decrease in the contagious and infectious diseases among school children since the establishment of medical inspection, the result varying according to the rigidity of the examination.

DAVID J. WOLFSTEIN, M. D.,
Secretary of Section of Nervous and Mental Diseases.

Upon motion of Dr. C. B. Burr, of Flint, Mich., this report was accepted and the committee continued.

ENTERTAINMENTS.

The work of the various sections was agreeably diversified by a series of smokers, vaudeville performances, musicales, yachting parties, etc. On Tuesday evening, from 7 to 9 p. m., section smokers and vaudeville performances were held at the Hotel Islesworth, Hotel Rudolf, and Hotel Chelsea, while the section of Laryngology and Otology held a dinner at the Hotel Strand. A reception was tendered the visiting ladies in the music hall of the Steel Pier at 10.30 the same evening. On Wednesday afternoon at 2.30 a yachting party of ladies was organized at the Atlantic City Yacht Club House. On the same evening were a musicale and vaudeville performance in the ballroom on Young's Pier; a musicale and dancing on the Steel Pier; a smoker in the American Garden, to which the ladies were invited, at Board Walk and New York Avenue; and a smoker at the Islesworth Hotel Palm Garden. On Thursday afternoon, June 9th, Mrs. John H. Musser gave a reception to the visiting ladies at the Marlborough House. On Thursday evening there was a repetition of the musicales and vaudeville performances on Young's Pier and the Steel Pier, and on the latter, from 10 p. m. until midnight, the president's reception was held. There were also smokers in the American Garden and in the Hotel Islesworth Palm Garden, to the former of which ladies were invited.

THE SUBSIDIARY MEETINGS.

THE NATIONAL ASSOCIATION OF STATE MEDICAL AND EXAMINING BOARDS

held its fourteenth annual meeting at Young's Hotel, on the morning and afternoon of June 6th. After the invocation by the Reverend William Aikmann, D. D., acting for Bishop Scarborough, who was unable to attend, addresses of welcome were delivered by Mayor Honorable F. P. Stoy, on behalf of Atlantic City; by Dr. William M. Pollard, on behalf of the medical profession of Atlantic City; and by Dr. E. L. B. Godfrey, of Camden, N. J., on behalf of the State Board of Medical Examiners of New Jersey, to which a suitable response was made by Vice-President A. Walter Suiter, of the Board of Medical Examiners of the State of New York. The report of the secretary-treasurer having been presented, the annual address was delivered by the president, Dr. Henry Beates, Jr., of Philadelphia. Then followed another address of welcome by Mayor Honorable F. P. Stoy, on behalf of Atlantic City. A paper was then read, entitled What Constitutes the Practice of Medicine in New Jersey, by Dr. John W. Bennett, of Long Branch, N. J.

At the afternoon session, a most valuable and instructive report was presented by Dr. George W. Webster, of Chicago, chairman of the Committee on Curriculum and Preliminary Requirements, accompanied by tables showing the curriculum and a statement of work in each subject required in every medical school in the United States; the schools having the lowest and highest requirements; and the general average. We hope to present this report later in our columns.

Dr. S. D. Van Meter, of Denver, presented A Model Registration Act, and Dr. J. N. McCormack, Jr., of Bowling Green, Ky., read his father's paper on The Relation of Licensing Boards and Colleges to the Work of Organization. Miscellaneous business and the Report of the Executive Committee followed. The officers were all reelected, as follows: President, Dr. Henry Beates, Jr., of Philadelphia; vice-presidents, Dr. A. Walter Suiter, of Herkimer, N. Y.; Dr. George W. Webster, of Chicago; executive council, Dr. W. S. Foster (chairman), of Pittsburgh; Dr. Joseph M. Mathews, of Louisville; Dr. W. A. Spurgeon, of Muncie, Ind.; Dr. W. Warren Potter, of Buffalo; and Dr. Augustus Korndoerfer, of Philadelphia. Committee on curriculum and preliminary requirements: Dr. George W. Webster (chairman), of Chicago; Dr. Augustus Korndoerfer, of Philadelphia; Dr. W. W. Halbert, of Nashville, Tenn.; Dr. William S. Ely, of Rochester, N. Y.; and Dr. Edwin B. Harvey, of Boston, Mass.

AMERICAN ACADEMY OF MEDICINE.

Saturday, June 4th.—The weather, which for the past week has been very wet and unpleasant, cheered up visibly on the advent of the physicians, showing that Nature, as well as human nature, responds to the doctor's cheery mood. The American Academy of Medicine convened to-day, at the Hotel Shelburne, for its twenty-ninth annual meeting, about a hundred fellows being present. An executive session was held at 11 a. m., and an open one at noon, this was followed by an afternoon session at 3 p. m., and an evening session at 8 p. m., when Dr. J. B. Roberts, of Philadelphia, delivered his presidential address on the Duty of the Physican to the State, which will appear in our next issue.

The meeting closed on June 7th. It was very well attended. The academy now numbers about 900 members. Dr. W. S. Hall, of Chicago, was elected president, and Professor Charles McIntire, of Easton, Pa., secretary.

Professor Albert Hoffa, the noted German orthopædic surgeon, received an ovation at the section on Surgery and Anatomy, on June 7th. His paper was listened to with great attention. He operated in the afternoon at the Atlantic City Hospital in the presence of a large gathering.

THE AMERICAN ASSOCIATION OF LIFE INSURANCE EXAMINING SURGEONS

met at the Steel Pier on Monday, June 6th, at 10.30 a. m. and 2 p. m., and at the Hotel Islesworth at 8 p. m. The membership of this association is now about 1,000, and the present meeting is considered the best in the history of the society.

The following papers were read:

Items of Experience from a Medical Director's Standpoint, by Dr. E. H. Hammill, of Newark, N. J.; The Relation of Modern Medicine and Surgery to Life Expectancy, by Dr. Allison Maxwell, of Indianapolis, Ind.; Abstract Diagnosis versus Applied Diagnosis, by Dr. Charles Woodhull Eaton, of Des Moines, Iowa; The Estimation of Arterial Tension in Insurance Examination, by Dr. Henry W. Cook, of Richmond, Va.; The Moral Hazard in Life Insurance, by Dr. J. L. Davis, of Cincinnati, Ohio. The Recognition of Eye Diseases in Relation to Life Insurance, by Dr. George F. Suker, of Chicago; The Recognition of Incipient Insanity, by Dr. Richard Dewey, of Wauwatosa, Wis.; The Significance of Indigestion, by Dr. Fenton B Turck, of Chicago; Further Observations Regarding Theory and Facts of the Origin of Cancer and Its Bearing Upon Life Insurance, by Dr. E. Holovtchiner, of Omaha, Neb.; The Effect of the Moderate Use of Alcohol as Affecting Longevity, by Dr. T. D. Crothers, of Hartford, Conn.; Gonorrhœa in Relation to Life Expectancy, by Dr. Ferd. C. Valentine, of New York; The Significance of a Discharge from the Ear, by Dr. Edward B. Dench, of New York.

Officers.—The following officers were elected for the ensuing year: President, Dr. Denslow Lewis, of Chicago, Ill.; first vice-president, Dr. Charles H. Harbaugh, of Philadelphia, Pa.; second vice-president Dr. Frank B. Cross, of Cincinnati, Ohio; third vice-president, Dr. Henry Wells Dewey, of Tacoma, Wash.; fourth vice-president, Dr. Henry W. Cook, of Richmond, Va.; treasurer and secretary, Dr. Woodbridge H. Birchmore, of New York.

THE ASSOCIATION OF AMERICAN MEDICAL LIBRARIANS.

This association met at the Traymore Hotel on Monday afternoon, June 6th, the president, Dr. W. Osler, in the chair. About thirty members were present, including the present and retiring presidents of the American Medical Association. Papers were read by Mr. Albert Huntington, of Brooklyn; Mr. Fischer, of Philadelphia; Dr. Taylor, of Wilkes-Barre; and Professor Cordell, of Baltimore.

A banquet was given to the members at the Traymore Hotel by Dr. Osler. The new officers elected were as follows: President, Dr. James R. Chadwick, of Boston; vice-president, Dr. Abraham Jacobi (reelected); secretary, Mr. Albert T. Huntington (reelected).

THE AMERICAN MEDICAL EDITORS' ASSOCIATION

convened at Young's Hotel on June 6th at 2 p. m., under the presidency of Dr. C. E. de M. Sajous, of Philadelphia, about fifty members being present. The business included the reception of twenty-six applications for membership. Attention was directed to the fact that of late years the by-law calling for some scrutiny of the qualifications of candidates had fallen into desuetude, and the voting on candidates *en bloc* was this year replaced by reference of the candidates' applications to a committee for recommendation prior to election. The president then gave his address, in which he emphasized the fact that American medicine and surgery were not sufficiently appreciated on the continent of Europe, and that it rested with the American medical press to correct this. Anything that implied push and energy in the way of commerce, mechanical arts, and the material side of things generally received due recognition; but on the intellectual side, America received no credit for the work that it was doing. This could be partly obviated in a large measure by the medical press. Too much valueless material was printed, so that a foreigner could not read the good without wading through a mass of useless matter. The president called attention to the need of more careful and accurate clinical records. He had recently had occasion to look for a careful and close report of a case of typhoid fever, and could not find one. The statements of diseases in the textbooks were merely types. They should be supplemented by careful, detailed clinical records in the journals. The following programme was then gone through: Proprietary and Patent Medicines, by Dr. Harold N. Moyer, of Chicago; Military Medical Journalism of To-day, by Major James Evelyn Pilcher, U. S. A., of Carlisle, Pa.; Sundown Journalism, by Dr. T. D. Crothers, of Hartford, Conn.; Medical Illustrations, by Dr. H. V. Wurdemann, of Milwaukee; The Medical

Press versus the Modern Plague, by Dr. William Porter, of St. Louis; Reading Notices, by Dr. W. C. Abbott, of Chicago; and The Imitator in Journalism, by Dr. Henry Waldo Coe, of Portland, Ore.

The annual banquet was held in the evening at the Hotel Arlington, about seventy being present. The scheduled speakers were Dr. J. H. Musser, President of the American Medical Association; Brigadier-General Robert M. O'Reilly, surgeon-general, United States Army (who was, however, unfortunately prevented at the last moment from being present and deputed Major Borden, U. S. A., to represent him); Surgeon-General Walter Wyman, of the Public Health and Marine Hospital Service; Surgeon C. F. Stokes, representing the Surgeon-General, United States Navy; Dr. Henry O. Marcy, of Boston; Dr. Winslow Anderson, of San Francisco (absent); Dr. George H. Simmons, of Chicago, secretary and editor, American Medical Association; Dr. H. H. Biedler and Dr. W. A. B. Sellman, of Baltimore. The remarks of the president of the American Medical Association were of a general nature, and emphasized chiefly his earnest desire to support Dr. Sajous in the work that lay before him with regard to increasing the efficiency and popularity of the American Medical Editors' Association.

Surgeon-General Wyman urged closer relations between the medical profession and his service, in bringing about which the medical press could greatly help. He described the six divisions in which the work of the service was carried on, and urged all members of the association, when in Washington, to give him the opportunity of showing them round and explaining the work accomplished by the service.

Surgeon Stokes advocated a closer rapprochement between the medical service of the navy and the profession at large.

Major Borden spoke in a similar strain for the army. The main defects of the army medical service were (1) that it was too small in numbers, and (2) contract medical service. A nucleus that was undermanned in time of peace could not be satisfactorily expanded in time of war. As to contract surgeons, they should not exist. Any man who was worthy to do the work of a commissioned army medical officer was worthy to have a commission, and a bill was now in progress, for which he bespoke the aid of the medical press to abolish contract service and give a commission to all medical men employed by the army.

Speeches were also made by Professor Osborne, of Yale University; Dr. Young, of Toronto, Ont.; Dr. Lisle, of Jacksonville, Fla., secretary of the Florida State Association; Dr. H. W. Coe, of Portland, Ore.; Dr. K. W. Millican, of New York; Dr. H. N. Moyer, of Chicago; Dr. W. Abbott, of Chicago; Dr. Taylor, of Philadelphia; Major J. E. Pilcher, U. S. A., of Carlisle, Pa.; Dr. Joseph Macfarland, of Philadelphia; and Dr. Garcelon, ex-Governor of Maine, respectively the youngest and oldest members of the association. The latter, at the age of ninety-one years, delivered a remarkably telling and effective speech.

An adjourned meeting was held at 2 p. m. to receive reports of the various committees.

The officers elected were: President, Dr. Harold N. Moyer, of Chicago; vice-presidents, Dr. James E. Pilcher, Dr. Otto F. Ball, of St. Louis; secretary and treasurer, Dr. Joseph MacDonald, of New York.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

This association completed its twenty-sixth annual congress at Atlantic City on Saturday, June 4th, which lasted for three days. It was the largest meeting in the history of the association—so large and successful, indeed, that there is considerable support to the suggestion that the next meeting be also held at Atlantic City. The following is the programme:

On Thursday, June 2nd, at 10 a. m., after roll call and reception of guests, the president's address was delivered by Dr. J. H. Hartman, of Baltimore. The following papers were then read: A Contribution to the Study of the Secreting Mechanism of the Nose, by Dr. J. L. Goodale; Report of a Case of Nasal Hydrorrhœa, by Dr. J. Edwin Rhodes; Some Remarks on the Intranasal Surgery of To-day, by Dr. John N. Mackenzie; A Study of the Fatal Results of Operations Upon the Nose and Throat, by Dr. Francis R. Packard; Observations on the Therapeutic Value of Medicated Ointments in Certain Affections of the Nasal Chambers, by Dr. Alexander W. MacCoy; The Ætiology and Diagnosis of Ozæna and Its Relation to Pulmonary Tuberculosis, by Dr. Clement F. Theisen; Two Unusual Tumors in the Nasopharynx, by Dr. Walter F. Chappell. Then followed the presentation of patients, instruments, and specimens; the election of fellows; the appointment of auditing committee; the election of committee of five to nominate officers for 1904-1905. Adjournment at 1 p. m. A luncheon was tendered by the president of the association at 1.30 p. m. at the Hotel Chelsea.

At the afternoon session, at 3 p. m., the following papers were read: Facial Asymmetry as a Cause of Deformities of the Nasal Sæptum, by Dr. Henry L. Swain; Submucous Operations on the Nasal Sæptum; No Perforation—the End in View; Report of Cases (by title), by Dr. Robert C. Myles; Intratracheal Injections, by Dr. Thomas Hubbard; Broncholiths, with Report of Case (by title), by Dr. D. Braden Kyle; The Compensatory Action of Certain of the Laryngeal Muscles Seen in Cases of Vocal Disability During the Past Year, by Dr. Clarence C. Rice; and The Sequel of the Case of Laryngeal Perichondritis After Typhoid, Reported to this Association in May, 1903, by Dr. Emil Mayer. On Friday, June 3rd, after the business meeting, there was a discussion on Neuroses of the Upper Air Tract, Exclusive of Those Due to Diphtheria and Organic Disease. Neuroses of the Pharynx, by G. Hudson-Makuen, M. D.; Neuroses of the Nose, by F. E. Hopkins, M. D.; Neuroses of the Larynx, by Emil Mayer, M. D.

The following papers were read: Removal of Foreign Bodies from the Œsophagus and Bronchi by the Aid of Killian's Œsophagoscope and Bronchoscope, by Dr. E. Fletcher Ingals; Three Cases of Foreign Body in the Bronchus, by Dr. A. Coolidge, Jr.; Present Methods for the Treatment of Malignant Disease of the Larynx, by Dr. D. Bryson Delavan; The Effects of Tobacco Upon the Throat, by Dr. Samuel W. Langmaid. The annual dinner of the association was held at the Hotel Chelsea on Friday evening.

On Saturday, June 4th, the following papers were read: The Final History of a Case of Supposed Vocal Nodule; Epithelioma of the Larynx; Thyreotomy; Death, by Dr. Charles H. Knight; Subglottic Tuberculous Lesions of the Larynx, by Dr. T. A. DeBlois; Two Cases of Pemphigus of the Mouth, by Dr. John W. Farlow; A Bronchial Cleft Cyst Simulating a Retropharyngeal Abscess, by Dr. Cornelius G. Coakley; Primary Ulceration of the Tonsil, Together with Some Remarks on Tonsillar Ulceration in General, by Dr. Thomas J. Harris; Bone and Cartilage in the Tonsils, by Dr. James E. Newcomb; Tic Douloureux from Sphenoidal Disease, by Dr. John O. Roe; and Lupus of the Pharynx and Nasopharynx Cured by the X Rays, by Dr. Herbert S. Birkett. The election and installation of officers followed.

Among the papers that excited considerable attention were Dr. J. L. Goodale's Study of the Secreting Mechanism of the Nose; Dr. John W. Mackenzie's Remarks on the Intranasal Surgery of To-day; Dr. E. Fletcher Ingals's paper on Removal of Foreign Bodies by Killian's Œsophagoscope and Bronchoscope; Dr. Bryson Delavan's on The Treatment of Malignant Disease of the Larynx; Dr. Charles H. Knight's Final History of a Case of Supposed Vocal Nodule; and Dr. Herbert S. Birkett's paper, the title of which was changed, on reading, to Primary Lupus of the Oropharynx and Nasopharynx Treated by X Rays. The general discussion, on Friday, June 3rd, on Neuroses of the Upper Air Tract was very successful, the discussion leaders being Dr. G. Hudson Makuen, for Neuroses of the Pharynx; Dr. F. E. Hopkins, for those of the nose, and Dr. Emil Mayer, for those of the larynx. New Officers for 1904-05, were elected as follows: President, Dr. Clarence C. Rice, of New York; first vice-president, Dr. Thomas Hubbard, of Toledo; second vice-president, Dr. Walter T. Freeman, of Philadelphia; secretary and treasurer, Dr. James E. Newcomb, of New York; librarian, Dr. Joseph H. Bryan, of Washington, D. C.; member of council for three years, Dr. D. Bryson Delavan, of New York; member of council for four years, Dr. J. H. Hartman, of Baltimore. *New Members.*—The following new members elected: To corresponding fellowship, Professor B. Fraenkel, of Berlin; to active fellowship, Dr. T. Passmore Berens, of New York; Dr. H. P. Mosher, of Boston; and Dr. J. M. Ingersoll, of Cleveland.

THE NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS.

This institution is the outcome of a meeting held on the evening of June 6th at the High School. Professor Osler, of Johns Hopkins, presided. Dr. Jacobs, of Baltimore, acted as secretary. The new organization will contain most of those officially connected in this county with leading institutions for the care of consumptives, and will cooperate harmoniously with foreign associations established for the same purpose. Dr. E. L. Trudeau, of Saranac, was elected president of the new organization. This appointment at once gives the stamp of authority to the association. A board of thirty directors from various States of the Union was also chosen.

AMERICAN MEDICAL TEMPERANCE ASSOCIATION.

The thirteenth annual meeting was held at the Dennis Hotel on June 8th and 9th, the president, Dr. W. S. Hall, of Chicago, in the chair. A committee was appointed to effect a combination of the two societies for the study of inebriety and alcoholism. The address of the honorary president, Dr. N. S. Davis, of Chicago, Ill., On the Effects of Alcohol on the Functions and Organs of the Body, was read by Dr. H. S. Dideina, of Syracuse, N. Y. A telegram of thanks and condolence was sent to Dr. Davis. The president, Dr. W. S. Hall, of Chicago, Ill., gave the annual address On the Recent Progress in the Study of Alcohol in Medicine. Dr. L. D. Mason, of Brooklyn, N. Y., read a paper on the Relation of the Pauper Inebriate in the Municipality and the State, from an Economic Point of View. Dr. T. A. McNicholl, of New York, presented a paper on Alcohol in the Public School, which excited much comment. Dr. H. O. Marcy read a paper, by Dr. Madden, on Alcohol in Literature. Dr. Stewart, of Battle Creek, Mich., read a paper on Alcohol as a Factor in Incapacitating Mothers from Nursing their Children. Papers were also read as follows: On the Influence of Alcohol on Digestion, by Dr. J. H. Kellogg; The Influence of Tobacco as an Active Cause in Disease, by Dr. D. S. Reynolds; The Treatment of Pneumonia Without Alcohol, by Dr. Frank A. Reese; Distinguished Intemperance, by Dr. David Paulsin; New Studies on the Alcoholic Problem, by Dr. T. D. Crothers.

NEW JERSEY STATE MEDICAL SOCIETY.

The one hundred and thirty-eighth meeting of this society opened at the Hotel Chelsea, on Saturday, June 4th, at 11.30 a. m. Some 250 delegates had arrived, and an attendance of 300 was expected. The president, Dr. Henry Mitchell, of Asbury Park, opened the proceedings. An addrss of welcome was made by Mayor Stoy, of Atlantic City, who, following the Spanish host's custom of giving the guest the house and all its appurtenances, bestowed upon the visitors the freedom of the city. He expressed himself glad, however, that they did not come in search of fees, as the city was in such a healthy condition that they would inevitably have been disappointed.

Dr. Walter J. Johnson, of Paterson, was elected a delegate to fill the unexpired term of the late Dr. A. M. Taylor.

The following officers were elected for the ensuing year: President, Dr. W. B. Johnson, of Paterson; vice-president, Dr. Henry W. Elmer, of Bridgeton; second vice-president, Dr. P. Alexander Marcey, of Riverton; third vice-president, Dr. Edward J. Ill, of Newark; corresponding secretary, Dr. E. W. Hedgles, of Plainfield; recording secretary, Dr. William J. Chandler, of South Orange; treasurer, Dr. Archibald Mercer, of Newark; delegate to American Medical Association, Dr. L. M. Halsey, of Williamstown; alternates, Dr. Gent Taylor, of Camden; Dr. Alexander McAllister, of Camden; Dr. J. L. Leal, of Paterson; delegate to Pennsylvania State Medical Society, Dr. Ralph Marvel; councillors, Dr. Thomas M. Harney, of Orange; Dr. J. L. Leal, of Paterson; Dr. Dan Strock, of Camden; Dr. Phil Marvel, of Atlantic City; Dr. W. A. Clarke, of Trenton.

Asbury Park was selected as the next meeting place.

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Lectures and Addresses.

THE DOCTOR'S DUTY TO THE STATE.

THE PRESIDENTIAL ADDRESS OF THE AMERICAN ACADEMY OF MEDICINE FOR 1904.*

By JOHN B. ROBERTS, A. M., M. D.,

OF PHILADELPHIA.

The doctor's highest duty is to be honest and to fight for honesty in his profession and in the State. He should abhor cowardice in others, as in himself; for cowardice is the parent of dishonesty. The professional coward and the commercial coward have aided efficiently, if perchance unwittingly, the present degradation of the body politic and the body medical. Moral cowardice is a characteristic of both corporations and individuals in this twentieth century; and is the result of the worship of the "Almighty Dollar;" which has usurped the place of "Self-Respect" in men's minds.

The sociological character of the work of this academy and its educational requirement for fellowship authorize the introduction here of topics of an economic, or politicosocial, nature. No excuse need, therefore, be made for my choice of subject. To those who may object to the criticisms of my profession, my city, or my State, I reply that I know of no better way to remedy evils than to recognize their existence. An honest and just investigation of suspected corruption and an honest and brave avowal of discovered wrong are the first steps towards amelioration of evil. He, who is afraid to see, and dare not mention, the misdoings of himself and his colleagues, is his profession's worst son. He, who cries out for concealment under the plea of loyalty, is no better than the scheming political leader, whose cowardice and insincerity call forth the reprobation of upright citizens. It needs no argument to prove that cowardice begets lying and that a liar is essentially a coward. Reformation comes from honest introspection, which begets respect and honor from the outside world.

David's description of a citizen of Zion is "he that walketh uprightly, and worketh righteousness, and speaketh the truth in his heart." The upright gait, the righteous labor and the truthful spirit are as needful now as in the times of the great king.

The superior training of doctors of medicine, their unusual opportunities to know the needs of a community, their wide acquaintance with citizens, their many chances to play the part of missionary, and their personal influence with active men make their responsibility to the State great. Even greater is the responsibility, and greater is the duty, that rests upon a fellow of this academy; because its claim to existence is founded upon a broad cultivation of the humanities, in addition to medical education.

The doctor is excused from jury duty and is entitled to withhold medical confidences under certain circumstances. He should, therefore, be willing to render a return for these privileges in a higher civic courage and usefulness. It is not only his religious or ethical duty to be honest and brave, but his civic duty as well. In these days, moreover, a mere passive virtue is not sufficient.

The doctor must fight for honesty in others also and strike real knock-down blows at political and professional chicanery, if he wishes to do his whole duty to the public. There are in all vocations weaklings, who do nothing but accept the benefits, which their environment brings them. They make no return to their generation and when dead leave no special vacancy in the economic household. Such impassive units are of little real worth. Although they may do no active harm, they increase the deadweight of indifference, which must be lifted if the righteousness of the world is to increase and the happiness of humanity to be brought to its fulfilment. It has always been this inertia that has retarded progress, and permitted wrong to flourish.

The physician should be on guard lest in civic matters he become tainted with this form of inert conservatism. It is easy to plead professional engagements and personal modesty as excuses for lack of energy in uprooting hygienic and political evils.

A physician does not do his duty to his fellow citizens by merely treating their typhoid fevers, while making no effort to compel the local rulers to supply pure drinking water to the home. He knows the cause of this disease, and it is his bounden duty to labor actively for a pure water supply. Similar activity in urging measures to prevent the spread of smallpox and other contagious diseases is a recognized part of his professional work. The doctor may not escape this responsibility because his sluggish temperament and unused conscience permit him to see with equanimity ignorant men and innocent children suffer and die. If he is mentally or physically lazy, let him select some position in the world where such inactivity and uselessness are less censurable.

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* Delivered at the meeting of the Academy at Atlantic City, N. J., June 4, 5, and 6, 1904.

Some may exclaim that these matters are not the business of the practising physician; but belong to the civic officials. Such excuses for dereliction of civic and professional duty should always arouse active condemnation. The doctor knows the results of scientific study of hygienic questions and should insist upon their application to the citizen's person and possessions. A member of a community, who is favored by education, experience, and social position, owes more to the common good than one less fortunate in these attributes. The more one has, the more one owes to his fellows. Let us all accept the responsibility of our profession, if we accept its honors and emoluments.

This claim upon the doctor is individual and may not be shirked. To delay for societies, institutions, or combinations of men to make the start is not justifiable. A brave knight goes to battle alone. He does not wait for companions to give him courage and afford succor. Delay often means failure. Prompt action often gives the only possible success. After all, history shows that organized bodies follow a single brave spirit. The great reforms have always been started by the alert brain or agile body of one man. He who works for the love of the duty to be done, soon finds followers. He who tremblingly waits for company in good deeds has a sorry achievement to his credit. The one-man fights for righteousness have made the modern better than the ancient world.

Much unpaid work is to be done on this earth. I like to think that a great deal of it is done by doctors. The public knows that physicians do much for the sick without money recompense. Much is to be done in civic affairs, which brings no reward and no glory. This is just as much the doctor's duty as to cure the poor and friendless, or to ease their road to the grave.

How often financial success blunts the conscience and lessens the activity of medical men! What a misconception of duty, this! The less one has to think of the necessities of his wife and children, the more free is he to devote his energies to the public service. It is often pretty easy to pardon the impecunious man, who for his household's sake is driven to accept a " dirty dollar " for some improper service to a sly tempter. No excuse seems adequate, however, when a similar dereliction is committed by a physician of means, education, and intelligence. His brains and intellectual training should show him the true path, which may be invisible to his muddlepated colleague; the absence of financial stress makes his failure to do the right inexcusable. It is unreasonable to expect us all to be measured by the same standard of ethics or morals. The fellows of this academy, for instance, are rightly expected to do better, and be better, than men of less intellectual opportunity. So also, those of means, whether professional men or business men, should be held to a stricter ethical responsibility than those who have a daily struggle to feed their children. In the abstract, right is right, wrong is wrong, and duty is duty, without regard to collateral circumstances; but I cannot bring myself to believe that so much is to be expected from the naturally weak and accidentally fettered, as from those who are strong and free. Strength and freedom give power, and power always brings responsibility. This is the reason that I urge our 800 fellows to consider the doctor's duty to the State.

In my city the business men will not work to free the State from the political ills that affect it; and I therefore call thus earnestly for political deliverance at the hands of the doctors. The attitude of indifference to election frauds, legislative corruption, and police blackmail, on the part of the business community, is easily intelligible to students of economic conditions. Much of the bribery in council chambers and legislative assemblies is the direct result of business competition. A railroad or a hospital desires to obtain a franchise, a grant of land, or an appropriation, to make it more prosperous than its competitor or rival. Its directors, believing that the end justifies the means, ignore the principles of ethics, because it is success that appeals to them, and bribe the men who vote, with cash from the treasury of the corporation; or, even worse, give them a rake-off of ten per cent. from the appropriation obtained from the public coffers. Many illustrations of this kind of bribery and robbery are familiarly discussed in our daily contact with society. Yet the directors who permit this thing to be done, pose as good citizens and expect us to greet them with deference and respect.

It is not difficult to understand the hold the political bosses have on these same directors, when they desire to raise a large corruption fund to pay for illegal voters and repeaters on election day. It is not surprising that such contemptible citizens and successful directors pay blackmail to both the larger political parties. Are they any better or any worse than the carter who gives the policeman ten dollars to permit his cart to obstruct the public highway, night after night, to save stable rent; or the brothel keeper, who pays a monthly stipend to the police captain to be undisturbed in her trade?

The managers of the great corporations are the chief causes of civic corruption. I have some respect for the ignorant dwellers in the tenements and alleys, who obey the ward leaders, probably their only friend in time of sickness, and accept for their vote a drink of whiskey, a silver coin, or a bag of flour. Their subservience has at least the flavor of gratitude. The business man with full bank account, cultivated surroundings, and clear insight, who allows his legislative agent to bribe members of council, assembly or congress, with money, stock, or unworthy patronage, deserves the contempt of true men. It is no valid excuse to plead that these things are done without his knowledge by the executive officers of his railroad or institution. If he be a director, let him take the responsibility, as well as the honor, pertaining to his position, and prevent such acts on the part of his subordinates. Shifting responsibility may quiet his uneasy, though feeble, conscience, but it does not lessen the contempt felt by others for such unworthy citizenship.

It is not fair to suggest that cases of this kind are found only among business men, and that the liberal professions are free from this political taint. The law and the clergy doubtless have their unworthy followers. That the medical profession has not succeeded in keeping all such evil practices out of its ranks is known too well. The promoters and trustees of some medical schools and hospitals are not a whit behind railroad and telephone magnates in seducing the political leaders to appropriate public funds for private use. Some of us have seen the coarsest forms of political trickery invade even medical organizations, with which no laymen are connected.

These illustrations serve to confirm the belief that human nature is the same in all vocations. They impel us to use due diligence to discover and fight the unworthy ones in our midst, who thus degrade the whole profession by failing to recognize their duty to the State.

You may think these general statements, made by reason of perusal of sensational newspapers. I assure you that I, as an election official, have personal knowledge of political corruption of the worst kind in the Eighth Ward of Philadelphia. My testimony under oath to the Court of Common Pleas has shown that I know something of the topic of which I am now speaking. My interest in professional organizations and in sociological studies has enabled me to see many things bearing on the relations of medical men to each other and to the State. Knowledge thus obtained makes me ashamed of some of my fellow doctors as well as of some of my fellow citizens in business walks. Men, desirous of seeing municipal government free from fraud and bribery, send generous contributions for that end with the condition that their names be kept unknown. Others decline to allow their names to be used publicly, lest the political machine interfere with their private business. The honest citizen in Philadelphia to-day is held in bondage as complete as that of the negro of the Southern States, in 1861.

This cowardice of business men, and even of the judges, is scarcely to be wondered at when the condition of affairs is examined. A four-story residence, with a brown stone front, on a lot 23 feet by 175 feet, situated on Walnut Street, is assessed at $60,000; while a four-story residence with a red stone and brick front, on a lot only 22 feet by 125 feet, and with much less backbuilding situated in the same square of Walnut Street, is assessed at $65,000. Every intelligent man one meets will say, "That's easy to understand. The first belongs to Governor B.——, the other to Dr. A.——."

The guilty election officers of the fifth division of the Eighth Ward are allowed to pursue election frauds undisturbed, for months after three judges have heard from a reputable citizen sworn testimony of their corrupt practices. Proprietors of disorderly houses easily obtain straw bail. Our friends point out to us "speak-easies," where liquor is illegally sold, concerning which the police apparently have no knowledge.

Upright citizens are ashamed of the machine-made judges, who seem in cases of a political character to strain every nerve to find technical quibbles in favor of the accused, with the result that justice to the State is practically impossible. Is not this due to the fact that judges know that their tenure of office depends on obedience to the political machine. This same machine it is that creates the courts, selects the judges, picks out officials which the judges subserviently appoint, and raises the judges' salaries after they have been "good." These things are now so notorious that it is the judge who fails of renomination whom the community honors. His rejection by the machine is an evidence that he has been a courageous and faithful judge. His retention would mean that he had made himself "solid" with the political bosses, who control the machine and who expect favors at his hands.

The public has not failed to observe that political cases, in which there is a reasonable general belief that the accussed is guilty, are often tried before judges whose recent political affiliations make them possibly amenable to pressure at the machine's hands. Has the people not been surprised more than once at the rulings of the judge in favor of the accused politician?

It does not conduce to honesty in the young to see one of the Middle States represented in the United States Senate by a man who seemingly escaped punishment, when on trial for illegal use of the State's money, only because the acts were done so long ago that the evidence must be ruled out. It needs the doctors and all citizens to cry out for public honesty, when a Western State is now represented in the United States Senate by a senator who is serving a term in jail! How can we expect Philadelphia boys to believe in decency when one of its wards has been repeatedly represented in the State Legislature by a man who was the backer, if not in part a proprietor, of a bawdy house?

It is time for physicians to wake up and in a body insist upon that public honesty and decency, which the business men, the lawyers, and the clergymen seem afraid to demand from the rulers of the cities in which we live. Business men are the main bribers of politicians and the greatest buyers of legislation. They are, therefore, the chief element in the political corruption of the day. They are worse traitors to the country than the politicians who accept the bribes and deliver the franchises and other legislative privileges; for they are often the "respectable citizens" whose hypocrisy is used to cover ill deeds.

A blunt and fearless political boss who boldly robs the public in the manner of a highwayman is less to be despised than the sneaking business man, who, through his legislative agents, secretly pays the boss to rob the people; while he himself wears a sanctimonious face and is "shocked" at the prevailing political corruption. The insincerity and dishonesty of a large contingent of the business world make one feel that the chief satisfaction in human intercourse is to be found in association with little children, whose straightforward honesty is proverbial.

Nothing impresses the unthinking world so much as success, and nowadays money making and money having seem to cover many forms of dishonesty. It has recently been delightful to see the faith of business men and financiers in successful politicians rewarded by great losses of money. So long as these politicians amassed wealth by robbing only the city and State, their compatriots in business respected, trusted, and even bowed down to them. This unreasoning mental attitude recently gave fine opportunity for the same political schemers to unload worthless securities on their financial acquaintances. Many men have now learned the needed lesson that a public thief will become a private thief, if he only have opportunity and a reasonable assurance of escape from punishment. A business man recently said that it was his opinion that a large proportion of men in business were honest only because it paid. So long as honesty is required, many men will be honest; so soon as business furnishes the same opportunity for unpunished fraud as does politics, men in all walks of life will emulate our political bosses in knavery, robbery, and blackmail.

The doctor, by being honest in his dealings with his patients, can do much to raise the public standard of truthfulness, and thus serve the State. It is a common belief that doctors are inclined to tell untruths, in order to save the sensibilities of their patients. This practice does unfortunately seem to be not uncommon among a certain kind of doctors; but it does not represent the real spirit of our profession. A patient who has once been deceived by a doctor's lies, is not apt to put much faith in his subsequent statements. Dr. Cabot, of Boston, wrote an important article on this subject a few years ago. His advocacy of truth and his belief that truthfulness is the best policy deserve high praise.

When one places the life of his wife, his child, or himself in the hands of a physician, one has a right to expect honesty and truthfulness in the man so honored. I have no patience with dishonest doctors who expect success and respect at the hands of their patients, and yet treat them with secret nostrums of unknown strength, deceive them with false words, and allow them to dictate the methods of treatment. If a doctor cannot induce his patient to do what is proper in treatment, he has no right to temporize and follow the patient's desires, rather than follow what he knows to be the only right line of treatment. It is much more honest to say to the unbelieving and contemptuous sick man, "If I have the responsibility, I must have the control. You must get some other doctor, if you will not obey me."

It is no wonder that many patients treat physicians with little consideration and respect. The unscientific methods, careless attention to details, and weak conduct of many doctors are enough to make the public fly to osteopaths, Christian scientists, and other quacks, who seem at least to have the virtue of believing in their own nonsense. A weak kneed, wobbly minded doctor cannot expect to arouse sentiments of confidence; he is necessarily doomed to a life of professional failure.

An honest physician need not be as blunt as a boor, but he must be forceful, truthful, confident, and self-respectful. It will not take long for the local public to recognize the worth of such a man as a citizen, and the young will grow up to respect and emulate him in civic value.

This is part of the doctor's duty to the State.

The doctor should teach the laity that mental hygiene or discipline is as essential to proper living and happiness as physical hygiene. The theologians for centuries taught us to train the spirit to save the soul, while the physicians laid too much stress perhaps on the physical side of human nature. It is now seen that the mutual relations of a sound mind and a sound body are of primary importance in the saving of the soul as well as in saving the body. Hygiene of the body gives a spirit of religious toleration and calm, and fits man for the next world, as well as for this. So, also, hygiene of the mind gives a healthy digestion and a good income-making body, and fits man for this world, as well as the next. Many of the mental and physical wrecks in our homes and hospitals, who may truly be said to be "possessed of a devil," would have been useful members of the body social, had they had proper mental culture from childhood. Such control must be obtained by psychic gymnastics instituted by parents during the early years of childhood. Nervous children are the get of nervous households. It should be as disgraceful to be called "nervous" as to be called "bandy-legged" or "cock-eyed." If parents would practise self-control, their children would emulate this virtue; just as well shaped athletic parents have children, who aspire to their parents' physical beauty and prowess.

It is the doctor's duty to teach the State's inhabitants this fact, and not encourage hysteria, neurasthenia, and general "cantankerousness" by foolish sympathy, unwise talk, or ignorant diagnoses of "railway spine." Many wrecked lives and useless citizens are made by unwise advice given by doctors, into whose hands persons with slight injuries first fall for treatment. Many damage suits could be avoided with justice to the injured and to the agents responsible for the injury, if all doctors realized the importance of mental control. Many railway spines and traumatic neuroses are caused by the doctor's unscientific and unreasoning sympathy.

The doctor's duty to the State includes instruction to his patients in mental hygiene, and the prevention of unnecessary litigation. It is easy to develop a neurasthenic crank out of a patient who has received an insignificant injury, and it is easy to make a hysterical valetudinarian out of a useful citizen, by magnifying his dangers and feeding his imagination with depressing possibilities. It is the doctor's public duty to see that such sad occurrences do not result from his maladroitness.

Instances could easily be given to prove this contention. Take as an example a railroad company that was, in my opinion, practically robbed of between $15,000 and $20,000, for an insignificant injury that ought not to have brought to the patient more than a few hundred dollars at the very most. I recollect well a firm that was forced to pay $5,000 or $6,000 for an injury to an employee, which was of comparatively little moment. The woman when brought into court after months of delay was a neurasthenic wreck, due, not to the injury, but to injudicious friends, lawyer, and perhaps doctors. A prompt settlement of the claim, which, in justice to all, should have been by a small amount of money, would have saved the girl's health. What can the worried and distressed patient do, if the doctor does not protect her from her own family's anxiety and cupidity, and the lawyers' greed? The doubtful professional character of lawyers' contingent fees in damage suits should be affirmed by good citizens. It requires an unusually honest man, be he lawyer or doctor, to resist the temptation to magnify the patient's sufferings when his own pay depends on the jury's verdict.

In connection with the same topic may be mentiond the wrong done to the public by what may be called "alarmist" practitioners. Some doctors make such a "mountain" out of a "mole-hill" of illness that they become known to their professional colleagues, and even to their patients and their patients' friends, as those who perpetually cry "wolf, wolf," when there is no wolf. This conduct is partly due to narrowness of professional experience, partly to temperament; but the laity often attributes it to a desire to scare the patient into a mental attitude which will allow frequent visits and large bills. With all deference to the specialties, I cannot help feeling that the limited outlook which special practice furnishes, contributes to this evil as much perhaps as real ignorance of ætiology, symptomatology, therapeusis, and prognosis.

A graduate who has become a specialist a few months after Commencement day may, with perfect truthfulness on his part, assert that a furuncle of the auricle, a follicular amygdalitis, a foreign body in the cornea, a bean in the nose, or a small crop of herpes over one of the ribs, is a serious condition demanding rest in bed, a trained nurse at $20 a week, and daily visits at $5 a visit. His assertion is, however, as untrue, in the majority of cases, as the statement of the ignoramus who calls a febrile attack, due to indigestion, a case of typhoid fever, and says that it was aborted in three days by his treatment.

Even specialists of eminence are not free from this injustice to the public, which keeps patients unnecessarily from business, depleting their pocketbooks, and adding to the anxiety of their households. It is in some cases a pardonable error, for to examine for years only eyes or ears or throats or skin must make a doctor's horizon as small as that of the old fashioned dentist, whose profession was much more that of a mechanic than a physician. Recent years have fortunately given the State specialists in dentistry and other departments of medicine, who know the collateral branches of the healing art. The general surgeon and physician, too, are now learning the necessity of at least some working knowledge of the specialist's science and art.

An important duty of the doctor is to support the present State supervision of medical practice. The various State laws governing medical licensure are far from perfect, but they result in much better protection of the citizen than did the commercial medical schools of ten or twenty years ago. Many of you remember the struggle to wrest from medical teachers the power to create medical practitioners with almost no real knowledge of medicine. The medical schools of that day were, in many instances, conducted merely as money makers for the professors. The chief output was a crop of half educated men with a moderate knowledge of the art of medicine, but almost none of medical science.

It is gratifying to remember that it was the medical profession itself which ended this system by obtaining laws to give State boards of medical examiners control of the entrance to medical practice. Now, the medical schools educate, but the States, through their respective examining boards, fix the standard of education and control the license to practice. It is the duty of the doctor as a citizen to strengthen the hands of these boards, because they give the public an opportunity to know which physicians have sufficient education to render them likely to be safe practitioners.

It is undoubtedly possible for a man to pass the examinations of a board, and yet be a dangerous practitioner; either because of his rascality or his lack of common sense. Still, this menace to the public safety is infinitely less than was the case when students entered medical college ignorant of the common school branches, attended two five months' courses of lectures, and were given the medical degree after a farcical examination, conducted by the teachers whose income depended upon the size of their classes. In those days a considerable number of students deliberately selected the medical schools known to have the easiest examinations.

The present system of State license is a hardship when a doctor removes from one State to another; and the demand for reciprocity in medical licensure is therefore reasonable. Even this defect in the method of protecting the public from medical ignorance, however, is of little consequence, when compared with the evils of the former system of commercial college control of medical practice.

Fellows of this academy were active in the campaign to destroy low grade medical schools, by the establishment of State examinations; and that work has been pretty satisfactorily accomplished. Professors who fought the enactment of laws to protect the public from their ignorant pupils, still probably evade the law when possible; or perchance endeavor to bring political pressure to bear on the examiners. I have known political pressure to be exerted to influence medical examiners to pass unqualified men; but, in the instances with which I am acquainted, the bravery and honesty of a few doctors frustrated the scheme.

These facts show why it is the doctor's duty to the State to support the medical examining boards, to work to have honest men appointed upon them, and not to be too censorious of their shortcomings. We, who have not served on these boards, know little of the worry, the work, and the weariness entailed by honest service in them. The man who unreasonably or unjustly decries the system and its exponents, is doing an economic wrong similar to that of those few honorable but shortsighted doctors who for years played into the hands of the profession's enemies by opposing the State control of medical licensure.

The manner in which State laws compelled low grade medical colleges to adopt entrance examinations, lengthen terms, and exact efficient final examinations has fully justified the prophecies of the advocates of State control.

It is difficult to understand the mental quality of an educated physician who believes that he is acting honestly toward his patients, when he accepts his therapeutic teaching from the advertisements of secret remedies and writes his prescriptions after consultation with the drummer of a drug firm. I formerly supposed that the sale of large quantities of these secret medicines was due to their use by ignorant physicians who had graduated from low grade medical schools. Careful observation has convinced me of the error of this view. Some years ago, I read in a cyclopædiac work on one of the specialties an elaborate article by one of my hospital colleagues, in which "A————" was suggested in the treatment of a certain disease. I saw recently a letter written by a professor in a great university medical school, in which he advised that a patient, whom I had referred to him, be given "P————." Not very long ago, I heard a metropolitan professor of surgery descant on the value of "H————;" and about a year since, one of my patients told me that she had been advised to take "M————," by a hospital physician of Philadelphia. These facts suffice to show that intelligent physicians, and even teachers, have been led into the illegitimate practice of treating patients with remedies of whose composition they are ignorant.

It is clearly improper for a doctor to prescribe a certain remedy for a patient when he does not know, and is not permitted to find out, the character and the amount of the powerful drugs it contains. It is also, in my opinion, detrimental to professional integrity for medical journals, conducted under professional auspices, to accept advertisements of pharmaceutical products of secret composition.

Both of these questions have been vigorously discussed in medical circles during recent years. As to the first proposition, there can be but one answer, which is that a doctor has no right to use a powerful therapeutic weapon, unless he knows its possibilities for good and evil. These possibilities he cannot know unless he is able to learn how much acetanilide, strychnine, arsenic, mercury, or other active ingredient it contains. The propriety of medical journals, published under medical influences, increasing the dangerous use of these secret remedies by accepting their advertisements cannot be successfully maintained. In a discussion among some officers of a medical journal, a distinguished professor of medicine once said: "Other journals take them, why shouldn't our journal?" The reply to this query is: "Some doctors accept commissions for steering patients to operating specialists, why not we also?" If the vice of prescribing medicines of unknown composition is to be rooted out, honest doctors must jointly repudiate any such illicit combination with commercial journalism, and individually refuse to prescribe remedies of whose composition they are kept in ignorance.

It is said that in Japan the importation of secret proprietary medicines containing a poison, from which accidents might result, is absolutely prohibited; and that the retailer must be informed as to the ingredients, proportions, and doses. (*American Medicine,* May 9, 1903, from *Canadian Journal of Medicine and Surgery*). Such a law would render valuable service to the public of America. Osler, in an address before the Canadian Medical Association, in 1902, spoke of these nostrums being "foisted on the profession by men who trade on the innocent credulity of the regular physician, quite as much as any quack preys on the gullible public." It must be a very ignorant or dishonest doctor, and not an innocently credulous one, who treats his patients with the secret nostrums brought to his notice by interested salesmen.

Such a travesty of medical science deserves the condemnation of every honest doctor. It is the duty of every honest consultant to express his adverse opinion when such course of treatment is suggested in the consultation room. It may be true that men of distinction use remedies of unknown composition, it may be true that medical journals, owned by doctors or by great medical schools and organizations, accept advertisements of these abominations; but such conduct only serves to show to what degradation a lax ethical spirit may bring even those whom we would like to respect.

The secret remedy evil is degrading the medical faculty at this hour very much as the low grade medical school debauched the profession two or three decades ago. The cause is the same —laziness and love of money. The cure is the same—an aroused professional sentiment. It was the leaven of honesty in the hearts of the doctors at large, which compelled avaricious professors and low grade medical schools to cease deluging the public with unsafe and ignorant medical practitioners. It took energy, courage, and unselfishness to carry on the work. Honest men were compelled to antagonize friends, to fight against their almæ matres, to relinquish opportunity of professorial position, and to be misunderstood by other honest men. What matter! when the goal was to preserve the State and uphold the honor of the medical guild.

You and I have now a similar, but mightier, task. Then we fought colleges with self-satisfied faculties and thousands of dollars invested in teaching plants. Now, we have to battle against professional dishonesty, therapeutic credulity, and millions of dollars invested in the manufacture of secret nostrums by quick-witted business men.

The task is made more difficult by the fact that a very large number of these vaunted remedies and foods owe their popularity to the alcohol they contain. Dr. Charles Harrington made, a few years ago, a chemical analysis of many of these products. His paper (*Boston Medical and Surgical Journal,* March 12, 1903, quoted in *American Medicine,* March 21, 1903, page 469) showed that one of these foods contained in volume 23.03 per cent. of alcohol; another 10.60 per cent., another

14.81 per cent., another 15.81 per cent., another 15.58 per cent., another 18.95 per cent., another 19.72 per cent. He calculated the nutriment contained in the maximum daily amount which was recommended of these so called foods to be only 1.25 ounces, but the contained amount of alcohol was equivalent to six ounces of whiskey.

A much advertised remedy was found by the Massachusetts State Board of Health to contain 23.46 per cent. by weight of alcohol, another 15.33 per cent., another 16.77 per cent., another 5.87 per cent. The New York *Evening Post* (quoted by *American Medicine,* March 21, 1903) mentions a "tonic" which contained 41.6 per cent. of alcohol, and refers to other remedies, called by names suggestive of vegetable composition, containing 26.2 per cent., 18.8 per cent., and 21 per cent. of alcohol.

It is not difficult to understand the ease with which makers of these remedies obtain certificates of their remedial value from preachers, statesmen, and women. One would expect medical men to be too wary to be caught in the trap. Their endorsement by physicians always suggests to me ludicrous credulity, therapeutic ignorance, or downright bribery.

Many of the pain-curing secret remedies, used by the laity and prescribed by dishonest doctors, contain acetanilide, phenacetin, and similar agents, in unknown quantity. The danger to life assumed by the administration of these powerful drugs, in indefinite amounts, is so great that a thinking man must stand aghast at the temerity of physicians, who prescribe mixtures of unknown composition for the relief of headache, neuralgia, and other ills. Acetanilide and its congeners are known to depress the heart and may have a hæmolytic or disorganizing effect upon the blood itself (*University of Pennsylvania Medical Bulletin,* 1903, xv, page 462, quoted by *Journal of the American Medical Association,* March 21, 1903, page 786). The *Journal of the American Medical Association* (January 16, 1904, page 177) expresses the belief that a recent increase in the number of sudden deaths from heart disease in New York was due to the unusual consumption of acetanilid.

It is not surprising that addiction to the use of acetanilide, alcohol, and cocaine is frequent among persons of unsuspected impropriety in this regard. The unnecessary taking of medicine for all kinds of real and imaginary minor ills is common. The storekeeper and the druggist, whose function is to sell goods, naturally encourage the consumption of proprietary medicines and vaunt their remedial qualities. The doctor should protect the public from such insidious intoxicants and poisons by refusing to condone their use or prescribe them.

The remedy for the evil lies in the development of a feeling of individual responsibility in the medical faculty. Let every doctor refuse to accept samples of secret medicines, refuse to waste time talking therapeutics with smooth tongued salesmen, refuse to debauch medical science by believing the mendacious advertisements called by the trade "literature," and treat his patients honestly by giving them what they pay for, the best result of his own knowledge and experience.

I think with pleasure of the discomfiture of a drummer for a much advertised lithia water, when I told him in my office that I did not expect to prescribe the said water, because Professor M——, of the University of ——, had analyzed a number of the lithia waters on the market and had told me that he could find no lithia in any of them. The stereotyped reply, to all agents of secret nostrums, that I do not prescribe medicines of whose composition I am kept in ignorance, has saved me many hours for more advantageous professional work than conversation with men whom I despise.

It is possible that efficient aid may be obtained in our crusade against this evil, through Congressional legislation. The law which gives the Public Health Service a limited supervision over the manufacture of, and interstate traffic in, viruses, serums, antitoxines and the like, and the proposed Heyburn Pure Food and Drug Bill are steps in the right direction.

In all these questions of such moment to the State, the essential element is the honesty of the individual members of society. It is said that "corporations have no souls." The proverb is justified by the fact that men who constitute corporations put their individual consciences and ideals of right aside, as soon as their actions are assignable to a body of men instead of to its individual members. As incorporation limits individual financial responsibility, so it acts as a narcotic to individual rectitude. This is seen in larger fields of action; as in governments, which will steal harbors from heathen Chinese, rob African farmers of their country and freedom, and under the color of diplomacy emulate even the father of lies.

Though corporations and governments have no souls they, fortunately for the preservation of civilization and religion, are sure to suffer the penalty of their misdeeds. In this, at least, they are no more apt to escape punishment than men. Economic laws avenge economic follies and sins with much the same resistless energy as is seen in the operations of the natural law and the moral law.

The doctor sees the sins of youth bear fruit in old age, and the sins of the father visited upon the children down to the third and fourth generation. He, as others, sees in history the same process exhibited in the remote effects of corporate and governmental vice. He knows how murder committed under military sanction is only a little less debauching than murder committed under the sanction of a lynching bee; he knows how political robbery and ballot frauds lead to a deterioration of the public morality and health; and he realizes from observation that nothing is so relentless as the orderly course of the laws of Nature and of Nature's God.

To whom, then, shall the State look for preservation of its health, to whom shall the State call for help in time of trouble, in whom shall the State place its hope for deliverance from political corruption? The honest citizen; and the honest doctor is his best representative.

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Original Communications.

THE TREATMENT OF EMPYEMA OF THE THORAX.

By HELIODOR SCHILLER, M. D.,

CHICAGO.

The leading subject for discussion at the Eighth Congress of General Medicine was the treatment of empyema of the chest: Whether the more conservative methods, of which the main representative is Bülau's permanent aspirating drainage, or the more radical operation, the resection of a rib, should be generally used. The mere fact that a physician and a surgeon were asked to give the introductory statements proves that the treatment of this disease belongs to the surgeon as well as to the physician. But the congress failed to solve the problem. They could agree on certain points only, but all in all, there still remained two parties, one pleading for the radical operation, the other for Bülau's siphon drainage or similar methods. The methods of Bouchout or Bälz, who advocate frequent punctures and the washing out of the pleural cavity, were entirely rejected, so also was Fürbringer's proposal to wait three weeks with the operation in acute cases, especially if there was no fever, relying upon the observation of spontaneous absorption of a few correctly diagnosticated empyemas. It was evident to all that the method adopted had to apply to the following conditions:

1. To remove the pus.
2. To prevent its regathering.
3. To restore the respiratory apparatus in its anatomical and physiological relations as completely as possible. According to the opinion of one party, represented mostly by the physicians, this could best be accomplished by Bülau's drainage, while the other party, consisting of nearly all surgeons and a few physicians, held that the only suitable treatment to cover these conditions, was the resection of the rib, or perhaps in a few cases the simple incision. The pros and cons could be easily found. Thoracic empyema is not the same as an abscess in the soft tissues, the walls of which, after the pus is emptied, fall together, filling up the cavity by granulations and thus accomplishing healing. The walls of the empyema are rigid, the pleura does not form genuine granulations, and the cavity can only be filled through the expansion of the lung.

The sinking in of the wall of the chest can only be expected in childhood as long as it is movable. Even then this progress of repair is only an inferior factor.

The followers of Bülau's method praise its superiority: 1. It avoids pneumothorax. 2. It is the simplest operation, scarcely more than a puncture. 3. It makes only a small wound, and leaves no shock from the operation. 4. It avoids narcosis. The avoidance of pneumothorax is the most important advantage admitted, but if that were really the most decided advantage of this method, then the entire method might as well be abandoned, as the fear of the pneumothorax is not well founded at all. The pneumothorax that occurs through the resection of a rib or incision concerns a lung that is compressed by the exudate and has not served in respiration for some time, or in cases of limited empyema, a part of the chest that by means of adhesions and pseudomembranes is separated from the lung and can therefore only interfere in a slight degree with the respiration. Thus the danger of acute pneumothorax does not exist.

Before proceeding, I will add a few words in explanation of the above statements in regard to the reexpansion of the lungs, when the cavity of the chest communicates with external air. Physiology teaches that atmospheric pressure keeps the lungs expanded and presses them toward the walls of the chest.

The tension of the atmospheric pressure extends the lung over its natural volume, thus producing negative pressure in the chest. If the pleural cavity is opened at one place, the lung collapses quickly, and with this a complete change occurs in the respiratory action. The collapsed lung becomes smaller during the inspiration and dilated during expiration, and if the expirations are forced, the lung is pressed through the opening in the wall of the chest, just like a balloon. If the pleural cavity is hermetically closed up again, then the pneumothorax disappears in a short time, and a complete restoration of the lung occurs, the air becomes absorbed. The atmospheric pressure and the elasticity of the lung bring the lung back to its proper volume. The conditions in a case of empyema differ from those of the physiological status. The atmospheric pressure is unable to dilate the atelectatic lung, which is already surrounded by adhesions. Other forces must do the work, the nature of which has been discussed in many different ways. For instance, Roser supposed that shrinking of the connective tissues which had been produced by the inflammatory process would manage the dilatation by the pulling of the visceral pleura toward a fixed point in the wall of the chest. But this supposition was entirely given up when it was found that the pleura never built genuine granulations. In my opinion, this supposition has some value and should not be overlooked altogether. Every one who has operated for empyemas has certainly seen strands of fibrin, sometimes organized, between the visceral and costal pleura, which certainly could act as Roser supposed they would. Weissberger, as a result of experiments, came to the conclusion that only positive expiratory fluctuations, and a preponderance of them over the negative ones during inspiration, could produce the dilatation. This is a well founded fact, but only in cases of normal pleura with a very large communicating opening.

Aufrecht was the first to pay attention to the relation between the size of the fistula in the wall of the chest and the lumen of the main bronchus of the affected lung. He says, replying upon his experiments, that the lung becomes expanded if the diameter of the fistula or opening in the chest is smaller than that of the bronchus, and this during inspiration.

Reineboth draws similar conclusions from his own experiments. He thinks that the dressing of the chest acts as a valve, which is sucked tight to the wall during the inspiration and thus closes the wound in the wall of the chest, and still causes no obstacle to the air escaping during expiration.

In both phases of the respiration there is a dilution of the air in the pleural cavity by the dressing acting as a valve, which produces the expansion of the lung. Martens, who succeeded in producing artificial empyema of the chest in animals, came to the same conclusion. My own experiments, which I made upon the advice of Martens, confirm these results, but they also show me that these authors put too much importance in the above mentioned factors; while, in their opinion, the adhesions and fibrinous agglutination have not the importance which I think they should have. This so called agglutination holds the once dilated lung in place and does not allow it to collapse, which otherwise it would do every time the dressing was changed. I have found in all my experiments that after the pus has been removed, the pleura forms delicate adhesions if the inflammatory process in the pleura is stopped. As long as the pleura produces pus, no agglutination can take place, and not until the suppuration subsides can a dilatation be observed. In one case, I produced an intense suppuration by the use of turpentine, and dilatation occurred, although the animal was in the same conditon as the others were.

Post mortem examinations have also shown that I am right, as there are always residues found after empyemas. I do not believe that a total restitution of the normal conditons takes place after the healing of an empyema. The respiratory mobility of the lung, on which the internists lay much stress, does not prove anything. By extension of adhesions, the lung can become movable or adhesions to the diaphragm can draw down the lung, and so give the appearance of a movable lung; besides, it is an undisputed fact that many adhesions do disappear by absorption, but their residues will always be found. These experimental researches were made use of in practice by applying a hermetical dressing which acted as a valve.

The result of such a dressing is that after a few days, except in inveterate cases, the lung becomes dilated in spite of the largest communication with the air. The numerous endeavors to avoid the pneumothorax, from the valve shaped drainage tube to Bülau's method, show how much it was feared, but the above mentioned results of experimental studies show it to be quite harmless.

Those who have used Bülau's method a few times have discovered very quickly that the first advantage, the avoidance of the pneumothorax, does not really exist. After a few days the leaking of the drainage tube in the fistula, or the slipping of the drainage tube out of the fluid into which the end of the tube dips, or the necessary cleaning of the drainage tube, all these things produce an unavoidable communication of the pleural cavity with the external atmospheric air.

Bülau's method has also its disadvantages. 1. The time for complete healing is nearly twice as long as in performing a radical operation. 2. When the patients are restless or unreasoning children, the method does not act at all. 3. The drainage tube is small, and obstruction with all its bad consequences is liable to occur. 4. The more complicated after treatment. Experiments show that by using the aspiratory drainage, we are only able to empty two thirds of a fluid in the pleural cavity. It is natural that the drainage should stop as soon as the level of the fluid lies deeper than the opening in the drainage tube, nor can the operator always succeed in placing the tube at the deepest point. This explains why even the masters of this method have cases, about 12 per cent., which are unsuccessfully treated by Bülau's method and must be radically operated on, in order to be cured.

Bülau's drainage can never become a method for general use; while in certain cases, it is best, still it has many disadvantages. From my own experience, I will quote certain indications for its use. 1. Empyemas on both sides.. 2. In cases of acute empyema, which Ziemssen called " empyema acutissimum " a rare disease, metapneumonic, or metastatic, or of idiopathic origin, which is not often mentioned in literature, and which produces a disease of severe form with terrible dyspnœa, and a condition in which even the most loyal follower of the radical operation would fear the effects of the shock of the operation and the narcosis. 3. In chronic empyemas discovered very late, and which had already produced severe cachexia. Besides, it is not always easy to find a sacculated empyema.

In the before mentioned cases, the incision in the intercostal space can compete with Bülau's method; both are easily performed, both remove the danger, bring relief and are therefore preferable, even if they have only a temporary importance. 4. In cases where there is a strict indication to operate, but where there are no conveniences for operating, for instance, in the country. If it were possible to perform a resection of the rib painless by the use of local anæsthesia, this would always be preferable, but until we can make the necessary toilet of the pleural cavity painlessly, we cannot take this method into consideration. Even the improvements on Bülau's method that have been made in the last few years cannot enlarge the above mentioned indications. These improvements are intended to prevent the obstruction of the drainage tube, by the use of a T shaped glass tube, which would allow the rinsing of the tubes. Storch uses the so called aspirator of Bunsen, an easily managed apparatus, that consists of two bottles, one placed higher than the other, and connected by a tube; the higher one also connects with the chest drainage tube and is filled with fluid. The aspiration can be regulated by the flow of the fluid from the higher to the lower bottle. In order to meet the objection that the drain is not hermetically closed in the fistula, Perthes constructed an apparatus, a combination of Storch's aspirator, with a method previously used and advised by Thiersch, which produced an absolutely hermetical joint between drain and chest wall. In place of the Bunsen aspirator, Perthes uses the more active aspiration of the hydrant, with which he can produce a very high negative pressure (120 mm. Hg.). This method means a decided improvement, as it certainly avoids the pneumothorax and the obstruction of the drainage. Perthes's method has still another advantage. After injecting a strong solution of strychnine into the pleural cavity of animals and immediately emptying it by resection of a rib, he could show symptoms of a severe poisoning, but on using his method for emptying the fluid from the pleural cavity, there would be not any, or very slight, symptoms of poisoning. The negative pressure produced by the active aspiration influences the circulation of the blood and lymph and diminishes absorption.

This method would be in accord with the modern theories, assuming that it is rather absorption of toxic substances from the pus which causes cachexia, than loss of albumin. Perthes and others report recoveries from chronic empyemas by the use of his method, but to offset these advantages are the following disadvantages: 1. The strong active aspiration will sometimes produce an insuppressible cough. I had to discontinue this method for that reason, in a case where I had used it for thirty-six hours. 2. The patient must remain in bed the entire time. 3. The entire method and apparatus is complicated.

The simple incision in the intercostal space has still many followers.

The easy way to perform that operation holds them to it. In acute cases where there are wide intercostal spaces, the incision is the most satisfactory method for the country doctor with his limited resources. The daily experience of almost every surgeon shows that the main condition, good drainage, can best be obtained by the resection of a rib. The latter method is the only method which permits the performance of the important toilet of the pleura, the removal of large clods of pus and fibrin, the dissection of organized fibrin threads, which latter, if not removed, would lead to adhesions of the lung in not corresponding places, and which would hinder the expansion of the lung. The objection that the fibrin will become liquefied and that therefore it is not necessary to remove it, is not correct, for the liquefaction occurs late, and in the meantime these clods of pus and fibrin act as foreign bodies, and are a source of suppuration, and therefore, as above explained, are an impediment to the expansion of the lung. The resection of a rib is, and should be, the normal method in cases of thoracic empyema, and should be replaced by Bülau's drainage or the simple incison in the before mentioned cases only.

The resection of a rib is easily performed, but it requires narcosis. The time to operate is immediately after the diagnosis of empyema is made. The place for the incision is the ninth rib between the scapular and posterior axilliary lines. Koenig, fearing that the diaphragm might obstruct an incision lower down, advised an incision over the fifth rib, but this incision is unfavorable, the more so as this danger is not proved at all. In very chronic cases the diaphragm has ascended, or, in more acute cases, the diaphragm has, as Schede says, "no reason to ascend," as the lung is rapidly expanded and thus diminishes the cavity, not to mention that after the incision or resection the atmospheric pressure acts in a like degree on the lower, as well as the upper surface of the diaphragm. Küster's double incison should only be used in sacculated empyema where the first incision has not reached the suitable or the deepest point, otherwise it is not necessary. There is absolutely no necessity of removing the pus slowly and thus prolonging the operation, as has been advised. The advice is founded on accidents which followed rapid evacuation of serous exudates, as œdema pulmonis, hæmorrhagic expectoration, and collapse. The fact that I have never observed, after rapid evacuation of pus, serous expectoration, shows that the conditions in a case of empyema are different from those in a case of serous exudate. Hyperæmia of the lung, with its consequence, does not occur there. I would advise the emptying of the pus very cautiously, only in cases of a very large empyema where the heart is displaced, in order not to be surprised by a collapse induced by the rapid transposition of the heart.

After the resection has been done, there follows the toilet of the pleura, be it only in order not to overlook a multilocular empyema. Then two large drainage tubes, short inside and out, are securely fastened. No rinsing of the cavity, no packing of iodoform gauze, should be used. All that is necessary is to secure a good drainage. Iodoform gauze is of no use, except possibly in cases of putrescence or in tuberculous empyema. There are no pockets or little cavities to be kept open, as in abscesses in other localities where it is so useful. The drainage tubes are covered with a great deal of absorbent gauze and cotton, over this is placed a large piece of oiled silk or protective in order to procure a hermetical dressing. I could never make up my mind to use the oiled silk directly over the tubes, as Schede advises, and I have never found a disadvantage in this alteration, nor do I advise leaving the first dressing on as long as possible. After two days the lung once expanded will almost keep up its size in consequence of the agglutination, so that a change of dressing need not be feared; on the other hand, the dressing saturated with pus is very annoying to the patient. Narcotics, to prevent coughing, are used only when the cough is extremely annoying, as the cough with its strong expirations and inspirations helps to expand the lung. For this reason the patient is ordered, very soon after the operation, to breathe very deeply, in connection with which there can be combined inhalations of turpentine. Nourishing food with a restricted quantity of fluid is certainly an important part of the treatment. By this treatment the lung expands in a shorter or longer time, the suppuration subsides, the inflammatory process of the pleura disappears, and through it much has been done to prevent pseudomembranes and often deformities of the thorax. As soon as possible the patient is allowed to get up and go into the open air. The after treatment is very simple. The drainage tubes are gradually diminished in size, but are allowed to remain as long as there is any secretion and until vesicular breathing is observed over the affected part of the lung. There will always be a few cases which cannot be healed by this treatment, the causes of which are: 1. Incomplete expansion of the lung by early and high adhesions of the lung to the parietal pleura. 2. Thick pseudomembranes around the lung or obliteration of the alveoli and fibrous retraction of the lung, as it occurs in all chronic cases. 3. Copious suppuration of the pleura. 4. Tuberculosis, actinomycosis. 5. Diseases of the lungs. For these cases, as well as for the chronic empyemas with fixed rigid walls and with subsequent deformities of the skeleton, the methods of Estlander and Schede must be used, and especially the modifications of the latter's method by Beck and Sudek, methods that are so well elaborated and tested, that they do not need further discussion. I only wish to add that the two before mentioned modifications of Schede's thoracoplastic, advised by Sudek and Beck, mean important improvements. Beck's method is particularly advisable, as it makes it possible to vary the extent of the thoracoplastic and to do only what is necessary, an advantage which, in this dangerous operation, cannot be too highly appreciated. In one case where it was clear from the first that the thoracoplastic could not be done by one operation, on account of the extent and the poor condition of the patient, I followed Sudek's method with great success.

He makes two parallel incisions, for instance, one along the ninth and the other along the sixth rib, removing through these incisions these two as well as the seventh and eighth ribs, thus procuring a movable flap. This flap will not interfere with the next operation, while, according to Schede's method in the second operation, it is always necessary to detach the flap which was secured in the first operation, not to mention the fact that this flap does not become smoothly attached to the underlying lung and only forms a roof over the cavity.

The decortication, which Delorme advises, performed by itself, can never be successful. In these cases the pseudomembranes are not the only hindrances for the expansion. It is rather the obliteration of the alveoli and the fibrous retraction of the lung; and therefore the decortication can assist, but never by itself accomplish, the work. In cases where pseudomembranes are disposed in layers like rings in a tree, and where it is easy to decorticate them, it can be done in connection with thoracoplastic, but it would be unwise to prolong so dangerous an operation by still another operation, especially as the benefit to be derived is not in proportion to the danger. After the thoracoplastic, it is the pull of the muscles adherent to the lung that produces the expansion. This explains why the large defect, after thoracoplastic, diminishes after the lapse of a few years, an improvement which can be preceded only by the expansion of the lung.

Tuberculous empyemas are entitled to a separate discussion. From the pathological standpoint we have to divide as follows:

1. The miliary tuberculosis of the pleura.
2. Direct continuation of the process from the lung to the pleura.
3. Perforation of a tuberculous cavity into the pleural cavity. Empyema does not necessarily follow these forms; very often they produce only serous exudation, which, especially in the two first mentioned forms often shows a hæmorrhagic character.

In forms 1 and 2, and sometimes in form 3, the pus is sterile; tubercle bacilli are not often found. If mixed infection occurs, as happens after a perforation of a cavity, then there are found streptococci, staphylococci, leptothrix, and proteus. The surgical treatment should be founded on the bacteriological examination. If the pus is found sterile or contains only tubercle bacilli, then the surgeon must avoid mixed infection; and therefore he should use a simple puncture done with all aseptic precautions and followed by an injection of iodoform—formol-glycerin. Judging from the experience, that sometimes the tuberculous process is greatly improved after the formation of a serous pleuritic exudate or a pneumothorax, the puncture could be combined with Murphy's method of the injection of nitrogen. But if the examination shows infection with pus bacteria, then the case should be treated like an ordinary empyema, providing the tuberculous process in the lung is not too far advanced. I cannot advise the use of Bülau's method in cases of tuberculous empyema, especially not when the pus is sterile, for when using Bülau's method mixed infection is unavoidable.

Empyema following typhoid fever or diphtheria is seldom produced by the specific bacilli of these diseases, but mostly by streptococci. In one case of empyema following diphtheria, and in two following typhoid fever, I could only find streptococci.

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THE FEVER OF THE PUERPERIUM (PUERPERAL INFECTION);

A CHRONOLOGICAL REVIEW OF THE DOCTRINES OF ITS ÆTIOLOGY AND OF THE METHODS OF TREATMENT FROM EARLY TIMES TO THE PRESENT.

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(*Continued from page 1138.*)

EPIDEMICS *(Continued)*.

In the spring of 1750 Pouteau studied an epidemic at the Hôtel Dieu, Lyons, and made careful autopsies, publishing his findings in considerable detail (24). In 1760, about eleven years after the general establishment of lying-in hospitals in England, the affection appeared in epidemic form in London. In connection with this epidemic Charles White, a surgeon of Manchester, wrote as follows in his *Practical Observations on Child-bed Fever*, London, 1761:

"A gentleman whose veracity I can depend on, informs me that he attended a small private lying-in hospital in London in the latter end of May, June, and beginning of July; during which time the puerperal fever was very fatal there. That, to the best of his recollection, they lost twenty patients in the month of June. They sometimes buried two women in one coffin, to conceal their bad success."

In 1767, about ten years after it was first opened for the reception of patients, the first epidemic occurred at the Lying-In Hospital, Dublin. A detailed description of this and of subsequent outbreaks and the measures taken to suppress them is to be found in *Medical Commentaries,* Edinburgh, 1790, Vol. V, page 299. Dr. Joseph Clarke, the author of the article, says:

"From the first of December to the end of May, of 360 women delivered, 16 died. . . . Seven years afterward this fever reappeared. Of 280 women delivered during the months of March, April, and May, 1774, 13 died. From the year 1774 until 1787 the fever was unknown as an epidemic in Dublin. From March 17 to April 17, 1787, 128 were delivered, 11 had puerperal fever, and 7 died. In November, 1788, the same fever appeared for the fourth time since the establishment of the hospital. During November, December, and January, 365 women were confined, 17 contracted the fever, and 14 died."

It is notable that the first of these epidemics, as well as those which occurred subsequently, were controlled by measures which might well be adopted at the present day. Being convinced of the contagious nature of the affection, Clarke isolated the patients to such an extent as the facilities of the hospital permitted, subjected the bed linen and mattresses to a thorough washing, and caused the walls and floors of the wards, as well as the beds, to be painted. The windows of the wards were then permitted to remain open for two weeks.

In the year 1770 epidemics occurred in many of the London hospitals. At Westminster, between November, 1769, and May, 1770, 63 women were delivered; of these, 19 became infected and 14 died. At the British Lying-In Hospital 890 women were delivered and 35 died. Fleetwood Churchill says, in this connection, "Dr. William Hunter was in the habit of informing his pupils that of 32 patients who were attacked with the disease during two months only one recovered," and quotes Dr. Hunter as saying, "We tried various methods. One woman we took from the beginning and bled her, and she died. In another, we gave cooling medicines, and she died. In a third, we gave *confect. aromat.* and other cordials and stimuli, and she also died."

In 1773 an epidemic occurred at the Royal Infirmary, Edinburgh. "Almost every women, as soon as she was delivered, or perhaps about twenty-four hours after, was seized with it, and all of them died though every method was used to cure the disease. This disease did not exist in the town" (25).

In 1779 the *Société de Médecine de Paris* appointed a commission to study an epidemic which had broken out at Creteil among lying-in women during a thaw at the end of a very rigorous winter. After extended investigation this commission reported that the malady was "a malignant remittent fever, due to the unfavorable conditions of the atmosphere" (26). This report was in accordance with the theory which then, and for many years afterward, prevailed in continental Europe that puerperal fever was largely due to miasmatic or other atmospheric influences.

CONTAGIOUSNESS.

The contagiousness of puerperal fever was suspected, indeed, proclaimed, as far back as 1781, when Leake published the results of his investigations of the epidemics which occurred in London in 1769, 1770, and 1771. In 1793 John Clarke published much evidence to support the view of contagiousness, and Denman, in 1802, stated that "it was long suspected, and now it is fully proved that it may be, and often has been, conveyed by midwives and nurses from one patient to another." That eminent American physician, David Hosack, writing in 1815, expressed himself as follows:

"Puerperal fever ought to be divided into the idiopathic and symptomatic kinds: in the former we may observe the characteristics of an acute and pure inflammatory disorder, while in the latter are to be seen those of a typhoid affection. This typhoid state is to be considered as depending upon a peculiar condition of the system, and previous exposure to the sources of typhus. In this case, puerperal fever is not unfrequently highly contagious. The poison of typhus attacking the lying-in woman, an inflammation of the womb has been its accompaniment. A similar combination I have met with of scarlatina and hysteritis, in which the same typhoid state of body was induced."

The teachings of Oliver Wendell Holmes and of Ignaz Philipp Semmelweis, on the subject of puerperal contagion, are so well known that extended notice is unnecessary here. On February 13, 1843, Holmes published a masterly essay (27), in which he quoted many specific instances of the disease being directly communicated from one patient to another through the medium of the attendants. In 1847 Semmelweis, who, from 1846 to 1849, acted as clinical assistant at the Vienna Maternity, stated in the most positive terms that contagion at the maternity was directly traceable to previous contact of the physicians with cadavers; that "fever ensued in the practice of those who, after *post-mortem* examination, washed their hands in the usual manner, whereas no fever or but few cases of disease followed when the examiner had previously washed his hands in a solution of chloride of lime." In 1861 he published a pamphlet (28), in which he held that the fever was due not only to contagion from the cadaver, but also to the absorption of putrid animal substances of any kind.

"In the face of insult, ridicule, and abuse, Semmelweis maintained this position for years, almost unaided, with fanatical persistency. . . . Though he died with no other reward than the scorn of his contemporaries, it is impossible at the present day to so much as contemplate the abuses he attacked without a shudder" (Lusk).

In 1850 Sir James Y. Simpson published a paper in which he ably compared the causative factors in puerperal and so called surgical fever, his conclusions being directly in line with those of Holmes and Semmelweis (29). As a precautionary measure, before attending a lying-in patient, it had been his custom for several years to wash his hands in a solution of cyanide of potassium. Tarnier, in 1857, and Trousseau, in 1858, corroborated Simpson's views. Although credit is usually given to Simpson for having drawn attention to the analogy between puerperal and surgical fever, Eisenmann had already done so in 1837 (30).

In view of the mass of evidence brought forward in favor of the theory of the contagiousness of puerperal fever, it now appears almost incredible that a majority of the profession was not convinced of the soundness of the doctrine. In this country Dr. Hugh L. Hodge, professor of obstetrics at the University of Pennsylvania (31), and Dr. Charles D. Meigs, who held the same position at Jefferson Medical College, Philadelphia (32), were its most formidable opponents, while the elder Dewees, in his *Diseases of Females*, first published in 1824, a celebrated textbook in its day, said, "In this country, under no circumstances that puerperal fever has appeared hitherto does it afford the slightest ground for the belief that it is contagious." This statement, practically unmodified, appeared in the last edition of the work, published in 1845.

INFLUENCE OF PRIMIPARITY.

There is no doubt that puerperal infection is encountered more frequently among primiparæ than among multiparæ, although no satisfactory explanation can be given for the fact. It was recognized by most of the early writers on medicine, and by them was attributed to prolonged and difficult labor. In recent times Hervieux has reported 190 deaths, 119 being of primiparæ and 71 of multiparæ. Lassere's statistics show that among 1025 primiparæ 89 became infected and 66 died, while among 1314 multiparæ only 43 contracted the disease and but 21 died (33). Botrel affirmed that nine-elevenths of the cases observed by him had been in primiparæ. Charrier reported 313 deaths, 155 being of primiparæ, and Tarnier 71 deaths, 51 primiparæ.

FREQUENCY AND MORTALITY.

Statistics are notoriously dull reading, but it is necessary to briefly quote those in connection with the subject in hand in order to make comparisons between the death rate under old and new methods of treatment. Necessarily, also, such statistics, except when of hospital practice, are unreliable to a degree, as the returns to health officers from private practice are apt to be shining examples of intentional inaccuracy.

At the Lying-In Hospital, Vienna, from 1784 to 1813, the number of deaths from puerperal diseases averaged 2.1 per 100 cases; from 1814 to 1822, 4.9; from 1823 to 1839, 10.4; and from 1840 to 1846, 16.9. At the Maternité, Paris, from 1801 to 1818, the mortality from the same causes averaged 6.94 per 100 cases; from 1819 to 1828, 7.39; from 1829 to 1860, 11.62; and from 1861 to 1864, 18.43. In the obstetrical division of the General Hospital, Vienna, which was divided into two sections, one for physicians and the other for midwives, 37,833 women were delivered during the period between 1841 and 1846, both inclusive, 20,042 in the first division, and 17,791 in the second. In the first the deaths from puerperal infection numbered 1,989, or 9.92 per cent., while in the second there were but 691 deaths, or 3.38 per cent. The year of the greatest mortality in both divisions was that of 1842—physicians', 518, or 15.8 per cent.; midwives', 202, or 7.5 per cent. It will be remembered that it was this difference in the death rate during the years mentioned that prompted Semmelweis, in 1847, to express his views regarding the contagiousness of puerperal fever.

From the official records of the city of Paris during the ten years ending December 31, 1900, I find that the number of deaths credited to the disease was 1,420, or 5.974 per 10,000 of population. At the Rotunda Hospital, Dublin, from 1870 to 1876, the deaths from sepsis numbered 1 in every 90.9 cases, while from 1890 to 1896 there was but 1 in 908.5 cases. Mermann has reported a series of 1,200 cases of labor at the Mannheim Lying-In Hospital without a single instance of fatal infection (Webster). The report to the German government in 1877 of the special commission appointed to investigate the death rate from puerperal infection shows that in the city of Berlin, from 1861 to 1875, there were 431,600 lying-in patients, of whom 2,840 died, a percentage of .658, or 1 to every 151.97 patients delivered. In all Prussia, from 1859 to 1875, there were 14,735,799 women delivered, of whom 116,615 died, a percentage of .792, or 1 in every 126.33.

No statistics of deaths from puerperal sepsis should be considered complete without the inclusion of those presented by Garrigues (34), in which is shown the remarkable lessening of mortality after the introduction of aseptic methods. To this author, as is well known, is due the credit for having been the first to employ bichloride of mercury in obstetrical practice in America. At the New York

Maternity Hospital, from January, 1875, to October 1, 1883, upon which date the era of aseptic midwifery at the hospital began, there were 3,504 deliveries, and 146 deaths, a percentage of 4.17. During the first nine months of 1883 there were 447 deliveries, with 30 deaths, a percentage of 6.71. "During the last month (September) the total mortality reached even 10 out of 50, or 20 per cent., and that from sepsis 15.69 per cent. During the first three months after the change 102 women were delivered without a single death." Under the new plan of treatment, from 1884 to 1893, inclusive, 3,789 women were delivered, with a mortality of 7 from sepsis, a percentage of .18.

Municipal vital statistics in this country, as far as puerperal infection is concerned, are absolutely worthless, as may be inferred from the following reports. In reply to my request, the health officers of a number of the larger cities furnished me with an abstract of their records during the year ending September 1, 1903. In Greater New York the number of deaths recorded under the head of puerperal septicæmia was 258, "including those from puerperal fever, puerperal metritis, puerperal endometritis, puerperal infection, puerperal peritonitis, puerperal phlebitis, puerperal septicæmia, puerperal pyæmia, and puerperal sapræmia, but not those from abortion, either natural or criminal, or from miscarriage."

In Philadephia the record reads: "Deaths from abortion, 7; childbirth, 21; puerperal fever, 2; inflammation of the uterus, 7;" a total of 38. In Boston deaths from "puerperal fever, including septic metritis, septic peritonitis, etc.," 30; St. Louis, 23; San Francisco, 22. "During this period," the statistician informs me, "there were no deaths recorded from septic metritis or endometritis; none from septicæmia following abortion, and none from septic peritonitis following abortion or labor at term. Septicæmia following abortion is classified as such, but following labor at term is usually included under the heading of 'puerperal septicæmia.'" New Orleans, under the headings of "accidents of pregnancy; puerperal hæmorrhage; puerperal septicæmia; puerperal albuminuria and convulsions; and other accidents of labor," reported 35 deaths among the white population and 31 among the colored. Chicago reported "105 deaths from puerperal infection during the year 1903." Buffalo reported 17 deaths from puerperal septicæmia and 4 from eclampsia. The report from Cleveland was by far the most carefully tabulated of any received, and it is evident that more care is given to the collection of vital statistics in that city than in any other in this country. Under "puerperal septicæmia" 29 deaths were reported during 1903, and from other puerperal conditions, 20.

SEPTICÆMIA AND SAPRÆMIA.

It is unnecessary in this review to dwell upon the distinction between septic and putrid infection, except as bearing to a certain extent upon the treatment of the respective conditions. Briefly stated, puerperal septicæmia, whether local or general, results from wound infection by pus-producing microorganisms; sapræmia, on the other hand, is a putrefactive process due to the action of non-pathogenic microbes, or saprophytes. That sapræmia may exceptionally develop into general infection is admitted by most authorities.

At the Fourth International Congress of Obstetrics and Gynæcology, held at Rome in September, 1902, Pinard, of Paris, strongly emphasized the fact that, at the present time, it is impossible, either by clinical or bacteriological evidence, to distinguish between the two conditions. He said:

"The attempt to divide the various forms of puerperal infection bacteriologically cannot be considered thus far as successful. This much is certain, that in numerous cases which have run a normal course streptococci and staphylococci have been found in the uterine cavity, and further, in the severe forms of infection sometimes streptococci, sometimes staphylococci, at times *Bacteria coli communia* and other bacteria, or mixtures of these, are found, thus demonstrating that the attempt to make a ready and positive diagnosis from a bacteriological examination has thus far been a failure" (35).

Dr. H. N. Vineberg, of New York, has held to this doctrine for a number of years. His opinion is that this difficulty of differentiation cannot be too strongly urged upon the general profession. He says that "the practitioner should be taught to look upon every puerperal case showing fever, with the greatest concern. It is only in this way that we can hope to avert serious sepsis by appropriate treatment at the outset of the infection."

With reference to septicæmia, J. Whitridge Williams says:

"Although the infection generally remains limited to the endometrium, in not a few cases it may progress beyond it, giving rise to a metritis, a lymphangeitis, or a phlebitis, as the case may be. This extension usually occurs through the lymphatics, and in such cases areas of inflammation can be traced along their course extending to the peritoneal surface of the uterus. At other times, especially when the infection has been limited to the placental site, the thrombi may be invaded by the microorganisms, and there results a phlebitis which may remain limited to the uterine wall or may rapidly extend beyond it and give rise to the various thrombotic forms of puerperal infection."

In sapræmia the symptoms are due to the absorption of toxines originating in the uterus itself or elsewhere in the generative tract by organisms which do not invade the tissues deeply nor make their way into the blood current.

Of very great importance is an appreciation of the histological differences between the putrid and septic forms of infection.

"According to Bumm, in sections through the wall of a uterus, the seat of putrid endometritis, a thick layer of necrotic material is found lining the uterine cavity, embedded in which are large numbers of the offending microorganisms. Beneath this is a thick layer of small-cell infiltration (zone of reaction), and under this again more or less normal tissue. The microorganisms are limited almost entirely to the superficial necrotic layer; and although a few may be present in the zone of reaction, none can be made out in the tissues beneath it, thus showing Nature's mode of preventing the invasion of the body by the microorganisms.

"In septic endometritis, although a layer of necrotic material containing organisms is found adjoining the uterine cavity, it is usually thinner. The zone of small-cell infiltration is either lacking or very imperfectly developed, and the microorganisms can be observed making their way down through the decidua and along the lymphatics through the muscular wall of the uterus out toward its peritoneal surface" (Williams).

THE BLOOD IN PUERPERAL SEPTICÆMIA.

While by far the largest number of fatal cases of puerperal infection is due to action of streptococci, either alone or in combination with staphylococci, the proportion of cases in which these germs are demonstrable in the blood current is relatively small.

"In the great majority of cases of septicæmia and pyæmia cultures from the blood prove sterile, but such negative results neither exclude the existence of a septic process nor necessarily indicate a favorable prognosis. On the other hand, positive results are often of the greatest value in the diagnosis of obscure cases of sepsis, in which the clinical manifestations are most vague. As pointed out by Welch (Dennis' *System of Surgery,* 1895, Vol. I, page 251), blood cultures in which the *Staphylococcus pyogenes albus* is demonstrated have little significance in the prognosis of a case, whereas the presence in the blood of the other pyogenic cocci is almost invariably a grave sign.

"The results obtained by different investigators in the bacteriological examination of the blood in septicæmia vary within wide limits, these variations being explained partly by the differences in the technical methods used by each reporter, and partly perhaps by the nature of the infection. Petruschky obtained 17 positive results in the examination of 59 cases of sepsis, streptococci being found in 15 and staphylococci in 2 instances. Sittman examined 53 cases and found streptococci in 4, staphylococci in 11, and pneumococci in 6. Czerniewski, in 37 cases of puerperal sepsis, obtained positive results in 10, pure cultures of streptococci being found in all the grave affections. . . . On the other hand, Brieger obtained uniformly negative findings in the examination of 6 cases of puerperal sepsis" (36).

Da Costa also reports statistics of 316 cases of sepsis, in which positive results were obtained in 107, while the remaining 209 proved negative, a percentage of 33.8 for the former. This author says:

"The blood changes found in these conditions due to the presence in the circulating blood of septic bacteria or their toxines, general septicæmia, sapræmia, and pyæmia, are similar. . . . An apparently trivial infected wound may give rise to just as severe blood changes as an intense pyæmia with widespread metastatic abscesses, since these alterations depend rather upon the virulence of the infection and the reaction which it provokes than upon the character of the exciting lesion and the specific nature of the offending organisms."

It is a well recognized fact that in diffuse inflammation caused by the action of pyogenic bacteria the destruction of the red blood cells is more constant than in any other affection. The average loss has been estimated by different observers as being from 200,000 to 1,000,000 a week in ordinary cases. "Various forms of acute septicæmia not infrequently reduce the red cells below 2,000,000, but none appears to act more violently than does puerperal or uterine sepsis" (37).

"Leucocytosis is always present in those cases in which the infection, either moderate or marked, occurs in a patient whose powers of resistance are sufficiently strong to react against the poison. The increase in the number of leucocytes is usually moderate—from about 15,000 to 25,000 in the average case. In trifling infections, not sufficiently marked to produce activity of the leucocyte-forming organs, and in lethal cases, in which the system is overwhelmed by the toxines, not only does leucocytosis fail to develop, but in some instances leucopenia may be observed. These facts render the occurrence of leucocytosis in septicæmia an extremely inconstant sign, for it is no uncommon experience to examine case after case of undoubted sepsis without encountering any increase in the leucocytes above normal" (Da Costa).

According to Ewing, cases in which leucopenia is constant are invariably fatal, as proved by many observers. Da Costa reports 21 cases of septicæmia and pyæmia in which frank leucocytosis was found in but 12, or but a trifle more than 55 per cent., while in 4 cases, or nearly 20 per cent., there was distinct leucopenia. He states that all the cases showing leucocytosis were either very mild or very severe infections.

A fact which is of very great importance, in view of the comparatively recent development of the iodine treatment of puerperal infection, is the pronounced affinity which the protoplasm of leucocytes shows for this agent. Though in a sense foreign to the purposes of this paper, the inclusion of the method devised by Goldberger and Weiss (*Weiner klin. Wochenschrift,* 1897, Vol. X, page 601), for demonstrating this reaction, appears to be not out of place. They recommend a combination of iodine, 1 part; potassium iodide, 3 parts; distilled water, 100 parts, with enough gum arabic to produce a syrupy mixture. A sufficient amount of this is placed on the dried, unfixed blood specimen to be examined and allowed to remain from one to five minutes, when the excess is removed with blotting paper. "In the case of normal blood the protoplasm of the leucocytes is stained a pale yellow and the nuclei remain almost colorless; in all purulent conditions, and especially in puerperal sepsis, the protoplasm is stained a slight or intense brown, or contains numerous intensely stained reddish-brown granules, the latter change being the more common."

(To be continued.)

REPORT OF A CASE OF SPLENOMYELOGENOUS LEUCÆMIA.*

By C. M. ROSS, M. D.,

NEW BRIGHTON,

STATEN ISLAND, N. Y.

J. E., aged thirty-four years, born on Staten Island, and has always lived there. Married and has three children. Is an engineer by occupation.

Family history is negative; father and mother met death by accident; brothers and sisters are living and healthy.

Personal History.—Habits are good, no alcoholism, drinks tea and coffee in moderation and uses tobacco occasionally.

Previous Illnesses.—Had tertian malarial disease eleven years ago, the attack lasting a week, with no subsequent recurrence. Denies any venereal history.

Present illness commenced ten weeks before entering the hospital, on September 21st, when he sought relief from a local physician for œdema of the feet and legs, more marked at night, and for epigastric distress after eating.

His abdomen, he says, would become distended for half an hour to an hour after meals. His appetite and general health, except for slight constipation, at this time were good. After having been treated for four weeks for "chronic malaria," with no improvement, he changed physicians, and his chief complaints at this time were, in addition to the œdema, a gradually increasing shortness of breath, particularly on exertion, and a peculiar sense of constriction about the waist.

About the middle of August he had a tooth extracted, and after two days a severe hæmorrhage occurred from the cavity, which lasted about two hours and stopped spontaneously. Three weeks before admission to the hospital he began to complain of vertigo, the attacks usually coming on after breakfast and recurring at varying intervals during the day. Some of these attacks were so severe that the patient would have to lie down till they passed off.

There is no history of purpura or epistaxis, and no defect in vision except a slight astigmatism.

Physical examination shows a fairly well nourished man of about 140 pounds weight. Mucous membranes and conjunctiva slightly blanched, no bronzing or discoloration of the skin.

Dyspnœa is pronounced and œdema of the feet prominent; the heart apex is displaced upward and to the right of the nipple line about one inch and a half, the heart sounds are normal. Pulse is of fair quality and numbers 88.

The liver border is fixed by percussion about an inch below the free border of the ribs, is smooth, and not tender.

The spleen fills the entire left side of the abdominal cavity to within half an inch of the brim of the pelvis, the surface is smooth, and not tender, except on deep pressure. The border is sharp and well defined, hard and smooth, palpable from two to four inches to the right of the median line, and presents a deep notch opposite the umbilicus and about two inches to the right. The approximate longitudinal measurement is from eighteen to twenty inches.

Urine, alkaline, sp. gr., 1022; no albumin; no sugar; microscopically, a few mucous shreds and white blood cells.

Blood, as examined by Dr. H. W. Patterson, bacteriologist to the New York health board, shows:

Red blood cells	3,600,000
White blood cells	760,000

Differential Count:

Small uninuclear	8	per cent.
Large uninuclear	13	per cent.
Multinuclear	24	per cent.
Myelocytes (eosinophilic)	$3\frac{2}{3}$	per cent.
Myelocytes (basophilic)	5	per cent.
Myelocytes (neutrophilic)	46	per cent.
Hæmoglobin	65	per cent.

The blood, when drawn, looks pale and clots slowly. No malarial plasmodia were found.

The patient left the hospital on September 27th, unimproved, and from subsequent reports there was little change in his condition until October 3rd, when he became mildly delirious, refused all nourishment and medication, and passed gradually into coma, with suppression of urine and abolition of reflexes, deep and superficial. This condition lasted about twenty-four hours, when the patient died.

The case is reported as being typical of splenomedullary leucæmia, the diagnostic points being:

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* Read before the Richmond County Medical Association.

(1) The absence of any ætiological factor.

(2) The absence of any constitutional symptom until the enormous spleen produced such pressure effects as œdema of the feet, gastric disturbance and constipation, and dyspnœa.

(3) The typical picture shown by the blood, the white blood cells, consisting largely of myeloctyes, numbering almost one fourth the number of reds, with the comparatively small diminution in red blood cells and hæmoglobin, and the absence of any malarial organisms.

LABOR COMPLICATED BY A FIBROID AND RUPTURED UTERUS.*

By EDWARD T. HARGRAVE, M. D.,

NORFOLK, VIRGINIA.

I report this case on account of its comparative infrequency, as well as to acknowledge my failure to diagnosticate sufficiently early to give the patient a chance for her life.

Case.—On August 18, 1903, at 5 p. m., I was called to see Mary W., negress, thirty-nine years old, and obtained the following history from her mother and the granny in charge of the case: Mother of nine children, all living and healthy, youngest two years old. Previous labors normal, family history negative; she had never consulted a physician for any sickness in her life. Had been in labor for two days, waters having ruptured twelve hours before I was called in. The pains had been hard and regular till about an hour before I saw her, when she had what the granny in attendance called "a fainting spell from a sudden sharp misery in her right side." I found the patient's condition as follows: Anxious countenance, shallow, rapid respirations, rapid, weak and easily compressible pulse, skin cold and clammy, great thirst, drowsiness alternating with restlessness. She replied to my questions in an unintelligent manner. Abdomen was irregularly enlarged and looked as if the presentation was transverse. Tenderness so marked that I could not palpate. On examination *per vaginam,* I found the head engaged, O. L. P., and the right hand in front of ear. The cervix was nearly obliterated. I easily pushed the hand up and decided on immediate delivery with forceps. I could not hear the fœtal heart sound. I telephoned my friend, Dr. J. Warren White, to give the anæsthetic and assist me. Dr. White examined the patient and agreed with me on the necessity of immediate delivery. He remarked at the onset that the patient was a bad subject for anæsthesia. She went under chloroform very rapidly and quietly, and I applied forceps (after emptying the bladder) and made steady intermittent traction. The forceps slipped off three times, yet the traction was not very hard, and I decided to try podalic version, notwithstanding the fact that the waters had been ruptured for twelve hours. I was much surprised to find that the head nearly disappeared when I pushed it gently upward and I easily and quickly brought both feet down, noting that the uterus felt unusually roomy. Both arms went up, but were easily brought down. Dr. White had been warning me from time to time that the woman's condition was critical, and it was necessary to do a partial craniotomy in order to deliver the head, which was quite large. The child had been dead several hours at least, and its weight was easily twelve pounds. Putting my hand over the lower abdomen I felt what I took to be a well contracted uterus, slightly to the left side of the median line. The woman's condition growing steadily worse, I attempted at once to expel the placenta by Credé's method and failed. Upon the introduction of my hand into the uterus I felt what I thought for a moment might be the head of a second child, but what proved to be a fibroid. The placenta seemed to cover a larger surface than usual, and while trying to peal it off the side of the uterine wall, I was horrified to find a large tear in the right side of fundus, in which loops of intestines could be felt. I requested Dr. White to examine her, and he confirmed my diagnosis. We had not sufficient instruments and facilities to do an immediate laparotomy, not even adequate light, and the hygienic surroundings were typical of the homes of the poor and filthy negroes, where sunlight is looked upon with dread. The patient came out from the anæsthetic quickly and her mental condition was better than it was prior to its administration. She was informed that she had only a faint chance for her life by going at once to a hospital. She consented and talked a few seconds to her daughter, relative to the care of her children. We gave her ergot and strychnine hypodermically and hot saline solution per rectum, and had her in the Protestant hospital within twenty minutes after discovering the rupture, but she died just as she reached the operating room.

There is perhaps no complication more fatal and alarming than rupture of the pregnant uterus, nor is there any emergency which calls for more rapidity of judgment and of work, in that the life of the woman depends upon prompt diagnosis and treatment. We are indebted to the rapid strides made by elective obstetrical surgery for rendering this deplorable accident less frequent than formerly. I afterwards learned from the granny in attendance that she had been giving her ergot at frequent intervals for about thirty-six hours. The textbooks at my disposal do not give fibroid as one of the ætiological factors, and I am persuaded that in this case it played an important part in causing the accident, by obstructing delivery and thinning the uterine walls. The administration of the ergot (which we know to be positively contraindicated till the end of the third stage of labor), the presence of the fibroid, and the large size of the fœtus, were, in my opinion, the main causes of the rupture. I am convinced that the woman sustained the tear when she had what the granny called the "fainting spell," and I thought I was dealing with an ordinary case of prolonged labor, due to a faulty position and large fœtal head. We should be on our guard when called to see a patient who has been in labor for a long time and presents symptoms of shock and internal hæmorrhage, especially when a granny has been in attendance, and should not attribute such a condition to exhaustion incident to labor, etc.

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* Read before the Seaboard Medical Association of Virginia and North Carolina, at Norfolk, December 15, 16, 17, 1903.

460 FREEMASON STREET.

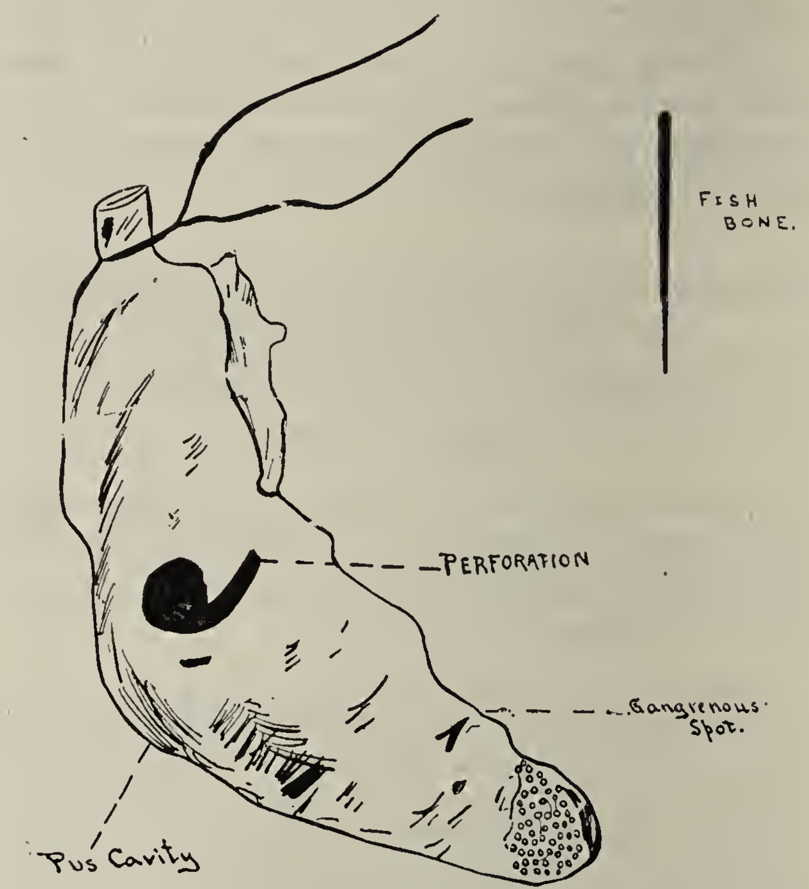
APPENDICULAR ABSCESS WITH FISH BONE IN THE APPENDIX. OPERATION; RECOVERY.*

By W. P. McINTOSH, M. D.,

SURGEON PUBLIC HEALTH AND MARINE HOSPITAL SERVICE,
PORTLAND, ME.,

Dan S. Admitted to hospital December 22, 1902. White, male, aged fifty-four years, native of Vermont. Family history negative.

Personal history: Patient suffered from malarial fever some years ago, has had no serious illness since; has been a hard drinker for years. Present illness began about three weeks ago, with pain in lower right segment of abdomen. The pain was rather severe for two days, then for four or five days he was much better; at end of this time the pain became worse than ever. This again lasted two days, when the patient applied for treatment at out office. He received a hospital permit, but feeling better did not enter hospital. The pain returning in a few days, he was sent to hospital. Patient states that he had no chill, and so far as he knows did not have any fever. When admitted to hospital the pain in right iliac region was very severe, and became much worse when patient lay down or upon pressure; the bowels were constipated; temperature, 38° C.; pulse, 84. The abdomen is distended and tympanitic, there is a distinct swelling, or tumor, about the size of a small orange, in the right iliac region above McBurney's point; there are great tenderness, rigidity, and swelling. Operated on at once. Incision high up and longer than usual; on opening the abdomen considerable foul smelling pus escaped. The appendix was above and behind the cæcum and was imbedded in the abscess wall. It was long and much thickened, and was perforated about the middle. The examining finger came in contact with a small hard substance about 4 cm. in length, lying across the appendix. The parts were strongly adherent to the intestines, and were bound down by adhesions. The appendix was surrounded by inflamed mesentery, the whole forming a large granular mass. The abdomen was packed around with iodoform gauze and the mass dissected out. The foreign body proved to be a fish bone, about one inch and a half long, and about the thickness of an ordinary silver probe. The appendix with adherent omentum was about five inches long and two inches in diameter. Gauze drainage was used. The patient made a good recovery. The accompanying cut shows the appendix with point of rupture of pus sac and the fish bone.



Dr. McIntosh's case of appendicular abscess, with fishbone.

Therapeutical Notes.

For Rebellious Coughs.—*Nouveaux remèdes*, for May 8th, ascribes the following to Merlet:

℞ Hydroalcoholic solution of codeine (5 per cent.), 12 grammes (3 drachms);
Cherrylaurel water.........15 grammes (½ ounce);
Alcohol at 60°............15 grammes (½ ounce);
Syrup of balsam of tolu, enough to make, 210 grammes (7 ounces).

M. A tablespoonful represents from 4 to 5 centigrammes ($^{3}/_{5}$ to ¾ of a grain) of codeine.

For Baldness.—*Journal des praticiens*, for May 21, 1904, recommends:

℞ Acetic acid.................1 gramme (15 minims);
Chloral ....5 grammes (75 grains);
Ether ....30 grammes (1 ounce).

M. Use in the morning, after a shampoo with soap.

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* Paper read and specimen exhibited before Mobile County Medical Society.

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NEW YORK, SATURDAY, JUNE 18, 1904.

ENDORSEMENT IN LIEU OF RECIPROCITY BETWEEN STATE LICENSING BOARDS.

At the recent meeting of the Confederation of State Medical Examining and Licensing Boards, held in Atlantic City on June 6th, Dr. E. L. B. Godfrey, secretary of the State Board of Medical Examiners of New Jersey, submitted certain preambles and resolutions the main purport of which was that, whereas reciprocity could be just to the profession and beneficial to the continued elevation of medical education only when exercised by States having practically identical requirements, endorsement could be practised with advantage by a State having certain requirements in the case of a State having higher requirements.

Of course, ultimate reciprocity between all the States is what the profession desires, but we think that even those who are most ardent in endeavoring to hasten such a state of things would not deny the cogency of Dr. Godfrey's contention. After discussion, the resolutions were ordered to lie on the table, to be printed, to be distributed among the members, and to come up for further consideration at the next meeting. This was a most sensible course to pursue. Nothing would ultimately be gained by undue haste in passing upon such grave questions. Every member of the confederation will now have a year in which to study Dr. Godfrey's arguments as well as other considerations bearing upon the question.

If his plan were adopted, more power and responsibility would doubtless be lodged with the members of individual boards, but from the high character of the men that at present make up those boards, and from the good reason we have to look forward to the maintenance of that high character, we cannot feel that any considerable risk is taken in imposing such power and responsibility upon the boards. Though the secretary was instructed only to distribute the printed document to members of the confederation, we do not doubt that he will be ready to furnish a copy to any physician who asks for it, and we think it would be wise for the profession in general to bestow upon it the amount of thought that so important a matter requires.

MEDICAL MEN'S CREDIT WITH TRADESMEN.

Dr. Griffith's letter, published in this issue, leads us to some reflections on the subject of the medical man's credit with tradesmen. Our own observation induces us to think that a reputable physician rarely if ever finds any particular difficulty in getting credit from such tradesmen as it is wise to deal with. Perhaps physicians are comparatively slow in paying their bills, but this is not to be wondered at when we take into account the notorious delays that they encounter in endeavors to collect their own professional charges. We doubt, however, if their slowness in paying is so decided as to induce shopkeepers to class them apart from other customers.

So far is it from being true that physicians have no credit, as was intimated by the particular tradesman with whom our correspondent had his experience, that they are sometimes too willing to open an account with a man who does not especially desire it. Many a physician, if left to himself, would never incur a bill, preferring to wait for an article until he could afford to pay for it on the spot; but such a man's wife will generally declare, and with unquestionable correctness, that she gets better served at a dry goods establishment, for example, if she has an account than if she pays cash. And so the account is opened. As a rule, we believe, it is settled with at least the average punctuality. Of course, however, what the dealer might have to say on this point would amount to better evidence than the experience of individual physicians. But we feel confident that there would be no material divergence of the two.

At the same time we think it unwise for a physician to incur a debt to a shopkeeper who on the first occasion suggests to him to do so, especially when, as in Dr. Griffith's own case, the tradesman meets an acceptance of his suggestion with difficulties, and adds to their exploitation the wholly uncalled for statement that physicians have no credit. Such men are to be avoided. They are quite on a par with the old time bailiffs who deliberately provoked men into kicking or caning them in order that they might bring suits for damages. Not only contempt for such a person himself, but lack of faith in his commercial stability, might well induce a physician or anybody else to decline the proposition to open an account. Physicians, we are sure, need not hang their heads in the matter of their relations with tradesmen.

UNILATERAL PUPILLARY CONTRACTION IN PHLEGMONOUS ANGINA.

There are some diseases that are more or less frequently attended with certain phenomena that, while they are of interest, are of little importance in the diagnosis. Among them seems to be unilateral contraction of the pupil in connection with phlegmonous angina. It appears to have been first observed by M. H. Vincent, of Val de Grâce (*Bulletins et mémoires de la Société médicale des hôpitaux de Paris,* May 26th), who reports that he has seen it five times in eighteen cases.

The meiosis mentioned by M. Vincent is not extreme, the pupil generally measuring from 0.5 to 2 millimetres in diameter. It lasts through the course of the throat disease and sometimes for a number of weeks longer. It occurs only in the eye of the same side on which the angina manifests itself or on which it is the severest. The contractility and dilatability of the pupil are not lost; both pupils behave as usual under light and accommodation tests, but after a test is ended the affected pupil resumes its contracted state.

One exception to the statement that the meiosis is always on the side of the greatest severity of the throat disease has been noted by M. Vincent. It was in the case a young patient, of a lymphatic temperament, having an abscess on each side, first on the right and then on the left. The pupillary contraction in this instance was observed only on the left side. The rule remains, however, as stated by M. Vincent, and the exception noted by him does not deter him from the statement that when the pupillary contraction exists one may make a diagnosis of phlegmonous angina and of its situation before the patient has opened his mouth.

We fancy that but few if any of our readers will be inclined to attach diagnostic importance to this disturbance of the pupil, but the knowledge of almost any fact turns out sooner or later to be of some value, and it therefore seems worth while to note the presence or absence of meiosis in suppurative affections of the throat.

THE TRAINING SCHOOL FAKE AND ITS VICTIMS.

The elevation of the plane of medical education has of necessity raised that of its satellite, the profession of nursing. It was once possible for a person to graduate in medicine at the end of thirty-two weeks of actual study, and to begin practice without ever having seen a case of disease at nearer range than from the rear seats of a large amphitheatre. All this is changed. Not only has the standard of medical education advanced to a point where the newly fledged doctor, ignorant though he may be of measles and whooping cough, can tell you all about the oscillations of a tadpole's tail, but the woman who would care for his patients must put in three years' hard work in a treadmill yclept a training school. She is paid practically nothing during the term of slavery called by courtesy training. Her work is farmed out at excellent prices to pay patients, both in and out of the hospital. Should she nurse a wealthy patient outside, full rates are charged, the fees being put into the pockets of the management of the hospital. This is a fraud, not only upon the nurse, but upon the patient. If the nurse is not supposed to be qualified to practise before her diploma has been earned, how can she conscientiously be placed in independent charge of a private patient before her course of training is complete? The superintendent of a private hospital said to me recently: " I consider it unethical for a physician to employ an undergraduate nurse." This was apropos of a nurse who had gone to work for herself at the end of a year or so of training at his institution. I then asked him why he had placed that same nurse, at regular rates, in charge of one of my patients before she had been in the school three months. His answer is immaterial, but he acknowledged himself cornered.

The work that a nurse is called upon to do during her course of training is laborious and often menial. In one institution of my acquaintance the young women are first put on probationary duty, which comprises scrubbing floors and other tasks. This, I presume, is to make what comes afterward delightful by comparison. It also serves to make the nurse properly humble. The better class of women, women of education and refinement, are, however, not especially encouraged to adopt the profession of nursing by such a probationary period.

The course of training in some hospitals is an arrant fraud. There are graduate nurses practising in Chicago who never saw a case of midwifery prior to their graduation. In some institutions practically no experience other than surgical is obtained. Yet the nurse graduates are armed with a diploma stamping them as qualified to nurse children and adults suffering from medical diseases. The absurdity of this is evident when one considers the simplicity of nursing a clean postoperation case.

The worst imposition of all is the length of time demanded of its victims by the training school. The time has been gradually extended, until now three years are required. Any nurse who is already in practice is herself *particeps criminis* in this fraud. Those who had graduated after short terms of training found it advisable to put up barriers to keep the oncoming pigs out of the clover patch. The hospital management, ostensibly actuated by altruism, is only too glad to raise the requirements for the graduation of nurses, so as to get an extra year or two of their labor for practically nothing. Chivalrous men, these hospital folk! Should a nurse leave one training school and endeavor to enter another, the training school trust malevolently pursues her. She is refused allowance for the period of slavery she has already put in, and has to begin over again.

How absurd the situation! It is demanded that a woman should slave for three years and go through what would be a fair medical course, were it conscientiously given, for the privilege of finally earning a salary which, were she constantly employed—which, by the way, she never is—would just equal that of a good stenographer. To earn this she must slave night and day and often risk her life—her health always. The course of instruction offered at the training school is usually absurd. Practical training in the care of the sick is largely replaced by lectures on subjects which are by no means a practical substitute. A lecture on anatomy or materia medica by a hospital interne who himself is not yet " dry behind the ears " is hardly as valuable to the future nurse as a knowledge of how to give a wet pack or prepare a poultice. But the poultice, I believe, is a relic of barbarism, and the modern doctor is not supposed to prescribe it, so I will rely upon the pack alone for my argument. With reference to the time required by the training school, I venture to say that, with a proper course of training, the woman who has not mastered all that properly belongs to the field of nursing at the end of one year will be no better as a nurse at the end of three. While a reasonable course of training is essential, it is my opinion that the greater part of the course at present prescribed is essentially hospital " graft."

The raising of the training school requirements has been alleged to have been followed by an improvement in the quality of graduates. This is seriously questioned by some. A prominent physician said recently that the result had been an influx of women of the servant girl class into the ranks of nursing. As matters now are, this is certainly the class that can best afford the prescribed course of training. It has been argued that a short course tends to increase competition and lower the nursing wage by increasing the number of nurses. The demand always controls the supply, however, and were the foregoing pessimistic statement true, the evil would not be an unmixed one. The poorer classes need nurses, and the $25 a week woman is available only to the well to do. It is high time that aspirants for a course of training in a school for nurses had a better understanding, not only of what is demanded of them, but of the "graft" system of which they are bound to be the victims.

G. FRANK LYDSTON.

THE WALTER REED MEMORIAL ASSOCIATION.

It is fitting that an association should have been formed to further the design of erecting some suitable monument to the memory of the late Dr. Walter Reed, of the army, whose service to the world, and to the United States and Cuba in particular, in demonstrating the part played by mosquitoes in propagating yellow fever, and the consequent feasibility of annihilating that terrible disease, cannot be overestimated. All classes have been laid under the heaviest obligation by Dr. Reed's labors, and the general public will therefore be privileged to contribute to the fund required to give realization to the association's efforts, but upon the members of our profession will fall the task of furnishing to the laity such information as may induce them to assist in furthering its great object, additional data concerning which may be obtained by addressing the association's secretary, General C. De Witt, U. S. Army, 1707 Twenty-first Street, N. W., Washington, D. C. We hope that the fund subscribed will be a large one and that it will be accumulated rapidly.

THE SHOEMAKER FESTIVAL.

We are gratified to have received, in pamphlet form, an account of the celebration, on March 22nd, of the thirtieth anniversary of the entrance of Dr. John V. Shoemaker into the medical profession. A dinner was given to Dr. Shoemaker by the faculty of the Medico-chirurgical College of Philadelphia, of which he has been an honored member almost from the opening of the institution. Dr. Judson Daland presented Dr. Shoemaker with a loving cup, and accompanied the presentation with such graceful remarks as we are accustomed to expect from him. Dr. Shoemaker's response teemed with eloquent tributes to his colleagues. Other speakers were Dr. L. Webster Fox, Dr. Ashton, Dr. James M. Anders, Dr. Rodman, Dr. W. C. Hollopeter, Dr. W. Frank Haehlen, the late Dr. F. Savary Pearce, Dr. John C. Heisler, and Dr. Isaac Ott. Such celebrations serve an exceedingly good purpose, and we hope that for a long time to come each succeeding decade will witness one of them, with Dr. Shoemaker as the central figure.

THE EAST RIVER STEAMBOAT DISASTER.

Appalling as was the loss of life occasioned on Wednesday—in great part needlessly, it is to be feared—by the burning of the steamboat *General Slocum,* we cannot pass unmentioned the heroic efforts of the physicians, the administrative force, and the nurses of the Isolation Hospital on North Brother Island for the rescue of those whom a hideous death stared in the face, and for their immediate relief from suffering.

TRADESCANTIA ERECTA AS A HÆMOSTATIC.

After all, cock fights are not wholly useless if we may judge by the statement that those who manage them in Mexico have taught us the use of the leaves of *Tradescantia erecta* as a hæmostatic, as is set forth by Simonin (*Revue hebdomadaire de laryngologie, d'otologie et de rhinologie,* 1903, No. 37; *Zentralblatt für chirurgie,* May 21st), who have used them with excellent results in hæmorrhage from the nose, throat, and ear.

YEAST IN THE TREATMENT OF ERYSIPELAS.

Within the last few years brewers' yeast has proved an important remedial agent. Its most recent application seems to have been in erysipelas. Presta and Taruella (*Revue française de médecine et de chirurgie,* 1904, No. 8; *Zentralblatt für Chirurgie,* May 21st), report a number of cases in which very gratifying results followed its internal administration in daily amounts of from half an ounce to six drachms.

MADAME CALVE'S SANATORIUM.

We regret to learn from the *Gazette médicale de Paris* for May 28th that the sanatorium benevolently maintained by the great singer as a summer home for sick girls was recently damaged to a serious degree by a band of malefactors. It will, however, be opened for the season. It is situated near Madame Calvé's home in Aveyron, and accommodates sixty inmates.

NOSE PULLING AS A REVIVER.

Debove's rhythmical tractions on the tongue for the relief of suspended animation have been much written about during recent years. They may now be supplanted or supplemented, it appears from reports by Panyrek (*Sbornik klinicky,* 1904 4; *Bulletin médicale,* May 4th), by rhythmical elevation and depression of the nose continued for a minute or two.

News Items.

Society Meetings for the Coming Week:

MONDAY, June 20th.—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, June 21st.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, June 22nd.—New York Academy of Medicne (Section in Laryngology and Rhinology); New York Pathological Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private).

THURSDAY, June 23rd.—New York Academy of Medcine (Section in Obstetrics and Gynæcology); New York Orthopædic Society; Brooklyn Society for Neurology; Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.; New York Celtic Medical Society.

FRIDAY, June 24th.—New York Society of German Physicians; Philadelpha Clinical Society; Philadelphia Laryngological Society.

SATURDAY, June 25th.—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

Change of Address.—Dr. Bernhard J. Fedde, to 376 Sixth Avenue, Brooklyn.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending June 11, 1904:

	Week end'g June 4.		Week end'g June 11.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	1,042	21	814	18
Diphtheria and croup	398	51	366	35
Scarlet fever	321	18	216	15
Smallpox	2	..	..	1
Chickenpox	86	..	58	..
Tuberculosis	407	170	319	131
Typhoid fever	34	6	37	5
Cerebrospinal meningitis	..	63	..	54
Totals	2,290	329	1,810	259

Dr. Carl Goldmark has been appointed adjunct visiting physician in the children's department of Lebanon Hospital, and also clinical microscopist to the Mount Sinai Hospital out-patient department.

Long Island College Hospital, Brooklyn.—The following graduated from this institution on June 2nd:

David Adler, Percy Edward Bank, Aloysius Briggs, Robert Ira Bull, Irving Goumott Cameron, Alexis Cigaldi, Hyman Climenko, Nelson Asahel Craw, Wilbur Fiske Crutchley, Simon Davis, Elliott Isaac Dorn, Harold Roy Dunton, Salomon Elysowitz, Benjamin Peter Farrell, Samuel Frank, Michael Friedland, Charlemagne Fukala, M. D.; George Glucksman, John Gabriel Glynn, A. B.; Henry Malachi Griffin, B. S.; Barnet Joseph, Louis Jean Kaplan, Morris Jacob Karpas, Charles Kemp, Jacob Joshua Klinkowstein, Richard Kuehne, Jr., Morris Levine, George Max Levitas, Inte Ignaz Lourie, Ph. G.; William Francis Mathews, Joseph Henry Meyer, Henry Monroe Moses, B. S., A. M.; Henry Ralph Moses, William Francis Mullin, Henry Edward Pflug, William Racossin, Ph. G.; Joseph Raphael, A. B.; Herman Roth, Henry Jacob Schreiber, Alexander Smith Sim, William Henry Snyder, Paul Tradelius, Robert Matthew Ullrich, Ph. G.; William Frederick Van Deinse, Jr., David Paul Waldman. Ernest Herman Saniter received a certificate.

Proposed Enlargement of New York University.—At a special meeting of the university council of New York University, held on June 7th, it was determined to purchase land adjoining the new college building on First Avenue, between Twenty-fifth and Twenty-sixth Streets, and to proceed at once with the erection of a six story fireproof building for the clinics and laboratories of the medical college. Plans prepared by the architects were submitted and approved, and a building committee were appointed. This action was taken because of the increased size of the classes. On the rear the building will adjoin the Carnegie laboratory, which belongs to the university, and is used also for laboratory work. The first floor of the building will be given up to the free dispensary of the college, which at present is treating more cases a day than any other dispensary in the city, with one exception, the total number during the past year reaching 150,000 cases. A number of appointments were made. The council accepted the resignation of Robert W. Hall, professor of analytical chemistry since 1887, tendered on account of the condition of his health.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g June 4.		Week end'g June 11.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	10	5	4	2
Diphtheria	62	9	45	8
Scarlet fever	62	12	64	2
Typhoid fever	102	19	78	16
Consumption	..	67	..	..
Cerebrospinal fever	..	..	..	..

Nurses Graduated at the Lying-in Charity.—The graduation exercises of the nurse class of the Philadelphia Lying-in Charity were held on June 6th in the New Century Drawing Room. The graduates are:

Estella Bateman, Cora Beaver, Emma Bosch, Emma Cox, Ethel Davis, Margaret Davis, Mabel Egbert, Lizzie Harron, Helena Huber, Julia Kensler, Rosa Knerr, Clara Livermore, Annie Magilton, Adele Miconi, Mabel Schreiner, Nellie Davis, Bessie Lee, Lizzie Santee, Maybella Tobois.

GENERAL

The Albany County Medical Society elected the following officers on May 10th: President, Dr. James P. Boyd; vice-president, Dr. J. Montgomery, Mosher; secretary, Dr. James F. Rooney; treasurer, Dr. William H. George.

Monroe County, N. Y., Medical Society.—The following officers of the Monroe County Medical Society have been elected: President, Dr. William M. Brown; vice-president, Dr. Robert L. Cook; secretary, Dr. William E. Conklin; treasurer, Dr. Clarence A. Greenleaf, reelected.

Medicochirurgical Society of Central New York.—The seventeenth regular meeting of this society was held in Syracuse on June 2nd, when the following officers were elected: President, Dr. F. H. Dowd, of Lysander; first vice-president, Dr. A. R. Grant, of Utica; second vice-president, Dr. A. M. Miller, of Lafayette; secretary and treasurer, Dr. E. M. Santee, of Cortland.

Statement of Mortality in Chicago, Ill., for the Week Ending June 11, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on United States Census Bureau's estimated midyear populations of 1,932,315 for 1904 and of 1,873,880 for 1903:

	June 11, 1904.	June 4, 1904.	June 13. 1903.
Total deaths, all causes	420	452	472
Annual death rate per 1,000	11.36	12.18	13.13
By sexes—			
Males	247	277	284
Females	173	175	188
By ages—			
Under 1 year	66	61	76
Between 1 and 5 years	32	32	54
Over 60 years	73	95	88
Important causes of death—			
Acute intestinal diseases	24	21	27
Apoplexy	15	18	9
Bright's disease	25	41	30
Bronchitis	15	6	16
Consumption	63	67	54
Cancer	21	18	21
Convulsions	5	9	18
Diphtheria	6	5	14
Heart diseases	33	33	41
Measles	1	2	9
Nervous diseases	12	24	21
Pneumonia	52	67	58
Scarlet fever	3	4	10
Suicide	8	9	4
Smallpox	..	..	..
Typhoid fever	1	8	2
Violence (other than suicide)	36	24	33
Whooping cough	3	0	5

The North Carolina Medical College graduated the following on May 10th:

Hugh Edgar Bowman, Campbell Atkinson Baird, Arthur Eugene Billings, Robert Harris Bradford, John Andrew Brewin, William Nicholson Dalton, Leighton Watson Hovis, James Thomas Justice, James Franklin Laton, Dugald Cladence McIntyre, John Quincey Myers, Thomas Frazier Reynolds, Henry Clay Salmons, William Franklin Smith, James Jackson Stewart, William Mason Strong, and C. E. Gibbs.

Smallpox in Chicago.—Only one case of smallpox was discovered during the week—an unvaccinated Salvation Army man; source of infection not ascertained. Since January 1st there have been 89 cases discovered and removed to the Isolation Hospital; not one recently or properly vaccinated. Of the 89 two died of the disease, 76 were discharged recovered and 11 remain under treatment. At this time last year there were 33 in the hospital.

Otsego County, N. Y., Medical Society.—The annual meeting of the county medical society was held in Cooperstown on May 24th. After transacting the routine business, Dr. J. R. Dorle, of Hartwick, joined the society. The following officers were elected for one year: President, Dr. Robert W. Ford; vice-president, Dr. Geth A. Mereness; treasurer, Dr. James Burton; secretary, Dr. H. W. Boorn; censors, Dr. H. D. Sill, Dr. C. E. Parish, and Dr. J. H. Moon.

The Minnesota State Medical Society elected the following officers on June 3rd: Dr. J. W. Bell, of Minneapolis, president; Dr. G. S. Wattam, of Warren, first vice-president; Dr. John Williams, of Lake Crystal, second vice-president; Dr. J. H. Haynes, of Stillwater, third vice-president; Dr. McDavitt, of St. Paul, secretary; Dr. R. J. Hill, of Minneapolis, treasurer; Dr. H. H. Worman, of Tracy, delegate to the American Medical Society; Dr. Rogers, of St. Paul, alternate for one year; Dr. Spaulding, of Luverne, alternate for two years.

Typhoid Fever in Chicago.—There has been a marked reduction in the percentage of positive reactions for typhoid fever, this week showing only 8 per cent. For the corresponding week in April there were 15.5 per cent. of positive reactions. This reduction is due to the fact that most of the contamination of the lake water, washed in by the spring freshets and melting snow, has either been removed by the drainage channel or the common bacteria have decomposed it; any pathogenic bacteria have by this time either died for want of food or been killed by the ordinary sewage and water bacteria.

The Washington County, N. Y., Medical Society held its annual meeting at Argyle on May 17th. The following officers were elected: President, Dr. R. A. Heenan, of Sandy Hill; vice-president, Dr. R. C. Davies, of Granville; secretary and treasurer, Dr. Henry Root, of Whitehall; censors, Dr. Banker, of Fort Edward; Dr. Oatman, of Greenwich; Dr. Davies, of Granville; committee on hygiene, Dr. Cuthbert and Dr. Dean, of Sandy Hill; delegates to State Medical Society, Dr. Oatman, Dr. Dean, and Dr. Davies. The semiannual meeting will be held at Fort Ann, October 4th.

Sanatorium Founded by a Charitable Cantatrice.—It is reported that Madame Emma Calvé has founded a sanatorium at Cabrières near her residence in the Aveyron. There nearly sixty young girls in need of pure air and medical attendance are received every summer, all the expenses being borne by the great singer. Burglars have paid a visit to the sanatorium, it is said, and removed everything they could lay their hands on. Madame Calvé has nevertheless given instructions for the preparation of the sanatorium for the reception of the annual contingent of sick girls.

The Carroll County, Tenn., Medical Society held an interesting meeting on May 27th. Officers of the society were elected as follows: Dr. J. W. McCall, of Huntingdon, president; Dr. J. W. Watkins, of Hollow Rock, and Dr. Earl Hillsman, of Trezevant, vice-presidents; Dr. C. T. Love, of McLemoresville, secretary; Dr. I. N. Grizzard, of Huntingdon, treasurer. An able address was made by Dr. I. N. McSwain, of Paris, State organizer. The West Tennessee Medical Society recommended that the Carroll County Society be made a part of the State Medical Association.

Episcopal Eye, Ear, and Throat Hospital of Washington.—The quarterly meeting of the board of governors of the Episcopal Eye, Ear, and Throat Hospital was held May 23rd in the new building just completed at 1147 Fifteenth Street northwest. Mr. H. P. Blair made reports for the finance and building committee. He stated that the cost of building and furnishing the new hospital would be about $80.000, and that stocks and securities had been recently received from the estate of the late Mrs. Ellen Parke valued at about $16,000. Mr. W. M. Poindexter submitted a design for a bronze tablet to be erected in the hospital in memory of Mrs. Parke, which was accepted. Dr. William P. McKee was appointed resident physician of the hospital for the ensuing year.

Wisconsin College of Physicians and Surgeons.—On May 26th the following graduated in medicine from this institution:

William Frederick Baker, Claude Spencer Beebe, Edward Patrick Crosby, Jeremiah Donovan, B. Sc.; Francis Patricius Flynn, Fred Starr Fish, B. Sc., LL. B.; Lambert John Hargarten, Alexander Francis Harter, Sc.; Harry John Heeb, John Gregory Hoffman, Norman Whittemore Hollenbeck, B. Sc.; Fred Johnson, William Bernhard Kowenstrot, Henry Thomas McCabe, Walter Thomas McNaughton, William Thomas Murphy, Frederick Bradford Mitchell, Harry Gustaf Oakland, Charles Aloysius Obertin, Daniel Cornelius O'Connell, Julia Henrietta Palmtag, George Joseph Pomainville, George Clemens Ruhland, Adolph Joseph Shimek, Edward Louis Schreiber, Adolph Charles Sontag, William Daniel Smith, William Ernest Herman Teich, Michael Walter Ward.

Johns Hopkins Hospital Training School for Nurses.—On May 26th, the following young women received diplomas as trained nurses:

Katherine M. Christhilf, Elizabeth B. Richards, Marie C. Roder, Esther Spicer, Mary Bryce Thompson, all of Baltimore; Alice Maude Best, of Utica, N. Y.; Emily Sherwood Bryan, of Cambridge, Md.; Elizabeth Carothers, of Newport, Ky.; Clara L. Dudley, of Oberlin, Ohio; Richardetta Gibson, of Bluemont, Va.; Ruby Hamilton, of Warkworth, Canada; Elizabeth Hunt, of Bridgewater, Md.; Amy S. Johnson, of Evansville, Wis.; Margaret J. Metcalfe, of Port Hope, Canada; Mary Motherwell, of Toronto, Canada; Gertrude Muldrew, of Toronto, Canada; Elizabeth M. Norment, of Bastrop, Texas; Martha M. Park, of Omaha, Neb.; Alice L. Peyton, of Staunton, Va.; Dollie Pollack, of Omaha. Neb.; Stella W. Sampson, of Fairfield, Iowa; Emma B. Stevenson, of Bloomington, Ind.; Mary D. Valentine, of Ruxton, Md.; Gertrude Farr Webster, of Geneva, N. Y.; Ethel M. Weldon, of London, Canada.

Howard University, Washington, D. C.—The following sixty students received the degree of M. D., on May 10th:

Mary E. Minor Armistead, Samuel Jones Bampfield, A. B., Lincoln; George Henry Bolling, Sara Winifred Brown, B. C., Cornell; Samuel S. Bruington, Hayes Joseph Burnett, Lloyd Hardison Cox, James Edward Foster, James M. Fraction, Walter Robert Franklin, Wilbur Clarence Gordon, Charles F. Green, Alonzo T. Griffin, Sumner Garrison Holmes, Lloyd Lyston Jones. Willis Wharton Jones, Allen N. Levy; John William McClellan, A, B., Fisk; Ulysses Simpson McCoy, William Clarence McNeill, Chares W. Maxwell, A. B., Biddle; David M. Munroe, William Thomas Nelson, A. B., Howard; Taylor Henderson Nichols, David W. Ogilvie, Huldah Josephine Prioleau, Daniel I. Renfro, Peter J. A. Simons, Richard S. Smith, Arthur Ernest Smyth, D. D. S., Howard; Emma Matilda Corey Starr, James R. Stroud, A. B., Morris Brown; George W. Thompson, Silas S. Thompson, Louis G. P. Todd, aid William Strother Turner, A. B., Lincoln.

Missouri State Medical Association.—Dr. Jabez N. Jackson, of Kansas City, was elected president of the Missouri State Medical Association at the third day's session of the forty-seventh annual meeting, held May 19th, in St. Louis. It was the first time in the history of the association that the president has been elected without the presentation of more than one name. Dr. C. H. Nicholson, of St. Louis, was elected secretary; Dr. E. J. Goodwin, of St. Louis, assistant secretary, and Dr. J. Franklin Welch, of Salisbury, treasurer. Excelsior Springs was chosen as the place for the next annual convention. Dr. Jabez N. Jackson, of Kansas City, and Dr. W. B. Dorsett and Dr. A. R. Kieffer, of St. Louis, were elected delegates to the American Medical Association, with Dr. Thomas Chowning, of Hannibal; Dr. C. Lester Hall, of Kansas City, and Dr. M. P. Overholser, of Harrisonville, as alternates.

University College of Medicine, Manchester, Va.—The following graduated on May 12th, as Doctors of medicine:

Isham Keith Briggs, Jr., of Briggs, Va.; Vernon Asbury Brooks, of Portsmouth, Va.; William Franklin Driver, of Timberville, Va.; Charlie Ewing Dyer, of Barren Springs, Va.; Houston R. Farley, of Thassalia, Va.; Michael Gaydosh, of Olyphant, Pa.; Henry David Gilmer, of Island Ford, Va.; Arthur Wesley Greene, of Powellsville, N. C.; Ernest L. Grubbs, of Riverton, Va.; John Ewing Hughart, of Cliff Top, W. Va.; Thomas Franklin Jarratt, of Jarratt, Va.; Charles Johnson Kinsolving, Jr., of Abingdon, Va.; Thomas Benjamin Leonard, of Richmond, Va.; E. Blake Martin, of Albin, Va.; Clarence Philip Obenschain, of Engleman, Va.; Nathanial Alexander Orr, of Charlotte, N. C.; Walter S. Quaintance, of Slate Mills; Henry Lawrence Robertson, of Ontaria, Canada; W. S. Slicer, of Roanoke, Va.; Francis Henney Smith, of Fredericksburg, Va.; Joseph Hoyt Smith, of Chester, N. Y.; John Blair Spencer, of Williamsburg, Va.; John Mason Williams, of Newville, Va.; George A. Wright, of Poplar Hill, Va.; Edward Franklin Younger, of Winfall, Va.

Medical College of Virginia.—At the sixty-sixth annual commencement exercises of this college, held on May 10th, the following received the degree of M. D.:

William Meade Archer, Jr., Harvey Smith Baker, Elisha Barksdale, Moses Benmosche, Allen Casper Biller, David Cabell Burks, William Edward Croxton, James Joseph Davidson, Charles Singleton Dodd, Herbert Oliver Forbes, Carl Atkins Foster, John Milton Gouldin, Embree Garland Hamilton, Charles Russell Hartsook, Archibald Cecil Herbert, Thomas Jefferson Holt, William John Judy, Alexander Doniphan Louthan, William Boykin Lyles, Donald Munro McIntosh, Charles Wilbur Mercer, Robert Parks Minnick, Joseph Henry Parker, John Russell Perkins, William Oscar Pollard, Robert Rolen Preston, Julian Lamar Rawls, William McMath Revercomb, Benjamin Alonzo Rice, Noah Montroville Robinson, John William Augustus Sanders, Harry Bennett Sanford, Stuart Wray Selden, William Almon Shepherd, Fayette Allen Sinclair, Julian Wylie Sloan, William Tilden Smith, Lee Oval Vaughan, Thomas Watkins, Thomas Higginbotham Watts, Achille Murat Willis.

Additions to Boston City Hospital.—At the fortieth birthday of the City Hospital, May 24th, two new buildings were dedicated, and all the different wards were visited by Mayor Collins, the board of trustees and the members of the city government. The dedicatory address was made by A. Shuman, the chairman of the board of trustees. The new buildings are a most useful and necessary acquisition, and the elaborate furnishings and facilities will meet a long felt want, and great credit reflects on the trustees and others who have identified themselves with these improvements. The new surgical out-patient building, with its substantial equipment, cost $140 000, and wards K, M, and L, inclusive of furnishings, cost $130,000. The out-patient building contains a surgical service for men and boys, a surgical service for women, a surgical service for genito-urinary diseases, a gynæcological service, a throat department and an eye and ear service. The building was laid out with the cooperation of the gentlemen composing the medical and surgical staff, and is adapted for the treatment of different diseases by modern scientific methods.

American Pædiatric Society.—At the recent meeting of this society, held in Detroit, Mich., May 30th and 31st, and June 1st, the following officers were elected for the ensuing year: President, Dr. Charles G. Jennings, of Detroit; first vice-vice-president, Dr. Charles G. Kerley, of New York; second vice-president, Dr. Thompson S. Westcott, of Philadelphia; secretary, Dr. Samuel S. Adams, of Washington, D. C.; treasurer, Dr. J. Park West, of Bellaire, Ohio; recorder and editor, Dr. L. E. LaFetra, of New York. The place of the next meeting is the Sagamore Hotel, Lake George, June 19, 20, and 21, 1905. Samuel S. Adams, M. D., secretary.

The Indiana State Medical Association met in Indianapolis, May 19 and 20, 1904, with an attendance of over 500. Charters have been issued to 84 county societies, and the total membership now exceeds 2,000. Among the subjects eliciting most discussion were Medical Education, Paretic Dementia, Treatment of Fractures, Surgical Aspect of the Typhoid Ulcer, Intestinal Obstruction, Club-foot, Arteriosclerosis, Treatment of Drug Addictions, Typhoid Fever, and Tuberculosis. Resolutions were adopted in favor of establishing a State hospital for tuberculosis. West Baden was chosen for the meeting of 1905, and the following officers were elected: President, Dr. George T. McCoy, of Columbus; vice-presidents, Dr. H. J. Hall, of Franklin; Dr. C. T. Hendershot, of Cannelton; Dr. D. J. Loring, of Valparaiso; secretary, Dr. F. C. Heath, of Indianapolis; treasurer, Dr. A. E. Bulson, Jr., of Ft. Wayne. F. C. Heath, M. D., secretary.

Georgetown University.—The following have graduated from this university in medicine:

Roy Delaplaine Adams, of the District of Columbia; Mahlon Ashford, of the District of Columbia; Frederick Rae Barton, of Nova Scotia; Hyman Bernstein, of the District of Columbia; Patrick Joseph Carney, of Massachusetts; John N. Constas, of Greece; David Charles Coleman, of Massachusetts; Charles Francis Conlin, of Massachusetts; Robert Joseph Green, of the District of Columbia; John Edward Connor, of Massachusetts; Ralph Alexander Hamilton, of the District of Columbia; Daniel B. Hayden, of Illinois; William Francis Hemler, of Pennsylvania; James Franklin Hilton, of the District of Columbia; William Hite Hough, of Virginia; Joseph James Kaveney, of Massachusetts; Michael C. Kett, of Colorado; George Albert Linnehan, of Massachusets; John Joseph McCormick, of Massachusetts; Francis James O'Hara, of Massachusetts; Francis Leo Quigley, of Kansas; Pedro M. Rivera-Pagan, of Puerto Rico; William Elwin Rogers, of Virginia; De Haven Sharp, of the District of Columbia; Michael Ignatius Shea, of Massachusetts; Dennis John Sheehan, of Vermont; Francis Jerome Short, of New York; William Henry Short, of New York; William Meredith Smith, of Maryland; Timothy Joseph Sullivan, of Massachusetts; Charles R. Keith Swetnam, of Virginia, and Thomas Francis Welch, of Massachusetts.

The Pan-American Congress will hold its next meeting in Panama the latter part of December. The Pan-American Congress meets every three years. It was founded by Dr. William Pepper, of Philadelphia; Dr. C. A. L. Reed, of Cincinnati; Dr. Albert Van der Veer, of Albany, and Dr. H. L. E. Johnson, of Washington. The first meeting was held in Washington in September, 1893; the second in Mexico in 1896. The third was to have been held in Venezuela in 1899, but was given up on account of the war in that country. The place of meeting was changed to Cuba, but had to be postponed until 1901, on account of the fever there. These meetings have always been well attended, and it is thought that Panama will be an interesting place for the convention. Further particulars will be sent out from time to time to the medical journals, together with notifications of the different officers applying to represent this and other countries. Ramon Guiteras, M. D., secretary of the International Executive Committee.

Washington University, St. Louis, Mo.—The medical department of this university graduated the following students on May 19th:

J. J. Singer, A. M. Austin, J. L. Evans, N. M. Freund, A. H. Friedeberg, Fred Griffin, F. B. Kirby, R. B. Lester, W. F. Shahan, Charles W. Tooker, Jr., J. H. Woodbridge, G. W. Bader, Paul Baldwin, C. C. Ball, James Edwin Ball, Jr., Homer E. Beall, John Henry Beckert, John F. Bolton, Frederick A. Brandt, Anderson F. Brown, Samuel T. Brownfield, Delane Stow Calhoun, Harry Cannon, Richard A. Chapman, William L. Clapper, William Q. Conway, Harry W. Dickerson, Claude W. Eastman, Henry R. Feuerborn, Frank C. Fink, Naokazu Fujimori, Allen G. Fuller, Donald B. Garstang, George O. Gauen, Daniel H. Hope, Alexander E. Horwitz, John R. Hudson, Harry L. Jones, Chiles L. Keithly, Jacob M. Keller, George A. Kilpatrick, George W. Koenig, George B. Kroeger, Ernest A. LeBien, Herman J. Lenz, Robert F. Lischer, Frank L. Long, Earl D. Maloy, Frank S. Marnell, John G. Martin, Earle G. Mayes, Joseph F. Mayes, Lewis R. Monday, John A. Nolan, Arthur H. Rohlfing, Roy Scholz, Charles A. Snodgras, Ira C. Stayner, Harry A. Terry, Frank J. Weber, Roy W. Whaley, Otto L. Wolter, Lathy L. Yerkes.

The West Virginia State Medical Association held its thirty-seventh annual meeting at Fairmont, May 10, 11, and 12, 1904. The following papers were read:

Suicide. Public Lecture, by Dr. S. L. Jepson, of Wheeling; Primary Syphilis of the Faucial Tonsil—Treatment of Syphilis by Inunction, by Dr. G. A. Aschman, of Wheeling; The Surgical Aspect of Typhoid Fever, with Special Refernce to Intestinal Hæmorrhage, by Dr. E. M. Gardner, of Morgantown; Typhoid Fever in and Around Morgantown, by Dr. S. S. Wade, of Morgantown; The Nose, Its Accessory Cavities, and the Mastoid, with an Exhibition of Specimens, by Dr. D. C. Louchery, of Clarksburg; Gunshot Wounds and Their Treatment, by Dr. John R. Cook, of Fairmont; Diphtheria—the True and the False—Its Ætiology, Symptomatology, and Treatment, by Dr. Chester R. Ogden, of Clarksburg; The Need of Legislation for the Benefit of the Medical Profession and the Public, by Dr. G. D. Lind, of New Richmond; La Grippe, by Dr. A. N. Frame, of Parkersburg; Fractures, by Dr. J. W. McDonald, of Fairmont; The Surgical Relief of Abdominal Injuries, by Dr. Frank Le Moyne Hupp, of Wheeling; Subconjunctival Injections of Formalin Solutions for Infectious Corneal Ulcerations, by Dr. V. T. Churchman, of Charleston; Ankylostomiasis in West Virginia, by Dr. A. A. Shawkey, of Charleston; Medical Ethics, by Dr. S. L. Jepson, of Wheeling. The following officers were elected: President, Dr. T. M. Hood, of Clarksburg; first vice-president, Dr. W. C. Jamison, of Fairmont; second vice-president, Dr. E. H Parsons, of Piedmont; third vice-president, Dr A. A. Shawkey, of Charleston; secretary, Dr. William W. Golden, of Elkins; treasurer, Dr. V. T. Churchman, of Charleston. Wheeling was chosen for the next place of meeting.

Ohio Medical College.—The following graduated from this institution in Cincinnati on May 21st:

Earl Ackley, of Cincinnati; Lewis T. Arthur, of Goshen, Ohio; Oliver Dustin Barker, of Marietta, Ohio; Arthur Bartel, of Dayton, Ohio; Charles W. Bausman, of Pleasant

Hill, Ohio; Oscar Behrman, of Covington, Ky.; Oscar Berghausen, of Cincinnati, Ohio; Carroll DeCourcy, of Cincinnati, Ohio; Arthur Earley, of Dayton, Ohio; Hubbert Ellis, of Elk City, Okla. T.; Melvin Fry, of Greenville, Ohio; Norman G. Gholson, of Hilly Springs, Miss.; Samuel S. Haberly, of Cincinnati, Ohio; Charles R. Hancock, of Charlottesville, Va.; Edward Heffner, of Celina, Ohio; Charles D. Heisel, of Cincinnati, Ohio. William Renick Hughey, of Frankfort, Ohio; Walter Scott Johnston, of Blue Ash, Ohio; Louis Marshall, of Sardis, Ky.; William C. Martindill, of McArthur, Ohio; Harry Andrews Mills, of Flemingsburg, Ky.; James Nelson, of Logansport, Ind.; John O'Connor, of Dayton, Ohio; Arthur E. Osmond, of Cincinnati, Ohio; Joseph L. Ransohoff, of Cincinnati, Ohio; Edward Reemelin, of Cheviot, Ohio; George R. Roessly, of Cincinnati, Ohio; Joseph E. Rogers, of Wilson P. O., Ohio; George O. Sikes, of Lebanon, Ohio; Charles W. Smith, of Townsend, Mont.; Frank J. Sofge, of Cincinnati, Ohio; Edwin P. Solomon, of Birmingham, Ala.; Thomas A. Speidel, of Batavia, Ohio; David W. Stephens, of Sandfordtown, Ky.; Harry Stuntz, of Terrace Park, Ohio; Frank Swing, of Bethel, Ohio; Frederick Swing, of Milford, Ohio; Paul Tetrick, of Mason, Ohio; James R. Tillotson, of Manchester, Ohio; Lee Earl Traul, of Bellefontaine, Ohio; Norman Waddell, of Peoria, Ill.; Harry Wayble, of Cincinnati, Ohio; Bertram Weakley, of Cincinnati, Ohio; David Elbert Weaver, of Cincinnati, Ohio; William H. Witherspoon, of Harrodsburg, Ky.; and Jesse Sydney Wyler, of Cincinnati, Ohio.

The American Gastroenterological Association held its annual meeting at Atlantic City, June 6th and 7th. A symposium on gastric ulcer was the chief topic of the proceedings. Dr. Harlow Brooks, of New York, discussed the pathological anatomy, and Dr. W. G. MacCallum, of Baltimore, the pathogenesis. Dr. Campbell Howard (from Dr. Osler's clinic) analyzed the post mortem and clinical statistics of many hospitals in the United States and Canada. Symptomatology, course, complications, sequelæ, and differential diagnosis were discussed by Dr. M. Einhorn, Dr. J. Kaufmann, Dr. M. Manges, all of New York, and Dr. H. W. Bettmann, of Cincinnati. Medical and surgical treatment were discussed by Dr. S. W. Lambert and Dr. J. A. Blake, both of New York; the condition of the blood and urine was discussed by Dr. T. Futcher, of Baltimore, and the occurrence of gastric ulcer in children by Dr. E. G. Cutler, of Boston. Other papers were read by Dr. J. C. Hemmeter, Dr. J. Friedenwald, both of Baltimore; Dr. C. D. Aaron, of Detroit; Dr. F. H. Murdoch, of Pittsburgh, and Dr. F. B. Turck, of Chicago. The following officers were elected for the coming year: President, Dr. S. J. Meltzer, of New York; first vice-president, Dr. F. H. Murdoch, of Pittsburgh; second vice-president, Dr. H. W. Bettmann, of Cincinnati; secretary, Dr. C. D. Aaron, of Detroit; council, Dr. W. G. Morgan, of Washington. The next meeting will take place in New York during the Easter vacation.

The American Urological Association.—The proceedings of the third annual meeting of this association, held at the Windsor Hotel, Atlantic City, on June 8 and 9, 1904, were too late for insertion among the subsidiary meetings in our last issue.

The programme was as follows:

Morning Session, June 8th.—Presidential Address, by Dr. Ramón Guiteras, of New York; demonstration of patients; exhibition of specimens; demonstration of instruments: Dr. Bierhoff presented his new double catheterizing cystoscope. Dr. Valentine and Dr. Townsend presented their interchangeable dilator handle, their new dilator mirror, and their new prostatic electromasseur. Dr. Blue presented his finger extension for prostatic massage and stripping the seminal vesicles.

The President announced that Mr. Heinrich Loewenstein, of the firm of Louis and H. Loewenstein, Berlin, was granted permission to show the association new cystoscopes, dilators, and other instruments recently devised by Professor Max Nitze, Professor Arthur Kollmann, and Dr. E. R. W. Frank.

The following papers were read: The Clinical Value of Microscopical Uranalysis, by Dr. Louis Heitzman, of New York; Hæmaturia Due to *Bilharzia Hæmatobia*, with Report of a Recent Case, by Dr. R. F. O'Neil, of Boston; The Effects Produced on the Urinary Apparatus by Certain Abnormities of the Urine, by Dr. Judson Daland, of Philadelphia; The Pain of Osteoarthritis of the Spine—Its Bearing on the Diagnosis of Urinary Disease, by Dr. Arthur L. Chute, of Boston; Report of a Case of Non-Medicamental Hæmatoporphynuria, by Dr. Heinrich Stern, of New York. A discussion on this group of papers, opened by Dr. James Tyson, of Philadelphia.

Afternoon Session, June 8th.—The reading of the minutes of the last meeting was followed by the presentation of applications for membership. The following were elected to membership: Thomas B. Carpenter, M. D., of Buffalo, N. Y.; T. L. Disque, M. D., of Pittsburgh, Pa.; H. L. Rees, M. D., of New York; Melvin S. Rosenthal, M. D., of Baltimore, Md.; Martin Ware, M. D., of New York; Thomas G. Youmans, M. D., of Columbus, Ohio; Ludwig Weiss, M. D., of New York; J. Francis De Silver, M. D., of Atlantic City, N. J.; Nelson W. Wilson, M. D., of Buffalo, N. Y.; W. B. Wolf, M. D., of Baltimore, Md.; H. R. Loux, M. D., of Philadelphia, Pa.; Guy Hunner, M. D., of Baltimore, Md.

The committee appointed to draft resolutions on the death of Isaac Newton Love reported a series of resolutions.

The following officers were elected: President, W. N. Wishard, of Indianapolis; vice-presidents, W. K. Otis, of New York; W. T. Belfield, of Chicago; secretary, Louis Schmidt, of Chicago; treasurer, W. L. Baum, of Chicago. Executive Committee: G. F. Lydston, H. G. Antony, Winfield Ayres, Ramón Guiteras, Ferd. C. Valentine, H. H. Young, Gardner W. Allen, Granville MacGowan, F. W. McRae.

The following papers were then read: The Position of the Kidney After Nephropexy, by Dr. Augustin H. Goelet, of New York; The Treatment of Catarrhal Pyelitis by Intrapelvic Injections, by Dr. Winfield Ayres, of New York; Additional Cases of Diagnosis of Calculi in the Ureter of Renal Pelvis with Wax-tip Catheter, by Dr. Howard A. Kelly, of Baltimore; Nephrotomy and Ureterotomy for Impacted Ureteral Calculus, by Dr. Willy Meyer, of New York; The Methods of Obtaining Separate Urine from Each Kidney, by Dr. Charles S. Stern, of New York. The Discussion on Renal and Ureteral Disturbances was opened by Dr. John W. Keefe, of Providence.

Morning Session, June 9th.—Technique of Cystoscopy, by Dr. L. W. Bremerman, of New York; A Cystoscope Arranged for Ureteral Catheterism and Operative Work, by Dr. Follen Cabot, of New York; Incontinence of Urine Occuring in Young Men, with Report of Cases, by Dr. T. M. Reade, of Springfield, Ohio; The Importance of Bladder Drainage in External Urethrotomy, by Dr. Oliver C. Smith, of Hartford. Discussion on this group of papers was opened by Dr. Louis Schmidt, of Chicago. The Rôle of the Prostate in Affections of the Urinary Tract, by Dr. A. L. Wolbarst, of New York; A Contribution to the Study of Infections of the Prostate from the Urethra, by Dr. F. Bierhoff, of New York; Abscess of the Prostate, by Dr. John A. Hawkins, of Pittsburgh; Experience Gained from Fifteen Cases of Vesical Obstruction Operated on by Galvano-Caustic Prostatotomy, by Dr. Francis Hagner, of Washington. Discussion on the Prostate was opened by Dr. George Goodfellow, of San Francisco.

Afternoon Session, June 9th.—Alterations in the Posterior Urethra as a Factor in Neurasthenia, by Dr. A. Ravogli, of Cincinnati; Urethral Endoscopy (Presentation of a New Endoscope), by Dr. E. G. Mark, of Kansas City; The Irrigator Versus the Syringe, by Dr. Ferd. C. Valentine, and Dr. Terry M. Townsend, of New York. Discussion on this group of papers was opened by Dr. W. K. Otis, of New York.

The annual dinner was held on Wednesday, June 8th.

Pith of Current Literature.

ZENTRALBLATT FUER GYNAEKOLOGIE.

May 7, 1904.

1. A Case of Chorioepithelioma, By S. VON ZABORSKY.
2. The Responsibility of the Operator, By R. KOSSMANN.
3. A Means of Avoiding Leaving Pads in the Peritoneal Cavity, By H. KREUTZMANN.

1. **Chorioepithelioma.**—Zaborsky describes a severe and rapidly fatal case of chorioepithelioma which developed after an abortion and led to death within three months; the autopsy showed metastases in both lungs and in the vagina.

3. **Pads in the Abdominal Cavity.**—Kreutzmann numbers all the pads and compresses used during abdominal operations. The compresses are placed in packages, each containing twelve, and are numbered, according to size, 1, 2, 3, . . . I, II, III, . . . or a, b, c, etc. At the conclusion of the operation, all the compresses belonging to a set must be accounted for.

BERLINER KLINISCHE WOCHENSCHRIFT

May 2, 1904.

1. Prophylaxis of Infectious Diseases in Schools (*To be concluded*), By F. HUEPPE.
2. Relation Between Facial Anomalies and Those of the Extremities (Acrometagenesis), By V. BAHES.
3. Significance of Blood in the Stool, By G. JOACHIM.
4. Significance of Heat Rays in Treatment with Finsen's Concentrated Light, By W. SCHOLTZ.
5. Pericarditis and Puncture of the Pericardium, By A. DOEBERT.
6. Percutaneous Use of Camphor in Pulmonary Tuberculosis, By W. KOCH.
7. Radium Holder for the Stomach, Œsophagus and Rectum, By M. EINHORN.

2. **Anomalies of the Face.**—Bahes has examined a large number of monsters. He finds that anomalies in development of the face and head, such as early ossification and sclerosis of the base of the skull, as well as amniotic adhesions of the latter, lead to symmetrical anomalies of the extremities. Among the latter, may be noted deficient or supernumerary fingers and metatarsal bones and toes. Bahes assumes the existence of a developmental centre of the extremities the disturbance of dislocation of which induces abnormities.

3. **Blood in the Stools.**—Joachim has studied a number of stools to determine the significance of the presence of blood. He found that after trivial hæmorrhages, such as epistaxis, the result was usually positive, but was mainly negative after an hæmoptysis. In cases of malignant growth of the intestine, blood was always present; in ulcer of the stomach it was found in eighty-three per cent. of the case, but with intervals in which it was absent. In catarrhal jaundice, blood is frequently seen in the stool; menstrual blood and blood from hæmorrhoids are responsible for errors. After severe hæmorrhages, blood can be found in the stools after several days.

5. **Pericarditis.**—Doebert reports 56 cases of pericarditis, of which 19 showed evidences of pericardial effusion. In two of the latter, Doebert performed pericardial puncture to the right of the sternum with good results, in one case actually saving life. The author advises that when the puncture gives little result and it is certain that fluid is present, the upper part of the body be raised and bent forward to facilitate the flow.

6. **Camphor in Pulmonary Tuberculosis.**—Koch has had very gratifying results from the subcutaneous use of camphor in pulmonary tuberculosis as recommended by Alexander. The general condition and the weight, especially, improved, but permanently good results were not noted. He uses camphor percutaneously; he made an ointment containing percutatin, balsam of Peru, and eucalyptus oil, which he rubbed into the skin. The treatment had no apparent influence upon hæmoptysis, but seemed to promote expectoration. The author gives simultaneously hæmatogen internally.

SEMAINE MEDICALE.

May 4, 1904.

The Optical, Acoustic, and Vestibular Chiasmata; Normal, and Pathological Functional Uniformity of the Centres for Sight, Hearing, and Equilibrium, By L. BARD.

Three Chiasmata.—Bard, after proving that the bilateral visual cortical centres have sensorial equivalence and motor synergy in the central field of vision, and a complementary sensorial and motor antagonist character in the lateral fields, by the decussation of nerve fibres, demonstrates a similar action between the two cortical centres of hearing and the two of equilibrium. To supplement the phenomenon of hemianopsia, Bard affirms *a priori* a hemisurdity, and a hemidisorientation.

PRESSE MEDICALE.

April 23, 1904.

1. Headaches of Ocular Origin, By A. TROUSSEAU.
2. Syphilitic Origin of Appendicitis; an Additional Note, By GAUCHER.
3. Prophylaxis of Malarial Fever, By PHILIBERT.

1. **Ocular Headaches.**—Trousseau says that when drugs fail to relieve headache, particularly in the young, an ocular examination will generally reveal the cause, usually astigmatism or hyperopia, but sometimes muscular insufficiency. Neurasthenia and hysteria may often be traced to ametropia. Several cases are cited.

2. **Syphilitic Origin of Appendicitis.**—Gaucher emphasizes his former statement that he meant that the origin only of appendicitis was syphilitic and not the various clinical manifestations of the disease. He says he has been misunderstood in many quarters and is far from advising specific treatment of an attack.

3. **Prophylaxis of Malarial Fever.**—Philibert points out two methods: (1) The cure of all malarial patients that mosquitoes may not become infected; (2) prevention of the mosquito's bite. The first method is advocated by Koch by saturation of the inhabitants of a region with quinine; it is difficult of thorough application and many subjects cannot tolerate quinine. The second method consists in screening all windows and killing larvæ wherever found. The results have been good in

Algiers, where railway stations are successfully protected.

LYON MEDICAL.

May 1, 1904.

Two Cases of Congenital Hydronephrosis Observed in Young Children, By RABOT and BERTIER.

Congenital Hydronephrosis.—Rabot and Berteir give two cases, accidentally discovered, when the ureters had strictures at points just before they entered the bladder. The writers believe that in these cases, the calibre of the stricture represents what was formerly the normal calibre of the ureter, which has not developed symmetrically. The nearer the stricture to the kidney, the greater the danger. Diagnosis is difficult even with the most careful palpation. The best remedial procedure is to create a ureterovesical anastomosis. In the writers' cases perhaps a mere dilatation of the structures with a sound, might have sufficed. The little patients died of intercurrent disease, doubtless enfeebled by their congenital condition.

RIFORMA MEDICA.

March 30, 1904.

1. A Case of Acrohyperplasia, By G. ARNONE.
2. The Value of the Fermentation Method in the Quantitative Estimation of Glucose in the Urine, By DOMENICO RIVARONO.
3. A Case of Senile Granulosis Due to the Dissemination of an Old Cheesy Focus (Thirty-five Years Old), which Remained After a Tuberculous Peritonitis, Probably of a Disseminated Type, which Had Resembled Typhoid Fever, By F. SICURIANI.
4. Contribution to the Study of Foreign Bodies in the Respiratory Passages, By C. V. PICH.

1. **Partial Hypertrophy in a Child, Due to Hereditary Syphilis.**—Arnone reports an interesting case of "acrohyperplasia," or partial hypertrophy, in a girl aged two years. He traces the origin of this phenomenon to hereditary syphilis, and cites other cases from literature to substantiate this theory. The child showed, in addition to a scoliosis and other minor deformities, a marked enlargement of the fingers and toes, which were very long and thin. The author facetiously remarks that Lombroso would have classed this child among the kleptomaniacs, if not among thieves, inasmuch as the latter, who use their fingers a great deal, must have long digits. Arnone thinks that hereditary syphilis, like many other toxæmias, stimulates the production of those tissues of the fœtus that afterward become cartilage and bone in the extremities. This toxic stimulus induces an abnormal activity in the protoplasm of the embryonic parts whence spring the limbs.

2. **Fermentation Test for Glucose.**—Rivarono compared the relative accuracy of three different methods for the estimation of the amount of glucose in the urine; viz.: the quantitative method of Fehling, the polariscopic method, and the method of fermentation with Lohnstein's apparatus. The latter is a U shaped tube which has a long arm and a shorter one ending in a bulb. The bulb is filled with mercury up to the zero mark on the scale of the long arm. A definite quantity of urine is poured over the mercury, a little yeast is added, and the tube is closed with a greased glass stopper. A weight is placed over the stopper in order to prevent its loosening when gas develops during the fermentation. The amount of gas is read off on the scale as indicated by the level of the mercury, and from this the percentage of glucose is determined. The errors of this apparatus are, however, so considerable, that it is not to be regarded as an accurate means of glucose analysis. Both the Fehling's method and the polariscope give more accurate figures than Lohnstein's apparatus. The fermentation test, therefore, may be retained for qualitative work, but for quantitative determinations it is inferior to other methods.

ROUSSKY VRATCH.

April 3, 1904.

1. On the Public Problems Confronting Clinical Medicine in Russia at the Beginning of the Twentieth Century, By S. V. LEVASHOFF.
2. Life and Death (*Continued*), By G. G. SCHLATTER.

1. **Kumyss Treatment in Tuberculosis.**—Levashoff's paper, althzough bearing a general title, is devoted to the consideration of the kumyss treatment of tuberculosis, especially to the status of this question in Russia, where the original kumyss, made from mare's milk, has long been very extensively used as a remedy in consumption. Levashoff points out that the Russian people early recognized the fact that the rational treatment of tuberculosis did not consist in specific medication, but in the improvement of the powers of resistance of the body. This is the object of kumyss feeding, and Levashoff places this therapeutic method at the head of all the public measures which should be adopted in the struggle against the disease in Russia. In the spring and the early summer there is a great annual pilgrimage of consumptives eastward and southward by railroad and down the Volga on steamers. These patients come to drink kumyss in one of the Provinces of Ufa, Samara, Saratoff, Orenburg, etc., and the great majority of the patients belong to the less well situated classes. Levashoff gives statistics that show that over thirty per cent. of consumptives in the first and second stages recover completely on simple kumyss treatment, and that over 37 per cent. are considerably improved. He enters a strong plea for a better organization of kumyss treatment for provision for medical attendance upon poor consumptives who take this "cure" now entirely without medical aid, and for a systematic study of the kumyss treatment.

BOSTON MEDICAL AND SURGICAL JOURNAL.

June 9, 1904.

1. Prognosis, Its Theory and Practice, By GEORGE DOCK.
2. Carcinoma Basocellulare. A Group of Superficial Gland-like Tumors of the Skin of Relatively Slight Malignancy, Including Rodent Ulcer, By S. C. EMLEY.
3. The Relation of the Burn to the Bullet Hole as Evidence of Homicide vs. Suicide: Report of the Nagle Case, By JAY PERKINS.

1.—Abstracted in our issue of June 11th. Report of the meeting of the American Medical Association, page 1158.

2. **Carcinoma Basocellulare.** — Emley has studied microscopically and clinically 37 tumors of

this variety occurring in thirty-five cases. Krompecher was the first to call attention to these peculiar growths, which are neither typically carcinomatous nor adenomatous in structure or development. Clinically they appear as fungoid tumors or as ulcers occurring most frequently in the skin of the face or of the female breast. They may occur on other parts of the body, but never at the junction of mucous and epidermal surfaces. Histologically they originate from the Malpighian basal layer or its embryologic equivalents. Krompecher distinguished six forms of these tumors. All the author's cases can be assigned to three types or to a mixture of these types. (1) The bulbous form. (2) The cystic form. (3) The styloid form. The author minutely describes the histological structure of each of these types. Brief clinical histories are recorded of all the thirty-five cases. The chief points of interest are also shown in tabulated form.

3. **The Relation of Burn to Bullet Hole.**—Perkins asserts that the major part of the burn, produced by a pistol shot at close range, is uniformly found on the hammer or sight side of the barrel. This relation of burn to bullet hole is more marked up to the point at which the burn fails to appear, the farther the revolver is held from the object fired at. The author discovered these facts for himself, but makes no claim to originality, since on looking up the literature he found that Fish, in 1884, showed that unless the revolver was held firmly as in a vice, there was no exception to the rule that the greater part of the burn will occur on the sight side of the pistol barrel. This observation is destined to be of the greatest importance in medicolegal work.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

June 11, 1904.

1. Some Aspects of Medical Education. President's Address, By JOHN H. MUSSER.
2. Prognosis: Its Theory and Practice. Oration on Medicine, By GEORGE DOCK.
3. The Association of Surgical Lesions in the Upper Abdomen. Oration on Surgery, By WILLIAM J. MAYO.
4. Preventive Medicine: Its Achievements, Scope, and Possibilities. Oration on State Medicine, By HERMANN M. BIGGS.
5. The Prophylaxis of Tetanus, By S. C. STANTON.
6. Prostatectomy. Report of 51 Cases Operated on from May 6, 1901, to February 28, 1904 (*To be continued*), By JOHN B. MURPHY.

1, 2, and 3.—Abstracted in our issue of June 11th. Report on the meeting of the American Medical Association.

4.—Abstracted in this issue. Report of the American Medical Association.

5. **Tetanus.**—Stanton asserts that, according to the census of 1900 there were 1,664 deaths from tetanus in the United States. In 1903 the deaths from tetanus following Fourth of July injuries were estimated at 406. The author considers that these figures and the near approach of the national holiday justify discussing tetanus prophylaxis even if there is nothing new to say on the subject. In the author's opinion the prophylactic treatment of tetanus requires the fulfillment of the following conditions: (1) The enforcement of existing laws regarding the sale of toy pistols and other dangerous toys. (2) The enactment of laws by Congress, State legislatures, and municipalities, prohibiting the manufacture and sale of toy pistols, blank cartridges, dynamite canes and caps, cannon crackers, etc. (3) The open treatment of all wounds, however insignificant, in which from the nature or surroundings there is any risk of tetanus. (4) The immediate use of tetanus antitoxine in all cases of Fourth of July wounds, wounds received in barnyards, gardens, or other places where the tetanus bacillus is likely to be present or tetanus infection to occur. (5) The injection of tetanus antitoxine as soon as tetanic symptoms become manifest. When the infection has so progressed that tetanus symptoms appear, the use of antitoxine is a forlorn hope.

MEDICAL NEWS.

June 11, 1904.

1. Some Aspects of Medical Education, By JOHN MUSSER.
2. The Association of Surgical Lesions in the Upper Abdomen, By WILLIAM J. MAYO.
3. Prognosis: Its Theory and Practice, By GEORGE DOCK.
4. Preventive Medicine: Its Achievements, Scope, and Possibilities, By HERMANN M. BIGGS.
5. Pathology and Treatment of Simple Fracture of the Patella, By ELLSWORTH ELIOT, JR.

1, 2, and 3.—Abstracted in our issue of June 11th. Report on the meeting of the American Medical Association.

4.—Abstracted in this issue. Report of the American Medical Association.

5. **Fracture of the Patella.**—Eliot strongly advocates treating simple fractures of the patella by the operative method. The advantages and disadvantages of the conservative and of the operative methods of treatment are compared at some length. The author reports thirteen cases of fractured patella treated by suture. In every case he obtained primary union and there was complete restoration of the joint function, both in the arc of flexion and of extension and in joint strength as a whole. The author gives the following as his choice of treatment: (1) Before operation. Rest in bed with a posterior splint to the affected knee and hot and cold applications. This is continued until the local symptoms have somewhat subsided. In any case operation should not be delayed for more than ten days. (2) Operation. The patella is best exposed by a curved incision with its convexity downward. The fractured patella, the deep fascia, the skin and subcutaneous tissue are united by chromic gut sutures; dry gauze is applied to the wound and the leg, from the groin to the foot, is put up in a plaster dressing. Drainage should be used only if oozing continues after the final irrigation to which the joint is subjected. Passive motion is begun at the end of the tenth day. At the end of the third week the splint is removed. At the end of the fourth week active flexion is allowed. At the end of the fifth week the patient is encouraged to go up and down stairs. A practical cure should be expected between the fourth and sixth month.

The author holds that a study of his cases warrants the following conclusions: "(1) That, owing to the not infrequent uncontrollable rotation of the lower fragment, through an arc of 90 degrees on its horizontal axis, accurate apposition of the fractured surfaces cannot always be secured and under these circumstances the ultimate result of conservative treatment could scarcely prove satisfactory. (2) That suitable apposition may also be prevented by the interposition of torn shreds of capsule, by extravasated blood clot and possibly also by the interposition of untorn periosteum, conditions which can be recognized and remedied only by exploration. (3) That suture of the fragments permits of simultaneous suture of the torn capsule, a procedure of the greatest importance for restoration of joint security. (4) That the results of suture are almost invariably excellent, and that the risk of operation is comparatively slight. (5) Finally, that in no way does the writer desire to belittle the risk of operation. On the contrary, the exercise of the most rigid aseptic precautions both in the preparations for and in the carrying out of the operation itself cannot be too greatly emphasized. Far better, in any instance, where for any reason, the highest degree of surgical asepsis cannot be practised, to advise some non-operative procedure than to subject the patient to the possibility of a septic arthritis with all its direful consequences."

MEDICAL RECORD.

June 11, 1904.

1. The Association of Surgical Lesions in the Upper Abdomen, By WILLIAM J. MAYO.
2. Prognosis: Its Theory and Practice, By GEORGE DOCK.
3. Preventive Medicine: Its Achievements, Scope and Possibilities, By HERMANN M. BIGGS.
4. Exercise in Relation to Diabetes, By LOUIS BARKAN.

1 and 2.—Abstracted in our issue of June 11th. Report on the meeting of the American Medical Association.

3.—Abstracted in this issue. Report of the American Medical Association.

4. Exercise in Relation to Diabetes.—Barkan reports the following case: A man, fifty-eight years old, in whose urine sugar occasionally appeared, was operated on for a small lipoma of the shoulder. He had never had any of the symptoms of diabetes. The sugar in the urine would always disappear after abundant exercise. About ten days after the operation on the shoulder the wound began to break down. Various expedients to promote healing were resorted to in vain. The patient was then ordered to take vigorous exercise, and from the very day he began to carry out his orders improvement set in. At the end of two weeks the wound was healed.

AMERICAN MEDICINE.

June 11, 1904.

1. Tuberculous Pericarditis, with Report of Cases, By CHARLES G. STOCKTON.
2. Some Aspects of Medical Education, By JOHN H. MUSSER.
3. Prognosis: Its Theory and Practice, By GEORGE DOCK.
4. The Association of Surgical Lesions in the Upper Abdomen, By WILLIAM J. MAYO.
5. Preventive Medicine: Its Achievements, Scope, and Possibilities, By HERMANN M. BIGGS.
6. Society for Experimental Biology and Medicine, By WILLIAM J. GIES.

1. Tuberculous Pericarditis.—Stockton reports, with autopsy, three cases of tuberculous pericarditis. Case 1. The interesting features of this case were: Severe and abrupt onset; advent of constitutional symptoms before the appearance of physical signs; severe and repeated pleurisies, a perihepatitis, a pericarditis. At autopsy, except in the pericardium, no evidence of tuberculosis was found in any of the serous sacs. The source of the pericardial infection could not be discovered. Case 2. Features of the case: Insidious onset of the pericarditis and of a double pleural effusion. At autopsy were found evidences of an old pleurisy and tuberculous lesions of both apices. Case 3. This case was of slower onset than the preceding one. There was no pericardial effusion, the pericardial cavity was obliterated. The author summarizes his study as follows: (1) Tuberculous pericarditis is not a rare affection. (2) The diagnosis is usually not made except in cases with simultaneously active tubreculous processes in other parts. (3) The concurrence of pleurisy with bloodstained effusion may be regarded as suggestive. (4) The pericarditis may be of a chronic obliterative type, or there may be massive effusion, generally sanguinolent, but rarely purulent. (5) It may be acute, continuing for but a few days, or chronic, existing for many months. (6) It may be a part of a multiple serositis, and the proportion of cases in which at least one or more of the pleural cavities are involved is remarkable. (7) The disease is to be regarded as a secondary affection, although from a clinical point of view, some cases may be looked upon as primary. (8) The point of origin of the infection is often found in the bronchial and mediastinal lymph nodes, although these may be quite exempt from the disease. The infection may be direct from continuity of tuberculous tissue, or by transmission through lymph vessels or through the circulation. (9) The heart may be greatly enlarged, or normal in size, or even somewhat small. (10) Some observers believe that occasionally the process subsides and that comparative cure results.

2, 3, and 4.—Abstracted in our issue of June 11th. Report on the meeting of the American Medical Association.

5.—Abstracted in this issue. Report of the American Medical Association.

6. Society for Experimental Biology and Medicine.—Gies, in his capacity of secretary, records eight abstracts of reports on original investigations conducted by members of the Society for Experimental Biology and Medicine. The titles of the abstracts are: *(a)* The lecithin content of fatty extracts from the kidney. By E. K. Dunham. *(b)* On the phloridzin test in Bright's disease. By P. A. Levene and L. B. Stoockey. *(c)* Effect of blood-serum in pneumonia upon the heart. By Isaac Adler and Richard Weil. *(d)* The influence of alcohol on biliary secretion. By William Salant. *(e)* The influence of repeated external hæmorrhages on the general composition of the blood. By G. M. Meyer and W. J. Gies. *(f)* Demonstration of a new portable Sphygmomanometer. By T. C. Janeway. *(g)* Demonstration of cytologic preparations. By Naohidé Yatsu. *(h)* The influence of subcutaneous injections, and of instillations of adrenalin upon the pupils of frogs, with demonstrations. By S. J. Meltzer and Clara Meltzer Auer.

BRITISH MEDICAL JOURNAL.

May 28, 1904.

1. Cough and Its Significance, By F. J. Smith.
2. Common Causes of Error in Examination of the Chest, By J. E. Squire.
3. Tuberculosis in the South of Ireland, By J. D. Wynne.
4. Primary Intestinal Tuberculosis in Children; Perforation of Ulcers, By N. Raw.
5. Suprarenalin in Pulmonary Hæmorrhage, By D. Macdonald.
6. A Case of Hæmophilia Treated with Adrenalin Chloride, By E. Francis.
7. On the Physical Examination of 1,580 Girls from Elementary Schools in London, By F. M. D. Berry.
8. Note on the Occurrence of Leishman-Donovan Bodies in "Cachexial Fevers," Including Kala-Azar, By L. Rogers.
9. The Leishman-Donovan Body, By Sir P. Manson, and G. C. Low.
10. "Leishmania Donovani" in the Soudan, By S. Neave.
11. Note on the Lymphatic Glands in Sleeping Sickness, By E. D. W. Greig, and A. C. H. Gray.

1. **Cough.**—Smith divides coughs into two classes only: (1) The cough useful; and (2) the cough ornamental or useless. The useful cough should be encouraged, the one that is useless should if possible be checked. Among the causes of coughs are plugs of wax in the ear, pharyngotonsillar troubles, the specific febrile diseases, diphtheria, laryngeal and tracheal troubles, gastric disorders, and, finally, diseases of the lungs. The author goes into the question of diagnosis of causes, and the information to be obtained from the history of the case. For nearly everything except actual trouble in the mouth gargles are practically useless. A one in sixty lotion of carbolic acid is a very useful application to the posterior pharynx in cases of relaxed throat. Potassium iodide is more useful for adults than for children in assisting cough. Belladonna gives better results in children than almost any other drug.

4. **Intestinal Tuberculosis.**—Raw states that primary tuberculosis of the intestine is a very rare condition to meet with *post mortem.* In 600 autopsies on tuberculous subjects, primary intestinal ulceration was present in only three instances. These three cases all occurred in children under three years of age. The author's clinical and experimental work is entirely in accord with the views of Koch and the conclusions of the German Imperial Commission: viz., (1) that there is a distinct difference between the bacilli of human and bovine origin, and (2) that bovine tuberculosis is conveyed to children by means of infected milk, but not to any great extent. The author thus believes that man is attacked by two distinct varieties of tubercle, one conveyed by infection from one person to another, the other by receiving into the body bovine bacilli from infected milk. The bacilli in the latter case readily pass through the intestinal wall into the nearest lymphatic glands, leaving no visible trace on the intestine. Thus tuberculosis may rapidly spread to all the viscera in the body, or may remain localized in the mesenteric glands. It is thus of the highest importance that tuberculosis among dairy cattle, especially those effected in the udder, should be recognized early and the cattle removed at once, and also that milk should be sterilized for all children under the age of ten years.

5 and 6. **Suprarenal Extract.**—Macdonald reports a case of pulmonary tuberculosis with hæmoptysis in which suprarenal extract was given, but without effect. In fact, the patient died of hæmorrhage. Owing to its elevation of the blood pressure, the drug would indeed seem to be contraindicated in such cases. Francis reports a case of hæmophilia occurring in a young Hindu treated with adrenalin chloride. Although the case ultimately proved fatal yet the bleeding from the pharynx and uvula was checked promptly.

7. **Examination of School Girls.**—Berry reports the results of the physical examination of 1,580 London school girls. She found no instance of serious lung disease of any kind: cardiac murmurs indicative of organic heart disease were present in eight per cent. of the cases; lateral curvature of the spine twelve per cent.; color blindness none; errors of refraction thirteen per cent.; defective hearing eight per cent.; enlarged tonsils or adenoids ten per cent. Albuminuria was present in nearly ten per cent. of the cases: in the majority of cases the condition was not merely accidental and transitory, but was more or less permanent. No evidence was found, however, of consequent deterioration of health, and the albuminuria tended to diminish in most of the cases, disappearing in a great many while under observation.

8, 9, and 10. **Leishman-Donovan Bodies.**—Rogers has found the Leishman-Donovan parasite in a number of cases of cachexial fever—indistinguishable clinically from similar cases due to the malarial parasite. The new parasite resists quinine more strongly, and produces cachexia more quickly. In seven cases of undoubted kala-azar the parasites were found in five. Manson and Low report the finding of Leishman-Donovan bodies in a case of kala-azar examined by them *post mortem.* Neave reports a case of cachexial fever due to these bodies, occurring in the Soudan.

11. **Sleeping Sickness.**—Greig and Gray report that in fifteen cases of sleeping sickness they found actively motile trypanosomes in specimens prepared from the contents of the cervical lymphatic glands during life. The typanosomes were far more numerous in the glands than in the blood or cerebrospinal fluid. A superficial gland is readily punctured with a hypodermic syringe and some of the juice sucked out. This is a much more rapid and satisfactory method of diagnosticating early cases than the examination of the blood.

LANCET.

May 28, 1904.

1. Some Disorders of the Spleen (Lumleian Lectures: I), By F. TAYLOR.
2. Acute Infective Gangrenous Processes (Necroses) of the Alimentary Tract (Erasmus Wilson Lectures: III), By E. M. CORNER.
3. On the Surgical Treatment of Diseases of the Stomach from a Physician's Point of View, By J. L. STEVEN.
4. Five Cases of Carcinoma of the Male Breast, By C. R. KEYSER.
5. A Case of Congenital Deficiency of Both Upper Limbs, By H. A. GAITSKELL.
6. On Three Cases of Suprarenal Apoplexy in Children, By F. LANGMEAD.
7. Further Note on Some Additional Points in Connection with Chloroformed Calf Vaccine, By A. B. GREEN.
8. Wound of the Left Thorax, with Extensive Laceration of the Pleura, Etc., By E. WYNSTONE-WATERS.
9. Gynæcomastia, By E. S. CRISPIN.

1. **Diseases of the Spleen.**—Taylor, in his first Lumleian lecture, states that capsulitis, perisplenitis, or thickening of the capsule is one of the most frequent lesions of the spleen, but that the condition probably is of little clinical importance. Enlargement of the spleen may arise from a number of causes, which may be roughly classified under (1) infections; (2) inflammations; (3) infarction; (4) passive congestion; (5) lardaceous disease; and (6) tumors, cysts, etc. Among the very large spleens only a few causes are represented: malaria, typhoid fever, cirrhosis of the liver, and ulcerative endocarditis. New growths in the spleen are comparatively rare; and extremely so if tuberculosis and Hodgkin's disease are excluded. In conclusion the author reports thirteen cases of enlarged spleen with anæmia; a consideration of these cases shows that the diagnosis of splenic enlargement depends very little upon the condition of the spleen as such, but almost entirely upon the other associated conditions, especially the state of the liver, of the heart, and of the blood. The size alone counts for anything.

2. **Acute Intestinal Gangrene.**—Corner, in his third Erasmus Wilson lecture, takes up the bacteriology of acute infective necrosis of the intestine. He shows the universal activity of microorganisms and the probable supreme importance of the rôle of septic cocci in the production of infective necrosis. Much has been done to remove from the walls of the alimentary canal their traditional character for delicacy and their proneness to become gangrenous on the least provocation. The tissues of the alimentary tract are liable to exactly the same laws of life and death as the others which constitute the body. But owing to the natural septicity of the contents of the intestinal tract moist gangrene —i. e., septic death or necrosis—is infinitely more common than dry gangrene—i. e., aseptic necrosis. Pyogenic cocci are markedly more common in the acute than in the chronic forms.

3. **Gastric Surgery.**—Steven's paper treats of his experience, as a physician, with the results of the surgical treatment of diseases of the stomach. During the past eight years 220 cases of stomach disorder have come under his notice. Of these 23 were treated surgically, as follows: Cancer, 13; ulcer, 4; hæmatemesis, 2; simple dilatation, 3; and stricture of the œsophagus, 1.

In only 2 of the 13 cancer cases could pylorectomy or radical removal of the tumor itself, be done: both patients died. A gastroenterostomy was performed in 6 instances, in 5 of which recovery took place. In the remaining 5 cases nothing more than an exploratory operation was done. Of the 4 cases of ruptured gastric ulcer, 3 patients died shortly after operation. In these cases time is a factor of the very highest moment. Not much reliance can be placed on the presence or absence of liver dulness as a diagnostic sign, but the development of a rapid leucocytosis is a valuable indication of the necessity for operation. Both of the cases of operation for hæmatemesis proved fatal; in one the bleeding was from an ulcer, in the other from a "pore-like" erosion. The results of operation in the cases of dilatation of the stomach were excellent.

4. **Cancer in Men.**—Keyser reports five cases of cancer of the male breast, and shortly reviews the literature of the subject. The age at which the disease occurs in men varies from 12 to 91 years. The right breast is the one most often affected; in women the left side is most frequently involved. The mean duration is about 3.36 years: the longest being ten years, and the shortest three months. Ulceration is present in a very large proportion of all cases. Of the author's five cases, three were scirrhus, one spheroidal celled, and one squamous celled carcinoma. The treatment should be the removal of the whole breast, the skin over the breast, the fascia covering the pectoralis major, and all the fat and cellular tissue in the axilla.

6. **Suprarenal Apoplexy.**—Langmead reports three cases of sudden death in infants, due to hæmorrhage into the suprarenal capsules. The train of symptoms is very definite. A child previously well is suddenly seized with acute abdominal pain and vomiting, the temperature rises, and one of the exanthemata is suspected. No characteristic rash appears, however, though sometimes there is purpura. Convulsions supervene, the patient becomes moribund, and death occurs in a few hours. If the condition is an infection presumably, it is a special infection of unknown origin. Bacteriological examination has proved negative in almost every case.

7. **Chloroformed Vaccine.**—Green states that his experience of the further use of the chloroform process in the preparation of vaccine, has confirmed his original conclusions as to the great value of the method and its efficacy in destroying extraneous microorganisms in the vaccine. Chloroformed calf vaccine, if originally of sufficiently high potency, will, when prepared and stored under suitable conditions, retain for a considerable time a high degree of potency, and this, notwithstanding that the extraneous organisms had been rapidly eliminated from it in an early stage of its preparation.

9. **Gynæcomastia.**—Crispin states that, contrary to the observations of others, true hypertrophy of the mammary gland in men is very rare in Egypt. The majority of such cases are only apparent, and are due to excessive fat.

AMERICAN MEDICAL ASSOCIATION.

Fifty-fifth Annual Session, Atlantic City, June 7, 8, 9, and 10, 1904.

HOUSE OF DELEGATES.

Fourth Day, Thursday, June 9, 1904.

The president, Dr. JOHN H. MUSSER, in the chair.

Adoption of the Resolution in Regard to Wood Alcohol.—Dr. J. N. MCCORMACK, of Kentucky, said that the reference committee reported favorably on the resolution that the employment of wood alcohol had been responsible for a large number of deaths and many cases of blindness, and as even confined fumes might cause blindness, the Committee on Legislation should secure action designating this substance as a poison and regulating its sale. This resolution was unanimously adopted.

The Scientific Exhibit.—Dr. F. B. WYNN, of Indianapolis, reported that this exhibit had been introduced as a feature of the American Medical Association four years ago. It consisted of subjects illustrating the work of the various sections. The present exhibit surpassed any previous one, both in artistic work and in size. Research exhibits were desirable, but did not constitute the prime object of the exhibit; they wanted such work as would be instructive to the great rank and file of the profession. He said that in preparing the exhibit a wholesome rivalry among different cities had been aroused, and related several instances which served to illustrate the advance that had been made in the artistic work of the various exhibits. Few institutions had creditable museums or specimens for teaching purposes, and the work of the American Medical Association had started up considerable activity in this direction. Competent demonstrators were present at certain hours daily, in order to explain the exhibits.

Invitations to Appoint Delegates.—Dr. JOHN H. MUSSER read invitations to the American Medical Association, asking that they appoint delegates to the International Congress, at Bordeaux; the X Ray Congress, at Berlin, and to the International Congress of Medicine. These invitations had been accepted and the delegates would be appointed later.

Recommendation of the Section on Dermatology.—Dr. MUSSER read a recommendation from the above named section, recommending that the American Medical Association, in view of the United States having acquired possessions where leprosy existed, should urge upon the federal authorities the necessity for a hospital and laboratory accommodations in such localities for the study of this disease.

National Legislation.—Dr. C. A. L. REED, of Cincinnati, Ohio, reported that his committee favored the resolution endorsing the action of the postmaster-general in respect to the use of the United States mails for the distribution of literature and drugs intended to deceive the public. The house adopted this resolution.

Report of Committee on the Establishment of a National Bureau of Medicines and Foods.—Dr. E. ELLIOTT HARRIS, of New York, reported that the committee had decided to lay the matter before the House of Delegates, as they were unable to come to a decision. This resolution asked for the establishment of a Bureau of Medicine and Foods, which should pass upon the purity, identity, quality, strength, etc., of foods and drugs, in order to protect physicians and pharmacists and the public from all doubtful or harmful compounds.

Dr. MOYER, of Illinois, said that a National Bureau of Food and Drug Registration already existed. He thought that on account of the vastness of the proposition it was not practicable. Such a measure, in the form of the Hepburn Bill, was already before Congress. He believed that the best thing the American Medical Association could do along this line was to urge Congress to give us adequate legislation.

Dr. PHILLIP MILLS JONES, of California, said that he had obtained the opinion of competent lawyers, and they had informed him that the formation of such a bureau would not interfere with national legislation, but would help it. He had said that it was the opinion of Dr. Wiley, of the Department of Agriculture, that such a bureau would supplement the national work.

After a prolonged discussion along these lines, the committee finally recommended to the House of Delegates that the matter be indefinitely postponed.

Committee on Reapportionment.—Dr. W. S. FOSTER, of Pittsburgh, said that the House of Delegates would consist next year of 150 members, as at present—that was, one member to every 500 physicians. He then read the apportionment by States.

Committee on Section and Section Work.—Dr. M. L. HARRIS, of Illinois, reported that they could not recommend the appointment of a permanent committee on section work.

Report of Committee on National Incorporation.—Dr. JOSEPH D. BRYANT, of New York, presented a petition to be sent to Congress setting forth the objects and aims of the American Medical Association, and asking that a charter be granted them by special act of Congress. A copy of this petition was given to a delegate from each State, in order that he might get the signatures of the members of the profession in his own State.

Election of Officers and Place of Meeting.—These were given in our issue for June 11th, page 1166, as also the place of meeting.

Dr. A. Maitland Ramsey, of Glasgow, Scotland, and Dr. A. Logan Turner, of Edinburgh, Scotland, were elected honorary members of the association.

Addresses at the general meetings of the association next year will be as follows: General Medicine, Dr. Charles Stockton, of Buffalo; Surgery, Dr. John Collins Warren, of Boston; State Medicine, Dr. George Brannan.

GENERAL SESSIONS.

EVENING MEETING.

Third Day, Thursday, June 9, 1904.

The Oration in State Medicine was presented by Dr. Hermann M. Biggs, of New York. After mentioning various instances of the reduced mortality of late years, Dr. Biggs spoke of the varying degrees in which different communicable diseases seemed to call for official intervention of one sort or another. As regards this part of the oration, we have space only for his remarks on typhoid fever. He said:

There are certain very large and important questions of prophylaxis connected with the prevalence of typhoid fever and the milk and water supply of our large communities. The occurence of great outbreaks of typhoid fever, such as the epidemics at Ithaca, N. Y., and Butler, Pa., during the last year, the prevalence in Philadelphia, Pittsburgh, and some other cities of the United States, and the extensive distribution in the rural districts, constitute a disgrace to American preventive medicine and should arouse the sanitary authorities, the medical profession, and the people to the provision of efficient measures and the enactment of suitable legislation for its prevention.

The annual cost of typhoid fever in sickness and death throughout the United States would be computed in terms of tens of millions of dollars. All of this loss we know is certainly preventable. If only a small portion of the annual outlay made by the country for sickness and death from this cause were expended in the education of the people as to the cause and the methods of prevention of this disease and the provision of proper water and sewerage systems, typhoid fever might soon become a rare affection. Unfortunately the city sanitary authorities are often almost powerless in this matter, as their jurisdiction does not extend over the watersheds which supply with water the people under their care, and a supervision by them of the sources of the milk supply is also frequently absolutely impossible.

In New York city detailed investigations of all the cases of typhoid fever occurring within the city limits were instituted several years ago and have been continuously carried on. These show that at least twenty-five per cent. of the cases occurring in the city have *certainly* received their infection outside of New York city, and a considerable percentage more have *probably* received it outside. Five or six per cent. are the result of contact with other cases, and the remainder are in all probability almost wholly the result of infection through milk or oysters. Some more comprehensive measures are urgently demanded to extend the jurisdiction of the authorities in the supervision of the supplies of milk and oysters and other foods.

A serious objection which may be urged against the adoption of the measures here recommended in regard to the registration of many infectious diseases is the increased labor thrown on physicians which their enforcement would involve. The question may properly be asked: Whether the sanitary authorities in the interest of the general public may call on the medical profession for the expenditure of so much time and labor without making any compensation in return. There are thirty-five diseases included in the New York list. The English authorities pay a fee for the notification of each case of infectious disease, and I believe that this course might properly be pursued in this country; but this has not been the custom here, and the authorities generally are not now provided with the funds necessary for this purpose.

When the Department of Health of New York city established its bacteriological laboratories, in 1892, measures were adopted to make some return to physicians for their interest and labor in connection with the sanitary surveillance of the infectious diseases. A systematic plan was then inaugurated, and has since been consistently followed, to secure their cooperation, by offering free bacteriological examination in the diagnosis and surveillance of various forms of infectious disease. This was first applied to Asiatic cholera in 1892, during the outbreak in New York Harbor, and has since been extended to all of the diseases in which existing scientific knowledge made it possible, cerebrospinal meningitis being the latest disease added to this list. The establishment of this system of free bacteriological examinations in the diagnosis and surveillance of the infectious diseases, and the provision of facilities throughout the city for the collection of specimens and the sending of reports to physicians, constituted an entirely new departure in sanitary work and has been of the greatest value. The example of New York has been followed by the sanitary authorities in most of the large cities of this country, by many State authorities, and by authorities generally in Great Britain and to a certain extent on the Continent. These examinations constitute the return which the authorities here have made to physicians for the reporting of cases and for their assistance and cooperation in their care. This return has a very considerable money value, when we remember that for such examinations the usual fee is $5, and as physicians cannot, as a rule, make such examinations themselves, they must work without the assistance thus afforded, unless they appeal to the regularly constituted laboratories.

What, now, are the possibilities of preventive medicine as concerns the larger centres of population? In answering this question we may first take as the basis of our reply the conditions found in some of the large cities with the lowest death rates, or still better, the conditions found in some healthy rural districts. In considering the crude death rates, as ordinarily reported, however, one must not ignore the influence of the sex and age distribution of the population on the death rate. . . .

We can hardly use for a basis of comparison the conditions in any of the cities of this country with very low rates, because the rates have not been corrected, and the basis on which they are calculated cannot always be accepted as correct. Taking all the facts together, and judging of the duration of human life as we know it, we may accept a corrected death rate of fourteen or fifteen in a large city as a goal toward which preventive medicine should strive and hope to achieve. If we consider the question from another point of view, as to what is possible in the reduction of the death rate from distinctly preventable diseases, we should reach a conclusion not unlike the previous one.

In New York city it may be assumed that the present tuberculous death rate of 2.7 may, under proper surveillance, with certainty be reduced to 1.2, and 1.5 point would thus be subtracted from the crude rate. The diphtheria death rate, already reduced 65 per cent. by the use of antitoxic serum, should certainly be reduced to one third of what it is at present; it is now about 0.6 per 1,000 population. Similar reductions should be possible in the death rate from typhoid fever, measles, and scarlet fever. The diarrhœal diseases of infants have already been reduced in the last twelve years to one half of their former prevalence, and should still be reduced more than 50 per cent. Thus more than 3 points may be subtracted from the crude rate in New York, which in 1903 was 18.18. The rate would then be 15+. The rate for 1903 was the lowest in the history of the city.

The most fatal affections with which we have now to deal in New York are the acute respiratory diseases, including influenza, lobar pneumonia, bronchopneumonia, and acute bronchitis. The average death rate from this group of diseases now exceeds 3 per 1,000 of the population, and in years when there is an epidemic prevalence of these diseases the death rate may be 4 or more, as seems likely to be the case this year.

The advances in preventive medicine have as yet not only had no influence in reducing the death rate from this group of diseases, but, on the contrary, there has been a slow and continuous increase. I cannot at this moment point out the method or the means by which a reduction is to be brought about, but still I firmly believe that with fuller knowledge such a reduction will become possible in the great cities where these diseases are so prevalent.

Something can be accomplished through the closer sanitary surveillance of the occupations and conditions under which the lower classes work, especially the noxious trades. Something, too, may be done through a closer supervision of foods to insure their purity and freedom from adulteration.

A very difficult problem arises in connection with the diseases of the circulatory apparatus and the kidneys. My investigations have shown that in New York city a large increase has taken place, due to these causes, during the last twenty years. The acute respiratory diseases, cancer, and diseases of the circulatory apparatus and the kidneys are the only important causes of death which have shown an increase during this period. The increase in cancer amounts to about 15 per cent., and the increase in the acute respiratory diseases amounts to about 15 per cent., while the increase in the diseases of the circulatory apparatus and kidneys combined equals about 40 per cent. In making this statement I have taken fully into consideration the possible influence of greater accuracy in the death returns, i. e., the inclusion formerly of these under other causes of death; but after making all allowances, it seems to me without question that an increase equaling 40 per cent. has taken place.

A very important sanitary problem is here presented to the health authorities. What are the factors in the lives of the inhabitants of our large cities (for I have found that similar increases, less extensive, however, have taken place in London, Paris, and Berlin) which have caused such a remarkable increase in the prevalence of these affections, and how are these factors to be removed?

The time at our disposal does not permit of more than this elementary and cursory review of the work in preventive medicine. Sufficient facts have, however, been adduced to show how great have been its achievements, and some of the directions have been indicated in which its scope should be extended. With such extensions, and many others not mentioned, the future possibilities of preventive medicine seem to be even greater than the past achievements, for almost every development in bacteriology opens up a new field of work for the sanitary authorities.

SYMPOSIUM. THE DEPARTMENTS OF SCIENTIFIC RESEARCH OF THE GOVERNMENT.

The Bureau of Animal Industry; Its Service to Medical Science.—Dr. W. H. Welch, of Baltimore, considered this subject. He said that this bureau had been established in 1884 for the purpose of conserving the animal industry by the study and control of the diseases of animals that caused the greatest losses. Diseases affected animals just as they did human beings, and their pathology was the same. consequently their study threw much light on the science of medicine. Some of the results of the scientific researches of the staff of the Bureau of Animal Industry had been the eradication of pleuropneumonia of cattle by killing both the diseased animals and those that had been exposed to infection, which effected a saving of millions of dollars. Foot and mouth disease had been eradicated in a similar way. A study of hog cholera had led to the finding of its bacillus, which had pointed the way to the research study of immunity. One of their most brilliant attainments had been the control of Texas fever by the discovery of the microorganism, a protozoal parasite which was conveyed by the cattle tic. They had collected important information about rabies, and had studied animal parasites and taken measures to exclude the introduction of Oriental parasites into this country. They had been studying tuberculosis for over ten years. They had discovered that immunity in cattle could be attained by injecting attenuated cultures. They had investigated Koch's theory of the transmission of tuberculosis and had proved that cattle could be infected by human beings, and it seemed that the reverse might be possible. He hoped that national legislation might be secured by which the government would take as great interest in the study of human disease as it had shown in the study of animal disease.

The Service of the Medical Profession to the Bureau of Animal Industry.—Dr. D. E. Salmon, of Washington, D. C., said that he had been engaged in the work of this bureau for twenty years. He had found that no matter how useful and effective the work might be, it needed the support and encouragement that could be given from outside sources. He proceeded to explain their methods of protecting the food supply by preventing animal diseases and by insuring a bountiful supply of food for the future. They maintained stations for the inspection of all animals coming into or going out from this country. All animals in large abbatoirs were inspected before killing and after they were dressed. That such supervision was absolutely necessary was shown by the fact that out of 37,000 000 cattle inspected annually, 65,000 were unfit for use as food, and 18,000,000 animals had been shipped under supervision and the cars that they occupied disinfected afterward. This work was met by enormous opposition from commercial interests. It very often seemed that there was no conscience and no philanthropy in commercial life. In the investigation of disease, they were constantly met by those who were opposed to experimental work on animals, entirely losing sight of the great ends that were furthered through this meeting. There was a never ending battle to be waged with this class of people, and here the medical profession could give great assistance to the bureau. The freedom of the investigator must be preserved if important problems were to be solved that would secure a pure and abundant food supply and help the science of medicine as well. The medical profession should support this work by assisting to secure the right to use the most effective remedy for the eradication of disease, and in the right to produce pure immunizing agents. This meant a continual conflict between commerce and philanthropy, and the moral support of the medical profession would be of great assistance to the cause of philanthropy.

The Bureau of Chemistry and Medical Science.—Dr. W. H. Wiley, of Washington, D. C., said that many of the problems that the Bureau of Chemistry attacked were closely allied with medical science. In the matter of the disposal of waste material, they had collected samples of all kinds of garbage, and had made experiments in regard to its usefulness as a fertilizer. Factories for the separation of the fertilizing elements had been established. He said that the time must come when no city would dump its sewage into a river to the detriment of cities located below it. Experiments in the employment of sewage for agricultural purposes, while not giving complete success, had made some progress. The most satisfactory method thus far found was the collection of the sewage into a reservoir and filtering it into the soil. This problem would have to be satisfactorily solved in the future. No vegetables should be eaten raw when grown where night soil was deposited. An investigation was being carried on with reference to the dyes and other chemicals used in the manufacture of clothing materials, and their effects on human health. Almost every kind of human food had been examined for adulteration. The injurious effects of meat preservatives, especially the sulphites of sodium, had been pointed out. All foods imported from Europe were investigated. He said that the government insisted that Europe should be good if we were not, and perhaps we should learn by imitation. It excluded all food stuffs containing injurious substances and those branded in a misleading way, as well as any that were not permitted to be sold in the countries where they were made. Since July 1st, last, out of 2,000 cargoes, 10 per cent. were forbidden entrance into this country, and some of these were so objectionable that they were not permitted to be returned to the countries whence they came. It was found that much of the imported white wine was a saturated solution of sulphurous acid. If meats contained preservatives, this fact must be indicated by a legible label. The Bureau of Chemistry had endeavored to help the States in their fight against local food adulteration. They inspected drugs, both domestic and imported, and required them to come up to the recognized standard. They were assisting the post office in its fight against secret remedies. In this struggle a terrific oppositon would be encountered, not only from manufacturers of nostrums, but from the whiskey trust. Analysis had shown that 85 per cent. of supposed whiskies sold in this country were not whiskey at all; that from one barrel of pure alcohol in the course of one day, two or three barrels of designated whiskey purporting to be ten years old, could be manufactured. The American Medical Association could exert its influence with legislative bodies in securing proper legislation in this matter.

The Work of the Marine Hospital Laboratory.—Assistant Surgeon H. D. Geddings said that the research work of the Marine Hospital Laboratory was begun at Stapleton, Staten Island, in 1887; that they had removed to Washington in 1891; that they had outgrown their quarters there and had recently received five acres of ground and $35,000 for new laboratories. They had an excellent school for the instruction of their officers. They had done much in investigating the subject of disinfection, and had first exploited formaldehyde and elaborated the perfected apparatus employed for this purpose. They had issued the first authoritative publication on diphtheritic antitoxine in this country. They had introduced means for protection against the introduction of plague. They had published eighteen reports in the form of bulletins, and others would soon be complete. They had demonstrated the presence of tetanus in commercial jelly, and had studied spotted fever and hook worm disease. They inspected all manufactories where serums were produced. Under their inspection the purity of serums had been greatly promoted, especially that of vaccine. They had investigated typhoid fever epidemics, the ætiology of yellow fever, and were working on the problem of the proper sanitation of railroad cars and coaches. It was evident that so wide and varied a work gave much to the medical profession, and in return it needed the support and assistance of an organized medical association.

CLOSING MEETING, *June 10, 1904.*

Dr. John H. Musser, the president, made the closing address. He said that this had been the most successful meeting in the history of the association, both in the matter of attendance and in the character of the work. There had been between 2,800 and 2,900 registrations,* about 600 more than had registered at any previous meeting. There were present a larger number of men of the highest scientific attainments, which was a matter upon which they were justified in congratulating themselves. That men interested in scientific research should choose to make the association the medium through which to present the results of their work for the betterment of humanity was a source of great satisfaction. The general meetings, which were a new feature of the work, had been a great success. The papers were of great value to the profession and of paramount interest to the public. These meetings were so well attended that they would hereafter become a permanent feature in the programme. It was highly gratifying that the interest shown in the scientific part of the programme was far greater than that shown in the social attractions of the occasion. In closing his remarks, Dr. Musser thanked the committee on arrangements and the officials of Atlantic City for their part in contributing to the comfort and success of the meeting.

SECTION ON MEDICINE.

Second Day, June 8th.

Pathology of Arteriosclerosis.—Dr. William H. Welch, of Baltimore, opened the symposium on arteriosclerosis. He wished to emphasize the combining of the clinical, the pathological, and the anatomical phases of the subject, and he thought that our knowledge would be much advanced by a combination of the work. The disease arteriosclerosis was recognized from the time that autopsies began to be made and was recorded as early as the sixteenth century. A historical review of the subject here followed. He then considered the nature of the trouble, as described by Keller and his students. In the cicatricial form of arteriosclerosis there seemed to be a peculiar localization, and it affected chiefly the thoracic arch, especially its ascending portion. It had but little tendency to extend into the large branches of the aorta or to extend down into the abdominal aorta. It was characterized markedly by changes in the adventitia and media, and also by furrows or scar like depressions seen more particularly in the inner coat of the aorta. Associated with this were elevated plaques, many of which were not to be distinguished from true arteriosclerosis. Sometimes fibrous scar-like patches could be seen. Another type was related to syphilis or syphilitic aortitis, so called by Keller and his students. There were at present three anatomically distinct affections which might occur separately, but were more often combined with each other. Dr. Welch said there were the following forms to be considered: (1) That form with inflammatory thickening of the inner coat of the vessel resembling scar tissue. (2) That form called by some "true arteriosclerosis," which naturally applied to a thickening of the intima and a splitting of the internal elastic membrane or the elastic muscular coat, associated with marked degenerative changes, necrotic, fatty, and hyaline degenerations. (3) That form of syphilis of the aorta as already referred to. He asked if this hypertrophy was not a compensatory act and a thing to be desired in the muscular coat of the arteries, as in the heart muscle. Experimentation did not shed much light upon the questions raised. The most important underlying cause was the functional strain upon the arteries. There was no question but that extensive arteriosclerosis was a disease without clinical symptoms or any effect upon organs. It was a matter of great importance to determine what were the conditions associated with arteriosclerosis which were responsible for the rise of arterial pressure and for the cardiac hypertrophy. This he considered to be the most important aspect of the subject. The rise of blood pressure was due to causes which led to arteriosclerosis, but not caused directly by it.

Arteriosclerosis from Acute Infectious Diseases.—Dr. W. S. Thayer, of Baltimore, said that he was led to the consideration of this part of the symposium by observations on typhoid fever patients. Out of 62 autopsies in cases of typhoid fever, in 19 there were definite sclerotic changes made out, in four there were noted yellow opacities in the intima, and in 13 sclerotic changes, which were early and fresh. The figures, together with a higher blood pressure than was noted in the control tables, led him to feel that typhoid fever played some causal part in the thickening of the radial arteries. If that was true, typhoid fever, to a greater or less degree, caused this condition. Light might be thrown upon this by analysis of the histories of a large number of cases in Dr. Osler's wards. A careful inquiry was made into the question of alcoholism, work, etc. The histories gone over consecutively numbered 3,894, and they were examined (1) as regarded the general presence of palpable radials; (2) in regard to the presence of palpable radials in cases with histories of diphtheria, scarlet fever, malaria, pneumonia, typhoid fever, acute rheumatism, syphilis, gonorrhœa, alcoholism, and heavy work. The results obtained were shown by tables. Subdividing these cases into groups in which only one ætiological factor was made out, the results were also shown by charts. Where no causal factor existed a general percentage of 18.9 was shown, and in cases of diphtheria a slightly lower percentage, then pneumonia with 19.6, malaria 22.6, syphilis, 23, scarlet fever with 24, diphtheria with 28.7, rheumatism 41, alcoholism 53.3, and heavy work 62.2. So far, he was not justified in drawing any conclusions that acute infectious diseases played a part in the development of arteriosclerosis. The part played by physical labor in the production of arteriosclerosis seemed to be far greater than that played by alcoholism.

Arteriosclerosis of Syphilitic Origin.—Dr. C. Travis Drennen, of Hot Springs, Ark., said that though there was a connection between arteriosclerosis and syphilis, the connection was obscure. The routine method adopted by the profession at large in the treatment of syphilis he believed to be responsible for the production of arteriosclerosis, and that the tendency of the disease itself was to produce sclerosis in various organs. He entered a plea for a more rational treatment of syphilis that would lessen the danger from mercury and the iodides, and at the same time possibly eliminate the agents used in the treatment of syphilis as causative factors in the production of arteriosclerosis.

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* The actual registration was 2,894.

Arteriosclerosis of Nephritic Origin.—Dr. George Dock, of Ann Arbor, Mich., presented this paper. He said that doubtless in many cases arteriosclerosis was caused by nephritis, and it was of great clinical importance that the kidney lesion might be severe yet latent, often developing symptoms severe enough to cause death. He called attention to the value of clincal study and the recognition of the importance of hyperdistention in causing vascular disease, as the presence of this condition in acute nephritis might lead to disease of the intima, followed by compensatory, and later by degenerative, changes. He cited the case of a boy, aged fifteen years, who suffered from acute nephritis, terminating in death during one of several attacks of uræmia. The object of his paper was to assert the possibility of renal diseases of all kinds assisting in the production of arterial disease, and to plead for a more extensive clinical investigation, in order to show the extent and, if possible, the explanation.

Arteriosclerosis Due to Lead.—Dr. Frank Billings, of Chicago, said that the mode of entrance of lead into the body was very easy, and he instanced a case of poisoning from washing the clothes of a man whose occupation was a painter. Regarding the effect of lead upon the blood and other tissues, he said it probably was direct. As the blood circulated, the poison might act directly upon the cells of the vessel wall and produce a proliferative endarteritis. This was associated with degenerative processes of the media and thickening of it, and especially a degeneration of the muscular coat with proliferation and thickening. The effect upon the elastic coat he did not know. There was also a widespread interstitial thickening of the outer covering. There was also caused a chronic degeneration of the kidney substance and resulting cirrhosis of the kidney, with well known fibroid changes and hypertrophy of the muscular coat of the arteries. The effect was upon the cells, tubules and glomeruli, and blood vessels. In a large number of cases brought to autopsy, with nephritis, a very large proportion of them was associated with lead. Lead predisposed to gout and it was well known that arteriosclerosis was common in gout. A diagnosis could not be made, except in cases where the nature of the cause was found.

The Significance of Alcohol in Relation to Arteriosclerosis.—Dr. Richard Cabot, of Boston, in his review of the literature on this subject had found that most standard textbooks asserted unconditionally the importance of the excessive use of alcoholic liquors as a causative factor in the production of this disease. His clinical research showed that of 283 cases investigated at the Massachusetts General Hospital, only 18, or 6 per cent., showed arteriosclerosis, so far as examination of the heart and peripheral vessels evidenced. This was to the exclusion of those over fifty years of age, and those who had syphilis. Excluding those of forty years, the percentage would fall to 1.4 per cent. Similar investigations at the Massachusetts Hospital for Inebriates and at the Long Island Hospital showed that alcoholism had a very slight influence in the causation of the condition. Post mortem evidence gathered at the Massachusetts General Hospital gave similar results, i. e., that the alcoholic origin of arteriosclerosis was a myth.

Arteriosclerosis and Angina Pectoris.—Dr. William Osler, of Baltimore, said that there were many things doubtful about angina pectoris, and that it was associated with arteriosclerosis was shown by Edward Jenner in post mortems he made. The association had been demonstrated in a large number of post mortems since then, and there was no question about its association in a very considerable number of cases. With regard to the attacks of pain there were a great many interesting points in this connection. Arteriosclerosis of the blood vessels of the head produced attacks of severe pain associated with migraine. Severe recurring headaches might be seen in connection with embolism and thrombosis. In sclerosis of the abdominal vessels severe pain was rarely met with, yet there were cases of angina pectoris in which the pain was almost entirely abdominal and might even be mistaken for hyperacidity; such cases might be termed cases of "angina abdominis." Interesting conditions were shown in the lower extremities; cases of numbness and tingling of the extremities were met with in old people, in diabetes, and Bright's disease, and these were due to senile arteriosclerosis. Pain caused by plugging of the femoral artery was marked, and there was also pain in thrombosis of the veins in typhoid fever. In old persons attacked with very great pain, with cramps in the muscles, the condition seemed to deserve the name of "angina cruris." Dr. Osler said that there seemed to be four groups of cases, as follows: (1) Those in which the angina attacks were definite, distinct and severe, in young persons, a neurotic process recurring over long periods of years, terminating fatally, and in which the arteries showed no sclerosis whatever. (2) Those cases in which the angina pectoris was associated with syphilitic arteriosclerosis. These were amenable to treatment, occurred in young men with signs of cardiac lesions, frequently aortic insufficiency, but with evidences of syphilis, definite and distinct. He wished to emphasize the importance of syphilis in producing a distinct type of aortitis. (3) A large group of cases occurring in the presenile, between the ages of forty and sixty years. (4) A group of cases occurring between the ages of sixty and eighty years, and a very important group.

(To be continued.)

SECTION ON SURGERY AND ANATOMY.

Second Day, June 8th, Morning Session.

Twine in Lieu of the Elastic Ligature in Performing Gastroenterostomy.—Dr. J. W. Draper Maury, of New York, gave a brief review of the method employed at the surgical laboratory of Columbia University for inserting the stitch now in use, viz., the twine triangular ligature. He said that it had been first an outcome of McGraw's work, and second, of the experiments done in the laboratory the previous year. The work of 1903 had established beyond peradventure the efficacy of the elastic ligature, both when inserted by the McGraw technics, and when used in the form of a quadrangle. He paid tribute to the inventive genius of Robert F. Weir, who had originally suggested the need of modifying the McGraw stitch, so as to enable the operator to punch a hole rather than to cut a slit. As a matter of fact the McGraw technics did not cut a line, but a reasonably wide opening. The modified stitch, as demonstrated by Dr. Maury, enabled the surgeon to have full control over the width, as well as over the length, of the opening created. The author showed a chart which demonstrated the mode of introduction of the twine triangular ligature and inserted the stitch as a demontration before the section. He said that the actual placing of the stitch could be accomplished in less than a minute and a half, and demonstrated the consecutive series of 13 specimens obtained from dogs' stomachs, in all of which an opening had been made. He admitted that perhaps not enough experimental work had yet been done upon the subject to allow of too sweeping conclusions in favor of the substitution of twine in place of the elastic, but he drew the attention of the section to the fact that two dogs on which he had operated in the presence of the chairman, last week, had furnished three and a half days later, two of the best specimens. The twine in these cases had cut through in three and a half days.

Remarks on the Disadvantages of the Murphy Button.—Dr. Robert F. Weir, of New York, paid a glowing tribute to the genius of the surgeon whose simple and world renowned instrument had done so much to revolutionize the subject of abdominal surgery. Without it, Dr. Weir stated, there could hardly be the advancement of which we were all so proud at the present time. He had used the button in 70 cases of gastroenterostomy and agreed with a great many surgeons that its use should be followed by the judicious employment of safety sutures. He described his new method of safeguarding against the falling of the button into the stomach. In his last 30 cases, he had practised enteroenterostomy between the loop, because he believed that this alone would prevent the occurrence of the vicious cycle. Through one of the fenestræ of the lower button, he tied a piece of fish line. He left six or eight inches of twine to fall below the button into the gut, the other end of the line was in a similar way attached to the gastric button. The principle of this simple manœuvre was that the end of the twine hanging down in the gut helped to provoke peristalsis, and the lower button, which always separated before the upper one, began to drag on the latter before it was detached. He said that, in future, when called upon to perform gastroenterostomy, he would either execute this technics, which had served him well in five cases, or he would utilize the twine trianglar stitch as described by Dr. Maury.

Excision of the Ulcer-Bearing Area in Gastric Ulcer.—Dr. W. L. Rodman, of Philadelphia, said that although this technics could not be looked upon as ideal, yet, with its various drawbacks, it had the very great advantage over other methods in that it not alone removed, the immediate possible complications of the ulcer, but disposed of the much graver occasional sequela, viz., malignancy. He said that excision of the ulcer alone was a second rate method of treating the condition at best, because in fully 50 per cent. of all cases the ulcers were multiple. They often occupied positions cheek by jowl. Simple pyloroplasty was occasionally indicated. Occasionally the technics of Finney was the best at hand, although criticism had aptly been made upon it, because of its making necessary, while giving splendid drainage, the passage of food over the wound area. Gastroenterostomy in the hands of some men had given good results, but no one could gainsay the statement that it had failed to control hæmorrhage in about 6 per cent. of cases of acute ulcer, and that in every case it left behind in the scar the direful possibility of malignant degeneration.

This probably occurred in 60 per cent. of cases developing in men over forty years of age. The topography of the region was given in detail and the statement made that duodenal ulcers, which were the most apt to penetrate, were always located in the first portion of the duodenum and were almost invariably accompanied by a similar gastric lesion. Puckers, or a milk-like capacity on the surface of the serosa, or adhesions, one or all might indicate from without the presence of the ulcer from within.

Dr. A. J. Ochsner, on opening the discussion, said that in the 86 cases in which he had used the elastic ligature, he had had three deaths. These were not caused by the elastic ligature or by shock from inserting it. Of this last dreaded factor, there was practically no evidence from this operation. In 33 cases of simple ulcer he had had one death. He criticized the endeavor to employ the elastic in establishing cholecystenterostomy.

Dr. W. J. Mayo said that he wished to ask Dr. Weir what would become of the string and the fistula in case the gastric button toppled over into the stomach. There would indeed be a complication of conditions, interesting to forecast. He considered Dr. Rodman's views a little too radical for the practical work of relieving ordinary cases of gastric ulcer. It might be wise to hemisect the stomach and remove the first portion of the duodenum. But it seemed like a rather large operation for a measurably small ailment.

Dr. J. B. Murphy, in closing the discussion, said that Dr. Weir had pampered the button even more than he had, an evidence of this being his desire to tie strings to it and his unwillingness to break away from its use. He agreed with Dr. Weir, that an enteroenterostomy should be done, and urged the importance of closing the pylorus to prevent muscular action of the stomach forcing food down into the loop.

Dr. R. H. M. Dawbarn said that for many years he had been in the habit of using a cork in each portion of the button, that it formed a handle which could not injure the thread, and which would, in the event of the instrument falling into the gut, prevent its being lost.

Dr. Lloyd, of New York, said that a positive conclusion had been reached as to the efficacy of the McGraw ligature, and that he therefore deprecated the use of the string, which was as yet relatively untried. He said that the elastic would begin to cut out sooner than the string, and that it seemed to him much easier to sterilize elastic than twine.

Dr. Rodman, in closing, said that every operator must occasionally open a stomach in which he would find enlarged glands and moderate tumefaction of the stomach. In the present state of our ignorance in these matters, it was utterly impossible to tell whether such condition was malignant or not. In any event, it was a growth worth disposing of. While the mortality of gastroenterostomy was but 6 per cent., and that of pyloroplasty but 10 to 12 per cent., still he considered that they had, as compared with the operations recommended by him, but limited field for utilization.

Dr. Maury, in closing, said that he was particularly interested in a statement made by Dr. Ochsner, to the effect that he had recently employed the elastic ligature to create a gastroenterostomy in a patient whose stomach had at the same sitting been almost entirely removed and been immediately thereafter tightly sealed. In an endeavor to answer a question asked by Moynihan and Mayo a year ago, he had closed the pylorus in the case of six dogs and had at the same time performed the gastroenterostomy with the ligature. Within thirty-six hours every one of these dogs had died of tetanoid symptoms. Was Dr. Ochsner's freedom from this complication due to the fact that tetany did not so readily develop in man, or was this brought about by the fact that he had excised almost all of the stomach, the walls of which as was well known, were supposed to secrete the toxic substances which produced this train of symptoms? In answer to Dr. Lloyd's criticism of the twine, he said that he had not been aware that Dr. Lloyd was in possession of data bearing upon the relative rates at which elastic and twine would cut through apposed viscera. He said that, so far as he knew, boiling sterilized twine without injuring it, and that in the opinion of authorities this sterilization was complete in a very short time.

Rupture of Mesenteric Glands During Typhoid Simulating Intestinal Perforations.—Dr. Robert G. Le Conte, of Philadelphia, detailed the considerations of the causes of mesenteric glandular involvement during this disease. He said that the glands were divisible into three classes, the second one, the units of which were located at the mesenteric border, being the class to consider in this particular research. In the first place, he stated that this enlargement had been definitely shown, first to be a late complication of the fever; second to be in no way directly the result of the diseased conditions within the gut. Furthermore, the enlargement of the glands might or might not be proportional to the degree and virulence of the typhoid. He cited a case from the Pennsylvania Hospital records where more than 600 cases of typhoid were treated annually, and stated that this was the first record from their autopsy findings of one of these glands having broken down, and produced peritonitis and death. The pathology of the condition was obscure, but it was associated with endothelial proliferation, the cause of which was unknown.

Dr. McArthur said that the condition cited was a rare but important one, and he called the attention of the section to the fact that late occurring retroperitoneal abscess might have had its origin in caseated lymphatics which had become infected during the typhoid.

Excision of a Part of the Ileum, all the Cæcum and the Ascending Colon,—Union by a New Method.—Dr. J. S. Horsley, of Richmond, Va., described the history of the case in which he had first removed the appendix and, subsequently to the development of malignant disease in the sæcum, had been obliged to resect the parts as above stated. He had successfully employed a method of union which he described in detail, and which in being an end to end suture resembled in some degree the Connell stitch, although it was separate and distinct from it. He illustrated his remarks by a series of very graphic and detailed charts which showed the technics perfectly.

Removal of a Large Retroperitoneal Fibro-Myxo Lipoma.—Dr. George B. Johnson, of Richmond, detailed the technics of this case, and cited very fully the pathology and what little was known of the ætiology of these rare but important tumors. He said that they were divided into prerenal, doubtful, and mesenteric. Adami had reported 48 cases. It was remarkable that the symptoms caused by these enormous growths, for they often aggregated forty pounds in weight, were of such vague and indeterminate a nature. The pathological report was made by Opie.

(To be continued.)

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

First Day, Tuesday, June 7, 1904.

(Continued from page 1170.)

Clinical Experiences With the Appendiculoovarian Ligament was read by Dr. Daniel H. Craig, of Boston. He said that notwithstanding the fact that a rather extensive study of the literature of the subject had convinced him that no such structure as the appendiculoovarian ligament existed as an independent entity, and that there was neither reason nor professional justice in the association of the name of Clado with the structure thus named by him, he had retained that nomenclature in the title of his paper because the name had become fairly well known to the gynæcologists and abdominal surgeons of America. He then quoted such writers as Nagel, Treitz, Durand, Rouget, Waldeyer, and others, as to the fœtal original of the ligament, and then described it as merely the continuation upward in varying degrees of prominence of the outer end of the infundibulopelvic ligament. The upper termination of the fold varied. In about one third of the cases observed it was directly continuous with the lower angle of the mesoappendix, but in many cases it ran behind various portions of the cæcum.

He reported six cases in which this structure was of actual clinical importance, and in which operation proved successful in relieving the symptoms. A relatively large V shaped piece was excised from the ligament just below the pelvic brim, thus relieving the traction on the broad ligament and on the cæcum.

At the conclusion of the session, on motion of Dr. J. H. Carstens, of Detroit, a committee was named by the chairman to prepare suitable resolutions on the death of Dr. John Milton Duff, of Pittsburgh, a member of the association who, for many years, had taken a prominent part in the work of the obstetrical section.

Second Day, Wednesday, June 8th.

Morning Session.

Diagnosis and Treatment of Pelvic Deformity.—Dr. George Boyd, of Philadelphia, read this paper. He said that pregnancy or labor complicated by pelvic deformity would always be of great interest to the obstetrician. Sufficient material was now at our command to enable us to approximate the frequency of this condition in this country. Reynolds had reported that he had observed 1.34 per cent. of contracted pelvis in 2,227 women delivered in Boston; Edgar stated that it was met with in 2 per cent. of American-born women and in 6 per cent. of those born abroad. The records of the Philadelphia Lying-In Charity, from 1894 to 1904, showed 3,224 deliveries, with but 76 cases, or 2.5 per cent., of deformity of the pelvis demanding surgical intervention.

A more general use of the pelvimeter would lead to an earlier recognition of the abnormity. Fatalities had resulted, even when most careful measurements had shown errors of half an inch in the correctness of the instrument. Müller's method of estimating the relative disproportion between the pelvis and the fœtal head, and Kerr's modification of the method, were not always trustworthy. The cephalometer of Perret and Budin, by which the biparietal diameter was supposed to be accurately measured, must necessarily also be unreliable. The fœtal head was the only trustworthy pelvimeter. As regarded treatment, the speaker said that it was essential to give the patient the test of labor in the majority of cases of moderate pelvic deformity. It was the duty of the practitioner in attendance upon a multipara with the history of one or more dead children to be prepared to perform Cæsarean section.

Heart Disease as An Obstetrical Complication.—This paper was read by Dr. C. S. Bacon, of Chicago. He said that pregnancy caused certain changes in the normal heart and circulation. There was probably a slight hypertrophy of the heart which was due to increased resistance in the blood vessels. Different theories to account for this increased work of the heart were discussed and a new theory was advanced which attributed to the toxines of pregnancy the rôle of a factor that stimulated the vasodilation of the splanchnic area and the vasoconstriction of the rest of the body. This produced a condition resembling chronic shock. The vascular obstruction thus caused was probably more important in increasing the heart work than any other factor.

Besides this physiological enlargement of the heart there occurred sometimes in pregnancy a myocardial degeneration due to a more severe gravidal toxæmia. In post mortem examinations of women dying in eclampsia the myocardial degeneration was an almost constant finding. Another affection of the heart due to pregnancy or the puerperium was endocarditis resulting from infection. It was estimated that a heart lesion might result from pregnancy in about 1 per cent. of all cases.

Preexisting heart disease did not interfere with pregnancy and was found in from 1 to 2 per cent. of all cases. The most serious cases were those where, before impregnation, a lack of compensation already existed and these were comparatively rare. However, cases apparently not very serious might become much worse during pregnancy. A fresh endocarditis might be set up or a myocarditis might develop. The secondary effects of pregnancy on heart disease were general and pulmonary œdema, dyspnœa, bronchitis, palpitation, indigestion, and kidney complications, all resulting from circulatory disturbances. Labor might cause death. During the puerperium a fresh infection of the endocardium was quite apt to occur. The heart also continued to be exposed to a severe strain and remained in danger for a number of days.

In the management of this complication the induction of abortion was indicated when, in spite of proper treatment, the pulse became weaker, the heart upsets more frequent and serious, and severe complications, such as œdema and gastric and renal disturbances arose. The method of inducing abortion by rapid operation exposed the patient to the least danger and was to be preferred.

When it was decided to try to carry the pregnancy to term the prevention of spontaneous abortion which, according to Mueller, occurred in over 25 per cent. of all cases, was best secured by keeping the patient in bed perhaps for weeks or months at a time and by giving morphine or codeine when necessary to stop uterine contractions. In order to keep the patient in good condition when in bed, bed exercises and massage were necessary.

The care of pregnancy embraced such dietetic, hygienic, and medicinal management of the circulatory, respiratory, digestive, and excreting systems as were necessary to keep them in the best possible condition. The food should be easily digestible and regulated as to quantity. Exercise should involve no risk of accident, should not be too long continued, and should never make the patient tired. The dress should not constrict the body and should protect the skin. All infection and especially infection of the air passages, should be avoided. The most important medicines were digitalis and strychnine for the heart, morphine or codeine to quiet uterine contractions, calomel, salines, and cascara for the bowels, and oxygen for dyspnœa.

Increased frequency of cardiac upsets, growing weakness of the heart as shown by more rapid and weakened pulse, and increased œdema with disturbed respiration and a serious impairment of nutrition were the indications for inducing premature labor. It should be postponed till the thirty-sixth week if possible. Preparation for the care of the child, including the incubator should be made. When there was hydramnion or twins the best method of inducing labor was to rupture the membranes. In other cases Voorhees's bag might be used when the patient was not too sensitive, otherwise the bougie should be employed.

The essential points in the management of labor were careful watching, prompt interference, and the use of oxygen. Rapid delivery under ether by incision and forceps or turning and extraction was the proper operative interference. Free use of oxygen was highly recommended. No especial haste in delivery of the placenta was necessary.

The immediate danger of the first hours and days of the puerperium were to be controlled by careful watching and free use of tonics and oxygen. Later, long continued care was necessary to restore the patient to good health.

The Difficulties and Dangers of Accouchement Forcé was the title of the next paper, read by Dr. H. G. Wetherill, of Denver, who said that all manual operations for the rapid dilatation of the cervical canal and extraction of the fœtus were dangerous, besides being slow and exhausting. The routine use of rubber gloves reduced the risk of infection to a great degree, but they operated somewhat against facility and certainty in the work. Present instrumental methods were also slow and dangerous and demanded expensive special instruments, which often were unavailable when most urgently needed. Immediate success and good ultimate results depended upon the simplicity, rapidity, and cleanliness of the operation and upon the use of the necessary force in exactly the best way to avoid injury to the soft parts, hæmorrhage, and accidents to the child.

The speaker advocated the use of narrow-bladed Sims's specula for dilating the cervix in these cases, and described the technics.

Is Cæsarean Section a Rational Method of Treatment in Placenta Prævia?—This paper was read by Dr. John F. Moran, of Washington, D. C. He said that of all complications that the obstetrician had to contend with there was none that was fraught with more danger or attended by more anxiety than placenta prævia, except, perhaps, eclampsia. Its sudden onset, often alarming hæmorrhage, and consequent anæmia, shock, possible sepsis, and thrombotic affections presented a formidable array of difficulties that, even in the hands of the most skilful, had been accompanied by high maternal and fœtal mortality. No new method of treatment would be evolved that would materially improve the best methods now pursued by competent obstetricians. The speaker had collected 18 reports of section for placenta prævia by 16 different operators. Five were performed in Italy, 1 in England, and 12 in the United States. Five mothers died, 27½ per cent., and 4 of the infants, 22½ per cent. One patient was operated on at the fourth month on account of infected placenta. Eleven of the operations were by the Sänger method, six by that of Porro, while the technics of one was not mentioned. All were emergency cases.

One of the weak points in the advocacy of Cæsarean section for placenta prævia was the danger of postpartum hæmorrhage. Donoghue suggested that this might be overcome by allowing the placenta to separate spontaneously, while others recommended that the uterus be packed with gauze. The speaker was thoroughly convinced that there was a limited field for this operation, but that its success would depend upon greater care of the patients during pregnancy with a view of determining the presentation and position of the fœtus and location of the placenta while the patient was in good condition.

(To be continued.)

Letters to the Editor.

PHYSICIANS' CREDIT.

49 East Sixty-fourth Street,
New York, *May* 24, 1904.

To the Editor,

Sir: While I lay claim to never having sought to obtain anything which I did not at the time have the money to pay for, I learned a lesson a few years ago and at the same time was instructed as to the business standing of the medical profession before the mercantile world. Desiring to purchase a ring, I entered a well established Broadway shop and was shown the stock, invited to open an account with the firm, and asked to call for the ring within a few days. As a reference, I gave the name of a large retail clothing and furnishing house across the street from the jeweler's, with whom I had had some dealings. Returning, I was treated as courteously as before and I made a selection. I was then asked by members of the firm, as I had not purchased anything at the store I had given them for a reference for a period of some months past and as altogether my purchases had not amounted to a sum of much over fifty dollars, if I would not submit the name of some other establishment. Laying aside at once the idea of the contemplated purchase, I entered into a discussion with them upon the merits of their method of soliciting accounts. A year later I was requested to open an account with this firm, they having treated the occurrence as though it had never happened. The matter, however, was still very fresh in my mind, and I have made it a rule not to open an account with any tradesman, but to pay cash and secure discounts in all such transactions. During the course of the conversation above mentioned I was told: "Doctors have no credit." If this is true, and there is any cause for the statement being passed around by members of the Retail Dealers' Association, it might be well to make known and to dwell upon the fact that good credit is an asset, whether an individual is a doctor, a lawyer, or the owner of a thousand share block of Standard Oil stock.

I am led to recite the incident which has been set down for the reason that what seems clearly like a breach of faith or business contract has occurred between the authorities of a medical school and its students without a comment from the medical press upon the legal (honest) aspect of the case. The right of a body of professional men or their managers which go to compose a medical school faculty to charge ten dollars or a thousand dollars a year for the service of educating a student to become a doctor certainly cannot be denied. But the right to alter the sum asked of a matriculate during his stay in college, or prevention of his completion of his course if he refuses to submit to increased charges, does not exist according to either reason or usage. During my own course at the University of Pennsylvania the tuition fee in the medical school was raised fifty dollars, but it affected no one who was then matriculated or for the next year or two thereafter. The explanation has been made in the present instance that the college has become too crowded and that this method is employed to reduce the number of students. In answer to this I would express the belief that aside from breaking the implied contract with their students, which any judge would decide without leaving the bench, a college, however well founded by previous reputation, private fortune, or public money will, if it puts money above brains in its requirements, fail of being a proper educator of medical men.

Medical professional opinion is a force to be reckoned with as truly as is public opinion in society in general. The greater a doctor's reputation the more jealous will he become of it, and it seems probable that a mere intimation that the medical profession at large has some interest in even the sophomore in a medical school will be sufficient to cause a reconsideration in this matter. In any event the general medical credit of our guild will not be enhanced by the public knowledge that such methods are considered to be within the right of any medical faculty. FREDERIC GRIFFITH.

X RAYS IN THE REMOVAL OF FOREIGN BODIES.

173 MAIN STREET,
NEW BRITAIN, CONN., *May* 30, 1904.

To the Editor,

Sir: Apropos of Galevski's report in *Roussky Vratch*, March 20, 1904, concerning the usefulness of the x rays during operations, I can heartily substantiate this gentleman's experiences by relating my own. In three cases in which I at first had extreme difficulty in removing foreign bodies from the tissues after their location with x rays I had none whatsoever afterward under their *immediate* and *guiding* influence. I believe this method is deserving of more frequent and widespread application. Especially should it be resorted to in the removal of foreign bodies from the extremities. It is simple and accurate and at the same time allows of strict asepsis in that the fluoroscope may be held either automatically or by an assistant. Care must be observed, however, to avoid too long an exposure, inasmuch as the surgeon's attention is concentrated on the operative procedure rather than on the x rays. KENNETH E. KELLOGG.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending June 3, 1904:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
Alaska—Hoonah	May 17	3	
Alaska—Juneau	May 15	1	
Alaska—Killisnoo	May 17	2	
Florida—Jacksonville	May 22-28	2	
Georgia—Macon	May 22-28	3	
Illinois—Chicago	May 22-28	6	
Iowa—Des Moines	Apr. 1-30	8	
Iowa—Dubuque	May 15-28	1	
Kentucky—Covington	May 22-28	1	
Louisiana—New Orleans	May 22-28	11 Two imported.	
Maine—Jonesport	May 26	23	
Maryland—Baltimore	May 22-28	5	1
Michigan—Detroit	May 22-28	2	
Michigan—Grand Rapids	May 22-28	2	
Missouri—St. Louis	May 22-28	4	2
New Hampshire—Manchester	May 22-28	3	
New York—New York	May 22-28	1	
Ohio—Bucyrus	May 22-28	13	
Ohio—Cincinnati	May 21-27	11	2
Ohio—Cleveland	May 21-27	2	
Ohio—Dayton	May 22-28	4	1
Ohio—Hamilton	Apr. 24-30	6	
Pennsylvania—Butler	Apr. 24-30	1	
Pennsylvania—Johnstown	May 22-28	5	
Pennsylvania—Philadelphia	May 22-28	11	2
Pennsylvania—Pittsburgh	May 22-28	1	1
South Carolina—Greenville	May 15-28	5	
Tennessee—Memphis	May 22-28	7	
Tennessee—Nashville	May 22-28	8	
Utah—Salt Lake City	May 15-21	2	
Virginia—Pocahontas	May 1-31	2	
Washington—Tacoma	May 17-23	1	
West Virginia—Martinsburg	Apr. 4-May 13	20	1
Wisconsin—Milwaukee	May 22-28	7	
Smallpox—Foreign.			
Austria-Hungary—Prague	May 1-7	4	
Belgium—Antwerp	May 8-14	2	3
Colombia—Barranquilla	May 2-16		3
France—Lyons	May 8-14		2
France—Paris	May 8-14	17	3
Great Britain—Dundee	May 8-14	2	
Great Britain—Edinburgh	May 8-14	2	
Great Britain—Glasgow	May 14-20	11	3
Great Britain—Leith	May 8-14	1	
Great Britain—Liverpool	May 15-21	1	
Great Britain—London	May 8-14	26	
Gt. Britain—Newcastle-on-Tyne	May 8-14	5	
Great Britain—Nottingham	May 8-14	12	1
Great Britain—Sheffield	May 1-14	4	1
India—Bombay	Apr. 27-May 3		17
India—Calcutta	Apr. 24-30		5
India—Karachi	Apr. 25-May 1	4	2
Japan—Nagasaki	Apr. 21-30	125	23
Java—Batavia	Apr, 17-23	12	1
Mexico—Mexico	May 9-15	7	2
Netherlands—Amsterdam	May 15-21	1	
Netherlands—Rotterdam	May 15-21	4	
Russia—Moscow	May 1-7	12	3
Spain—Barcelona	May 1-10		6
Straits Settlements—Singapore	Apr. 10-16		1
Turkey—Constantinople	May 9-15		3
Turkey—Smyrna	Apr. 25-May 1		2
Yellow Fever.			
Costa Rica—Limon	May 28	Present.	
Mexico—Coatzacoalcos	May 15-21	4 Two cases imported.	1
Mexico—Jalupan	May 27	1	
Mexico—Merida	May 15-21		3
Mexico—Tehuantepec	May 15-21	3	1
Cholera.			
India—Calcutta	Apr. 23-30		103
Plague.			
Arabia—Aden	May 31	Present.	
China—Canton	May 26	Spreading.	
China—Fu Shan	Apr. 15		50
China—Sun Ui	Apr. 15		20
Egypt	Apr. 17-23	42	23
India—Bombay	Apr. 27-May 3		471
India—Calcutta	Apr. 24-30		270
India—Karachi	Apr. 25-May 1	242	206
New Zealand—Auckland	Apr. 27	Still present.	
Peru—Payta	May 30	Present.	

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending June 10, 1904:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
California	May 21-28	4	
Florida—Jacksonville	May 27-June 4	1	
Georgia—Macon	May 28-June 4	5	
Illinois—Belleville	May 1-31	9	
Illinois—Chicago	May 28-June 4	7	
Illinois—East Liverpool	May 1-31	22	1
Iowa—Dubuque	May 28-June 4	1	1
Louisiana—New Orleans	May 28-June 4	11	
Maine—Machiasport	May 1-31	8	
Maryland—Baltimore	May 28-June 4	2	1
Michigan—Detroit	May 28-June 4	1	
Michigan—Grand Rapids	May 28-June 4	1	
Michigan—At 101 localities	May 21-28	Present.	
Nebraska—Omaha	May 21-28	3	
New Hampshire—Manchester	May 28-June 4	27	

New York—New York	May 28-June 4	2	
Ohio—Dayton	May 28-June 4	17	1
Ohio—Toledo	May 22-June 4	6	
Pennsylvania—Johnstown	May 28-June 4	3	
Pennsylvania—Philadelphia	May 28-June 4	10	5
Pennsylvania—Pittsburgh	May 28-June 4	3	
South Carolina—Charleston	May 28-June 4	2	
Tennessee—Memphis	May 28-June 4	14	
Tennessee—Nashville	May 28-June 4	12	
Wisconsin—Milwaukee	May 28-June 4	7	
Smallpox—Insular.			
Philippine Islands—Manila	Apr. 16-30	12	4
Smallpox—Foreign.			
Austria—Prague	May 7-14	4	
Belgium—Antwerp	May 15-21	5	4
Brazil—Bahia	Apr. 30-May 7	4	
Brazil—Rio de Janeiro	Apr. 17-May 8	167	98
Canada—Winnipeg	May 21-28	2	
China—Shanghai	Apr. 16-30	2	14
Colombia—Barranquilla	May 9-16		2
France—Paris	May 14-21	10	1
Great Britain—Cardiff	May 14-21	5	1
Great Britain—Dundee	May 14-21	1	
Great Britain—Glasgow	May 14-21	14	2
Great Britain—Leeds	May 14-21	2	
Great Britain—Leith	May 7-14	1	
Great Britain—London	May 14-21	18	
Gt. Britain—Newcastle-on-Tyne	May 14-21	8	
Great Britain—Nottingham	May 14-21	3	1
India—Calcutta	Apr. 23-May 7		11
India—Karachi	May 1-9	10	4
Mexico—City of Mexico	May 22-29	16	8
Mexico—Torreon	May 23-28	2	2
Netherlands—Rotterdam	May 14-28	5	
Russia—Moscow	May 7-14	5	1
Russia—Odessa	May 7-21	1	2
Spain—Barcelona	May 10-20		9
Straits Settlements—Singapore	Apr. 8-16		1
Turkey—Alexandretta	May 14-21		1
Turkey—Beirut	Apr. 30-May 14	Present.	
Turkey—Constantinople	May 15-22		4
Yellow Fever.			
Brazil—Rio de Janeiro	Apr. 17-May 8	11	8
Mexico—Vera Cruz	May 22-28	1	1
Cholera.			
India—Calcutta	Apr. 23-May 7		203
India—Madras	Apr. 23-29		1
Plague—Insular.			
Philippine Islands—Manila	Apr. 16-30	8	8
Plague—Foreign.			
Africa—Cape Colony	Apr. 23-30	1	
Brazil—Rio de Janeiro	Apr. 17-May 8	4	
China—Amoy	June 4	Present.	
India—Karachi	Apr. 23-May 8	203	176

Army Intelligence:

Official List of Changes in the Sta'ions and Duties of Officers serving in the Medical Department of the United States Army for the two weeks ending June 11, 1904:

Cowper, Harold W., First Lieutenant and Assistant Surgeon. Appointed first lieutenant and assistant surgeon, to rank from May 19, 1904.

Culler, Robert M., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Jay, N. Y.

Dale, Frederick A., First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence, to take effect June 15, 1904.

De Witt, Wallace, First Lieutenant and Assistant Surgeon. Relieved from duty at Louisiana Purchase Exposition, St. Louis, Mo, and ordered to Fort Washakie, Wyoming, for duty.

Ford, Clyde S., First Lieutenant and Assistant Surgeon. Ordered to report in person to Major William H. Arthur, president of the examining board at the Army Medical Museum Building, Washington, D. C., for examination for promotion.

Gorgas, William C., Colonel and Assistant Surgeon-General. Relieved from duty as Chief Surgeon of the Department of East, and ordered to report to the president of the Isthmian Canal Commission for duty with the commission until further orders.

Harnett, Eugene H., First Lieutenant and Assistant Surgeon. Ordered to report in person to Major William H. Arthur, president of the examining board at the Army Medical Museum Building, Washington, D. C., for examination for promotion.

Havard, Valery, Colonel and Assistant Surgeon-General. Left West Point, N. Y., on May 27th, with cadets *en route* to the Louisiana Purchase Exposition, St. Louis.

Jean, George W., First Lieutenant and Assistant Surgeon. Ordered to Fort Jay, N. Y., for temporary duty.

Lyster, Theodore C., First Lieutenant and Assistant Surgeon. Left West Point, N Y, on May 27th, with cadets *en route* to the Louisiana Purchase Exposition, St. Louis.

Mason, Charles F., Major and Surgeon. Granted four months' leave of absence, from May 31, 1904.

Mathews, George W., First Lieutenant and Assistant Surgeon. Ordered to report in person to Major William H. Arthur, president of the examining board at the Army Medical Museum Building, Washington, D. C., for examination for promotion.

Owen, Leartus J., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Myer, Va.

Reynolds F. P., First Lieutenant and Assistant Surgeon Relieved from duty at the U. S. Army General Hospital, Washington Barracks, D. C., to take effect about July 1, 1904. and ordered to the Presidio of San Francisco, Cal., for duty.

Snoddy, Cary A., First Lieutenant and Assistant Surgeon. Relieved from duty as surgeon on the transport *Sherman*, to take effect upon the next arrival of that transport at Manila, and will then report to the Commanding General, Division of the Philippines, for assignment to duty.

Stiles, Henry R., Captain and Assistant Surgeon. Left San Francisco, Cal., on May 23rd, on sick leave of absence.

Torney, George H., Lieutenant-Colonel and Deputy Surgeon-General. Left San Francisco, Cal., *en route* to Washington, D. C., with insane patients. Reported in person at the Surgeon-General's office on June 2, 1904.

Torney, George H., Lieutenant-Colonel and Deputy Surgeon-General. Granted thirty days' leave of absence.

Weed, Frank W., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort McHenry, Maryland.

Woodruff, Charles E., Major and Surgeon. Granted thirty days' leave of absence, from May 26, 1904, with permission to apply for two months' extension.

Wickline, William A., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Ethan Allen, Vt.

Zinke, Stanley G., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Riley, Kan.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the two weeks ending June 11, 1904:

Abekin, F. G., Assistant Surgeon. Detached from the naval station, San Francisco, Cal., and ordered to the *Adams*.

Angwin, W. A., Assistant Surgeon. Appointed assistant surgeon, with rank of lieutenant, junior grade, from June 2, 1904.

Fauntleroy, A. M., Assistant Surgeon. Detached from the *Scorpion* and ordered home to await orders

Fauntleroy, A. M., Assistant Surgeon. Ordered to the *Lancaster*.

Guthrie, J. A., Passed Assistant Surgeon. Detached from the *Franklin* and granted leave of absence for three months.

Hart, G. G., Acting Assistant Surgeon. Detached from duty with recruiting party No. 5, and ordered to await orders.

Kite, I. W., Surgeon. Detached from the *Maine* and ordered to the naval hospital, Pensacola Fla., for treatment.

Kite, I. W., Surgeon. Orders detaching from the *Maine* revoked; ordered to continue duty on the *Maine*.

Miller, J. T., Acting Assistant Surgeon. Detached from the naval hospital. Mare Island, Cal., and ordered to to the naval hospital, Sitka, Alaska.

Munson, F. M., Assistant Surgeon. Detached from the naval station, Polloc, P. I., and ordered to the naval station, Olongapo, P. I.

Murphy, J. F., Assistant Surgeon. Detached from the *Isla de Cuba* and ordered home to await orders.

Nelson, H. T., Jr., Acting Assistant Surgeon. Detached from naval hospital, Sitka, Alaska, and ordered home to await orders.

Owens, W. D., Assistant Surgeon. Ordered to the naval hospital, Newport, R. I.

Richardson, F. A., Acting Assistant Surgeon. Detached from the naval hospital, Newport, R. I., and ordered to the *Scorpion.*

Richardson, R. R., Assistant Surgeon. Detached from the naval hospital, Pensacola, Fla., and ordered home to await orders.

Ross, J. W., Medical Inspector. Detached from the Naval Museum of Hygiene and Medical School, Washington, D. C., and ordered to duty with the Isthmian Canal Commission.

Smith, C. G., Assistant Surgeon. Ordered to the naval hospital, Mare Island, Cal.

Sellers, F. E., Acting Assistant Surgeon. Ordered to the *Franklin.*

Taylor, J. L., Acting Assistant Surgeon. Detached from duty with naval recruiting party No. 6, and ordered to duty at the naval hospital, Pensacola, Fla.

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the fourteen days ending June 9, 1904:

Anderson, J. F., Passed Assistant Surgeon. Directed to proceed to Detroit, Mich., for special temporary duty. May 27, 1904.

Bakes, R. C., Acting Assistant Surgeon. Granted leave of absence for fourteen days from June 13th.

Carmichael, D. A., Surgeon. Bureau letter of May 4th, granting Surgeon D. A. Carmichael leave of absence for fifteen days from May 12th, amended to read twelve days from May 12th.

Carter, H. R., Surgeon. Directed to report to Chairman of Isthmian Canal Commission for duty. May 25, 1904.

Delgado, J. M., Acting Assistant Surgeon. Granted leave of absence for ten days. June 1, 1904.

Foster, J. P. C., Acting Assistant Surgeon. Granted leave of absence for four days from June 5th.

Geddings, H. D., Assistant Surgeon-General. Detailed to represent the service at meeting of American Medical Association, Atlantic City, N. J., June 7th to 10th.

Goldsborough, B. W., Acting Assistant Surgeon. Granted leave of absence for four days from June 7th.

Gwyn, M. K., Assistant Surgeon. Directed to report to Chairman of examining board at Manila, P. I., August 8, 1904, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

Hallett, E. B., Acting Assistant Surgeon. Granted leave of absence for four days from June 7th.

Magruder, G. M., Surgeon. Upon being relieved by Surgeon Eugene Wasdin, to proceed to Cincinnati, Ohio, and assume command of the service. May 27, 1904.

Mason, W. C., Acting Assistant Surgeon. Granted leave of absence for five days from June 27th.

Nydegger, J. A., Passed Assistant Surgeon. Granted extension of leave of absence, on account of sickness, for fifteen days, from May 21st. Granted extension of leave of absence, on account of sickness, for five days from June 5th.

Oakley, J. H., Passed Assistant Surgeon. Directed to proceed to Vancouver, B. C., for special temporary duty. May 27, 1904.

Peckham, C. T., Surgeon. Granted leave of absence for seven days from May 28, 1904, under paragraph 191 of the regulations. Relieved from duty at the Immigration Depot, New York, N. Y., and directed to proceed to Buffalo, N. Y., and assume command of the service, relieving Surgeon Eugene Wasdin. May 27, 1904.

Purviance, George, Assistant Surgeon-General. Granted leave of absence for twenty days from May 31st.

Rodman, J. C., Acting Assistant Surgeon. Granted leave of absence for seven days from June 7th.

Rosenau, M. J., Passed Assistant Surgeon. Detailed to represent the service at meeting of International Association for Study and Prevention of Tuberculosis, Atlantic City, N. J., June 6th. Detailed to represent service at meeting of the American Medical Association, Atlantic City, N. J., June 7th to 10th, stopping at Philadelphia, Pa., *en route*, on special temporary duty.

Vaughan, G. T., Assistant Surgeon-General. Detailed to represent the service at meeting of American Medical Association, Atlantic City, N. J., June 7th to 10th.

Wasdin, Eugene, Surgeon. Upon being relieved by Surgeon C. T. Peckham, to proceed to Memphis, Tenn., and assume command of the service, relieving Surgeon G. M. Magruder. May 27, 1904. Granted extension of leave of absence, on account of sickness, for sixteen days from May 1st.

Young, G. B., Passed Assistant Surgeon. Granted two days' leave of absence under paragraph 189 of the regulations.

Promotion.

Hall, L. P., Pharmacist of the third class, promoted to be pharmacist of the second class, effective from April 19th.

Board Convened.

Board convened to meet at Washington, D. C., June 1, 1904, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Assistant Surgeon-General L. L. Williams, chairman. Assistant Surgeon-General W. J. Pettus, recorder.

Births, Marriages, and Deaths.

Married.

Beebe—Hastings.—In New York, on Wednesday, June 1st, Dr. Edwin L. Beebe and Miss Emily Belle Hastings.

Buckley—Bailey.—In Cincinnati, Ohio, on Wednesday, June 1st, Dr. Albert Coulson Buckley, of Philadelphia, and Miss Harriet Bailey.

Chambers—Pulliam.—In Booneville, Missouri, on Wednesday, June 1st, Dr. James Quarles Chambers and Miss Nellie Noland Pulliam.

Clark—Leech.—In Philadelphia, Pennsylvania, on Wednesday, June 1st, Dr. Edgar Ashbel Clark and Miss Celia Helen Leech.

Eliot—Byrd.—In New York, on Wednesday, June 15th, Dr. Ellsworth Eliot and Miss Lucy Byrd.

Ellison—Speirs.—In Mount Vernon, N. Y., on Wednesday, June 1st, Dr. Clifford Walter Ellison and Miss Maude S. Speirs.

Hallowell—Dyer.—In Cheltenham, Pennsylvania, on Wednesday, June 1st, Dr. Alfred P. Hallowell and Miss Marian Estelle Dyer.

Hanchett—Veitch.—In Syracuse, N. Y., on Tuesday, May 10th, Dr. Reuben C. Hanchett and Miss Annie Veitch.

Herrick—MacPherson.—In Washington, D. C., on Wednesday, June 1st, Dr. Alfred Birch Herrick and Miss Marguerite Florence MacPherson.

Pettit—Glover.—In Chicago, Illinois, on Tuesday, May 24th, Dr. Gilman Wilbur Pettit and Miss Harriette Mae Glover.

Died.

Adams.—In Mendota, Illinois, on Tuesday, May 31st, Dr. Guy T. Adams, in the thirty-eighth year of his age.

Coe.—In Auburn, N. Y., on Saturday, May 21st, Dr. William H. Coe, Sr., in the sixty-fifth year of his age.

Gray.—In Pittsburgh, Pennsylvania, on Thursday, May 26th, Dr. James Robinson Gray, in the thirty-third year of his age.

Green.—In Battle Creek, Michigan, on Friday, May 27th, Dr. George W. Green.

Hutchinson.—In St. Croix Falls, Wisconsin, on Sunday, May 29th, Dr. H. J. Hutchinson, of Lynn, Massachusetts.

Isham.—In Chicago, Illinois, on Saturday, May 28th, Dr. Ralph M. Isham.

Line.—In Wilmington, Delaware, on Sunday, May 29th, Dr. Arthur Maxwell Line, in the thirty-fourth year of his age.

McKnew.—In Baltimore, Maryland, on Tuesday, May 31st, Dr. Wilbur R. McKnew, in the sixty-fifth year of his age.

Park.—In New York, on Monday, May 30th, Dr. Anna E. Park, in the seventy-third year of her age.

Pearce.—In Steubenville, Ohio, on Friday, May 27th, Dr. F. Savary Pearce, of Philadelphia, in the thirty-seventh year of his age.

Pursell.—In St. Louis. Missouri, on Saturday, May 28th, Dr. P. H. Pursell, of Chicago.

Town.—In Jackson, Michigan, on Wednesday, June 1st, Dr. Samuel P. Town, in the eighty-third year of his age.

New York Medical Journal
AND
Philadelphia Medical Journal.
CONSOLIDATED.

A Weekly Review of Medicine

Vol. LXXIX, No. 26. SATURDAY, JUNE 25, 1904 Whole No. 1334.

Original Communications.

ALBUMINURIC RETINITIS.*

By L. WEBSTER FOX, A. M., M. D.,
PHILADELPHIA,
PROFESSOR OF OPHTHALMOLOGY, MEDICO-CHIRURGICAL COLLEGE.

No subject in the whole domain of ophthalmology is entitled to greater consideration than that of retinitis occurring in the course of Bright's disease, or chronic nephritis; and its importance arises from the fact that the true general condition may often be detected by its ocular manifestations long before other subjective symptoms make their appearance. The association of dimness of vision with kidney disease was pointed out by Addison[1] as early as 1839, and Landouzy,[2] ten years later, made the statement that the loss of vision was one of the initial symptoms of Bright's disease and appeared and disappeared with the appearance and disappearance of the albumin in the urine.

The structural changes in the retina were not recognized until several years later. Mackenzie,[3] as late as 1854, ascribed amaurosis to kidney disease, and stated that in these cases the onset of the failure of vision was insidious and was attended by puffiness of the eyelids and frequently by diplopia. He likewise asserted that under such circumstances the pupils were dilated, and that the patients complained of pain in the lumbar region, swelling and œdema of the lower extremities, ascites, and of seeing as if through a veil, but the occurrence of true retinitis was not yet recognized.

With the discovery of the ophthalmoscope by Helmholtz,[4] in 1851, the facilities for examination of the fundus were enormously increased, and it remained for Liebreich and Mauthner to describe the eyeground picture so characteristic of this affection.

The inflammation of the retina, which is termed the retinitis of Bright's disease, occurs in about 30 per cent. of all cases of this affection. This percentage is subjected to very slight variation by different observers. For instance, Norris stated that 25 per cent. of cases of nephritis were attended by retinal changes; Eales demonstrated, by his statistics, that its frequency was 28 per cent.; while Galezowski places it at 33 per cent. It seems to be more frequent in males than in females.

The affection is found, in the greater number of cases, to be associated with that form of chronic renal disease known as contracted kidney, but it may be found in connection with any form of kidney disease. Probably the next in frequency is the large white kidney and lardaceous renal degeneration. While in most cases the ocular changes, to which I shall presently refer, are incidental to organic disease of the kidneys, cases do occur, as has been asserted by Eales and others, in young adults, directly traceable to transient albuminuria of functional origin. It may also be of interest to note that hypertrophy of the heart presents itself at about the same time as the ocular disturbances become manifest.

Albuminuric retinitis is nearly always bilateral, but may be unilateral, as has been shown by the numerous reports of well attested cases. Bull,[5] in 1886, reported ten such instances. Cheatham[6] found in a case of left-sided retinitis that only the left kidney was involved, and Yvert[7] encountered left albuminuric retinitis in a man aged forty-eight years, in whom a subsequent autopsy showed an entire absence of the right kidney and a condition of large white kidney on the left side. It must not be inferred, however, from this, that disease of one kidney precludes the possibility of bilateral retinitis in such a case.

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* A clinical lecture delivered at the Medico-Chirurgical College, December 18, 1903.

[1] *Guy's Hospital Reports,* Vol. IV, p. 1, London, 1839.

[2] *Gazette médicale de Paris,* October, 1849, p. 813.

[3] *A Practical Treatise on Diseases of the Eye,* London, 1854, fourth edition, p. 1076.

[4] *Beschreibung eines Augen-Spiegels,* Berlin, 1851.

[5] *New York Medical Journal,* July 31, 1886.

[6] *Journal American Medical Association,* 1885, vol. v, p. 150.

[7] *Recueil d'ophthalmologie,* 1883, p. 145.

The age of the patient seems to exercise a slight influence over the affection, it being more common to encounter it among middle aged or elderly persons, but it is by no means rare to meet with it in younger individuals. Bull has reported a case in a child five years old; personally I have never seen it in a patient under eight years of age.

For purposes of description we may divide albuminuric retinitis into two forms, acute and chronic. The acute form is characterized by swelling, congestion, hæmorrhages, and phenomena suggestive of acute inflammation, while the chronic form is attended by degenerative changes, such as are indicated by hæmorrhages and numerous dirty white spots. The relationship between the kidney disease and the ocular changes, while it is well recognized, is not altogether well understood. Probably the best explanation is that which attributes the ocular affection to an extension of the degenerative changes in the entire vascular system to the small vessels and capillaries of the tunics of the eye.

The subjective symptoms of albuminuric retinitis are few and not very distinctive. Headache and loss of vision—which fails to be restored by correcting lenses—are perhaps the most prominent. The fields undergo no charactertistic change unless there is coincident neuritis, and color perception remains unaltered.

Bright's disease may be attended by several ocular conditions, singly or combined. Thus, we may have blindness unassociated with perceptible structural changes in the retina, or there may be the peculiar retinitis or neuroretinitis to which we have already referred. The blood vessels of the ocular tunics may undergo degenerative changes; and, on the other hand, hæmorrhages and exudates may occur without alterations in the vessel walls. The iris and chorioid may be the seat of inflammatory processes, and opacities of the lens are by no means rare. Palsy of the extraocular muscles, particularly the superior oblique and the external rectus, may likewise attend nephritis.

Hæmorrhages beneath the conjunctiva, frequently recurring, take place occasionally during the course of albuminuric retinitis, and Talko,[8] as far back as 1872, observed them precede the affection. Such hæmorrhages usually occur during the night and are discovered by the patient on arising in the morning. Many competent observers believe that these hæmorrhages indicate the actual existence of kidney disease, but my own observations lead me to consider them as premonitory symptoms, and as due to generalized disease of the bloodvessels, which may lead ultimately to retinitis. In 23 cases examined under my direction, it was impossible to detect any retinal or kidney changes, although at a much later date these became manifest. Hæmorrhages into the lower lids may also occur, as has been shown by Samelsohn,[9] in a report of a case in which hæmorrhage into both lower lids preceded hæmorrhagic albuminuric retinitis, and Wharton Jones, long before the true ocular condition was recognized, described hæmorrhage into Tenon's capsule, with exophthalmos and blindness.

There is, sometimes, retinal detachment and folding of the retina in this affection, particularly in that form encountered in pregnancy, and strange to relate, recovery after delivery is not rare in these cases. Hirschberg[10] saw double albuminuric retinitis with detachment of the retina in a man twenty-two years of age, and Anderson[11] observed a similar condition in a child.

Ophthalmoscopic Appearance.—In order to understand fully the appearances presently to be described, one must presume the presence of a more or less generalized arteriosclerosis or similar degenerative affection, which may first make its presence known in the kidney or in the eye.[12] The changes which may thus be brought about have been summed up by R. Marcus Gunn,[13] of London, as follows:

1. The course and calibre of the retinal arteries are altered, as is shown by the undue tortuosity and changes in the size and breadth of the arteries. There may be general contraction of one or more arteries, or alternate contraction and widening, causing the affected vessel to assume a beaded appearance.

2. The translucency of, and the reflection from, the vessel walls also undergo marked changes. The loss of translucency is manifested by an inability to view any underlying vessel. White stripes are found along the vessels due to degeneration of the walls or to infiltration of the circumcorneal lymph sheaths. The entire breadth of the artery assumes an unusually light color and the central light becomes more distinct than normal.

3. The course and calibre of the veins are altered considerably and are associated with signs of mechanical pressure. These changes are manifested by undue tortuosity, alternate contraction

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[8] *Jahr. f. Augenheilk*, 1872, p. 353.

[9] *Virchow's Archiv.*, Bd. lix, p. 257.

[10] *Jahr. f. Augenheilk*, 1884, p. 387.

[11] *Ibid.*, 1888, p. 387.

[12] That retinitis was due to a diseased condition of the walls of the retinal vessels was pointed out by Gowers, in 1876, Brailey and Edmonds, in 1881, R. Marcus Gunn, in 1892, and again in 1898, and by Hertel, in 1900.

[13] De Schweinitz, *Proc. Phila. County Med. Soc.*, vol. xxiii, No. 3, 1904.

and dilatation, and an impeded venous circulation where crossed by a diseased artery. Ordinarily, the crossing of a vein by an artery induces no pressure symptoms, and the translucency of the vessels allows a perfect view of the underlying vein. When the arterial walls are thickened by disease, the vein is pressed upon or pushed to one side, or its calibre is contracted, resulting in an ampulliform dilatation beyond the point of crossing. The venous walls are subject to the same changes as those of the arteries, resulting in white stripes and varicosities.

4. Retinal œdema occurs, as is shown, by a grayish opacity near the disk, or whitish spots scattered through the fundus, following the lines of the vessels.

5. Hæmorrhages are frequent, and manifest themselves as linear extravasations along the course of the bloodvessels, rounded infiltration, and subhyaloid hæmorrhages. Absorption of the hæmorrhage and subsequent atrophy is shown by the yellowish or whitish-yellow spots that are scattered throughout the fundus.[14]

In proof of the seat of albuminuric retinitis in the walls of the retinal vessels, it may be remarked that clinical experience has demonstrated the failure of this form of retinitis to occur in eyes in which the retina is already atrophied, even in the presence of well-marked and unmistakable Bright's disease.

To the clinician, probably the first change noticeable in the retina is the fulness and dilatation of the retinal veins, which are darker in color and more tortuous than usual. The calibre of the arteries may become lessened or it may remain unaltered. Hyperæmia of the optic disk supervenes within a short time, and soon a faint, bluish-gray, serous infiltration of the optic nerve and adjacent retina is perceived. In consequence of this the margins of the papilla are obscured, and the chorioidal and sclerotic rings become effaced, so that the optic nerve seems to expand into the retina without any sharp line of demonstration. With the extension of this exudation the vessels become veiled and the light reflex common to them is lost to a greater or less extent throughout their course. The underlying chorioid, particularly near the disk margins, becomes obscured, and with the spread of the retinal hyperæmia, small hæmorrhages occur scattered throughout the eyeground. With the further advance of the condition the congestion becomes more marked, the veins turgid and tortuous, and the arteries become contracted, interrupted, and at times completely hidden from view.

In most cases swelling and infiltration of the optic nerve are not very great in this affection, but sometimes they are very prominent and the appearance of the nerve is then described as "woolly," being of a grayish-red color and having marked striations. Throughout the entire eyeground we find variously shaped and sized hæmorrhages and yellowish-white spots of degeneration. The hæmorrhages may be linear, flame shaped, or round, or may appear as small spots scattered throughout the fundus. The shape of the hæmorrhages depends largely upon their location, for instance those in the nerve-fibre layer are small and flame shaped, those in the external layers are more round, and those between the retina and vitreous are massive and more or less round, constituting the subhyaloid hæmorrhage so-called.

The yellowish white spots of degeneration are the distinctive features of this disease. In the region of the macula, these may appear in various shapes and sizes. Usually, however, they arrange themselves in a stellate figure around the macula, the rays of the star emanating from the fovea (but not involving it), or as the spokes of a wheel. The appearance thus presented resembles that produced by splashing paint on a wall with a brush. Liebreich was the first to call attention to this stellate appearance of the white spots around the macula, which is attributed to the convergence of the connective tissue fibres in this situation.

The white spots are not confined to the macula, but are scattered throughout the fundus. At a short distance from the margins of the optic disk, it is by no means uncommon to perceive coalescence of these spots until a broad encircling zone is formed, which is designated as the "snow bank" of retinitis albuminurica. The patches of degeneration as they approach the macula assume a streaky appearance, as was first demonstrated by Mauthner. The pathology of these white patches may be said to consist of fatty degeneration of the fibres of Mueller and of the granular layer, together with round cell infiltration and hypertrophy of the nerve fibres, themselves.

Absorption of the infiltration, hæmorrhages, and degeneration take place to a greater or less extent in these cases, but the sclerosis of the optic nerve fibres, which sometimes attends this condition, remains unaltered.

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[14] Hertel, as the result of examinations in a series of cases of widespread retinal angeio-sclerosis, divides the microscopical changes in the vessels into two groups, senile and inflammatory. In the senile variety all the layers show an increase in the elastic tissue and the lumen of the vessel is enlarged, these changes affecting the whole course of the vessel. In the inflammatory group the changes appear in the form of localized thickenings of the intima, composed of newly formed elastic tissue, which may give rise to narrowing of the lumen. Mention is made of this to account for the alterations in the calibre of the vessels, the sclerosis being due, as shown by Duke Charles Theodore, of Bavaria, to transudation of white blood cells, which remain in the intima and there undergo degeneration.

The epithelium and stroma of the chorioid undergo degenerative changes, but these are obscured by the swollen and infiltrated retina, and Mueller noticed sclerosis of the choriocapillaris.

Changes in the Blood.—Alterations in the character and constituents of the blood are always associated with nephritis, but are particularly well marked in the presence of retinal hæmorrhages and œdema. Ewing has stated that the usual condition of the blood is one of moderate chlorotic anæmia, and that the majority of cases show a blood count of between 3,000,000 and 5,000,000 red blood cells, and 40 to 80 per cent. hæmoglobin. My own observations serve to confirm this statement, particularly in cases in which œdema of the face coexists with œdema and anæmia of the retina. Repeated examinations of the blood made under my direction by Dr. L. Napoleon Boston, of the Medico-Chirurgical College, have placed this beyond a doubt. To my mind the alterations in the constituents of the blood are directly responsible for the changes in the retina, for it has been repeatedly demonstrated that, in chronic interstitial nephritis in which the circulation remains normal, there are no blood changes of note, and retinitis is seldom present, but with the loss of compensation of the already hypertrophied left ventricle, in these cases the blood becomes altered in its several characteristics and subsequent retinal changes take place.

Diagnosis.—The changes in the eyeground already described in the most minute detail are characteristic, and in the occurrence of such departures from normal it is safe to assume the presence of albuminuric retinitis. Confirmation is at all times necessary, and to this end an examination of the urine, of the condition of the circulation and the blood, and a careful history should be insisted upon. The affection may be mistaken for neuroretinitis from other causes, but such cases are equally serious. The condition known as *albumosuria,* described by Bence Jones and others, is attended by fundus changes, which deserve mention in this connection. In four such cases I have examined, the vessels of the fundus presented evidence of arteriosclerosis. In three of these cases the fundus reflex was yellow or pale saffron. Colloid dots were seen above and below the optic nerve, and white dots surrounded the macular region, resembling somewhat albuminuric retinitis. Hæmorrhages and whitish spots were scattered throughout the eyeground. Choked disk was observed in one case, and in another, diffuse retinitis was present. From this may be seen the necessity of examining the urine for albumose, as well as for albumin.[15]

Treatment.—It is necessary, as soon as the condition is recognized, to place the patient under the care of a clinician especially skilled in the management of such cases, who should be informed of the nature of the disease from an ophthalmic standpoint. In the event of this being impossible, general treatment, such as is indicated in nephritis, should be begun. The attendant anæmia will indicate the use of iron, but its constipating effect will necessitate considerable judgment, in order to select the least harmful preparation. In my opinion, Basham's mixture is the most applicable, and should be given, one to two teaspoonfuls, every three hours. Strychnine sulphate, in doses of $^1/_{60}$ to $^1/_{30}$ of a grain, three times daily, may be advised. Gray powder (mercury with chalk) one to two grains, and gallic acid, ten to fifteen grains, administered three times daily, are beneficial in absorbing the hæmorrhages and exudate. Free purgation and diaphoresis are especially advantageous. The diet should be such as to exclude foods rich in albumen, such as peas, beans, and potatoes, lamb, beef, mutton, pork, veal, fried fish, gravies, ice cream, pastry, cakes, coffee, and spirituous or malt liquors. Woollen clothing should be worn the year round, and the patient should be removed to a warm and dry climate, if possible. Edebohls, of New York, has made the assertion that removal of the capsule of the kidney is of great value as a curative measure in Bright's disease. Gradle,[16] of Chicago, reports one case with marked ocular changes, in which bilateral decapsulation was performed, and was followed by marked improvement in vision within a comparatively short period.[17]

Locally, very little can be done. Rest of the eyes is important and the refraction should be carefully examined and corrected. The instillation of eserine is advised by some observers, but it serves only to lessen the irritability of the retina.

Prognosis.—Vision is nearly always impaired or lost, according to the number, extent, and situation of the hæmorrhages. The outlook as regards life is very grave. Out of 42 patients observed by Nettleship, only 9 lived more than two years and 25 died within one year. The universal experience seems to be in accord with this—most patients die within two years; yet I have seen one case in which the patient lived seven years after the retinal changes were detected. When the disease occurs in patients over fifty years of age, its course is usually less rapid than in younger individuals. If the hæmorrhages of the retina are associated with fatty or colloid deposits, in a patient between thirty and forty years of age, death may be expected in from three to five months. The retinitis that follows pregnancy and the infectious fevers is more favorable as regards life, and often the retinal hæmorrhages and infiltration are absorbed to a large extent. In 19 cases of retinitis albuminurica observed by Nettleship, 14 occurred in the fifth or subsequent pregnancy, while in only 4 was it manifest with the first gestation.

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[15] See *Trans. College of Physicians,* Phila., 1902—paper on Albumosuria, by J. M. Anders and L. Napoleon Boston.

[16] *Chicago Med. Review,* Nov., 1902.

[17] Suker has collected fifteen cases in which decapsulation of the kidney was performed. Four patients died within three days, one of intercurrent disease, and the remainder, with the exception of one, perished from renal disease within a year. Improvement in vision, however, was observed temporarily in most of the cases.

The importance, then, of albuminuric retinitis lies in its early diagnosis, and the ability to do this is to a large extent denied the general practitioner, unless he has been trained in the use of the ophthalmoscope, as the symptoms, headache and loss of vision, are common to a number of less serious affections, and in the absence of expert advice on the subject such a patient might go wandering about aimlessly until too late to employ any measures which would be of any benefit whatever.

THE CARBOHYDRATES AS ÆTIOLOGICAL FACTORS IN STOMACH DISORDERS.

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In the discussions on diseases of the stomach, the medical authors usually classify the ingesta under the heads of proteids, fats, and carbohydrates. The last group, which includes a large number of substances, is treated as a unit, in the various changes which take place in the digestive tract. That this group plays a very important rôle in food stuffs is patent to the most casual observer if he but scan the following facts:

To a man weighing 70 kilos. 100 grammes of proteid, 100 grammes of fat, and 250 grammes of carbohydrates—or 62½ per cent. of carbohydrates—are daily necessary in order to maintain nitrogenous equilibrium (Burdon Sanderson).

Voit's daily allowance for a man doing hard muscular work is 105 grammes of proteid, 56 grammes of fat, and 500 grammes of carbohydrates, or over 75 per cent.; and for soldiers in active service, 145 grammes of proteid, 100 grammes of fat, and 500 grammes of carbohydrates, or 67 per cent. of carbohydrates. Hultgren and Lautergren made a series of analyses of the freely selected diets of men working moderately hard, with the following results:

	Proteids grammes.	Fats grammes.	Carbohydrates grammes.	Percentage of carbohydrates.
Russian ..	131.8	79.7	583.3	75
Munich ...	131.7	81.5	457.4	68
Swedish ..	189.	110.	714.	67

These results agree very closely, and in general terms we may say that about 70 per cent. of the food stuffs belong to the carbohydrates.

A thorough understanding of the physiological and pathological changes to which they are prone in the digestive tract, is necessary if we would treat gastric disorders intelligently. Halliburton has classified the carbohydrates used as food as follows:

The monosaccharides, which include dextrose, lævulose, galactose, and mannose.

The disaccharides, which includes saccharose, lactose, maltose, and isomaltose.

The polysaccharides, which include starch, glycogen, dextrin, cellulose, tunicin, gums, and inulin.

Each of these groups plays a very important part in digestion, and although the ultimate product is the same, namely, dextrose, still the way it is attained varies for the different groups in several particulars.

The object of this will be attained, if only the more important of the above named are dealt with.

The monosaccharides have the chemical formula of $C_6H_{12}O_6$. Dextrose, galactose, and mannose are aldehydes of the hexatomic alcohols. Lævulose is a ketone of one. They will react as follows:

(1) When digested with diluted acids, they do not yield any other sugar or sugars.

(2) If oxidized they become converted into monobasic and dibasic acids.

(3) They are directly fermentable by yeast into alcohol and carbonic acids and by the *Bacterium lactis* into lactic acid.

(4) They reduce metallic oxides in alkaline media.

The disaccharides have the chemical formula of $C_{12}H_{22}O_{11}$.

(1) When treated with diluted acids or inverting ferments, they take up water and break up into members of the monosaccharide group as follows:

Cane sugar into dextrose and lævulose.

Lactose into dextrose and galactose.

Maltose into dextrose and dextrose.

(2) They are not directly fermentable by yeast, but are readily affected by the *Bacterium lactis*, producing lactic acid and butyric acid.

The polysaccharides:

(1) Of these starch, glycogen, and dextrin are soluble in water, forming pasty solutions.

(2) They are acted on by malt diastase, ptyalin, and amylopsin, producing a number of intermediate products of modified dextrin (amidulin, erythrodextrin, achroodextrin), and finally, maltose, which, again, becomes inverted into dextrose.

(3) They are subject to bacterial fermentation, resulting in the formation of organic acids.

Cellulose is not acted on to any extent by the digestive processes in the human being, but is subject to bacterial fermentation in the small intestine. Its chief use in a properly ordered diet is to increase the bulk of the food, and by its mechanical and stimulating action on the alimentary tract, to assist the other food elements to undergo their physiological changes.

It has been shown that rabbits fed on a diet from which the cellulose was removed, died shortly from intestinal inflammation, but that they remained healthy if the same food was administered mixed with horn shavings (Bunge).

It can be seen from a consideration of the chemical and physiological relationships of the members of the carbohydrate group that they differ materially, and the changes which occur in one group in the digestive processes are not characteristic of all.

The types of this group will now be considered individually, the transformations which they undergo in the elementary tract, and the physiological action of their products on digestion.

Dextrose usually occurs in Nature associated with lævulose, in grapes, seeds, roots, nuts, and honey. As such, these sugars do not play a very important part in an ordinary diet. With the exception of honey, the percentages in which they occur in these substances are not large, and when ingested are mixed with a considerable amount of other food elements. In the stomach, they undergo normally no physiological change, not being acted upon by either ptyalin, or the gastric juice. They are, however, prone to fermentation by bacteria during the first forty-five minutes after ingestion, with the formation of organic acids, chiefly lactic.

Von Mering affirms that the stomach absorbs them partially, but practically all which escapes bacterial fermentation passes into the small intestine, where absorption takes place.

Saccharose or cane sugar forms a large part of the ordinary diet, and its importance is such that a somewhat detailed description of it is necessary. It occurs in Nature in sugar cane, sugar maple, sugar beet, and in the juices of many other plants and fruits.

Every adult consumes daily at least 15 grammes, and most a great deal more, in tea, coffee, jam, fruit, syrups, jellies, puddings, confectionary, etc. Probably it would not be too much to say that the average is about three times that amount, or about one ounce and a half. That seems in the bulk a very small amount, but if we compare it with potatoes, which contain about 20 per cent. starch, we find that 45 grammes of sugar contain as much carbohydrate as 225 grammes of potatoes, or about 75 grammes of bread or toast.

Its importance as an article of diet is readily seen, provided it is all assimilated.

What, then, are its physiological effects, and what part does it play in digestion?

(1) On salivary secretion, cane sugar has absolutely no stimulating effect (Claude Bernard).

(2) In the stomach, it reduces the secretion of HCl (Strauss), or is negative (Chischin).

(3) It is unaffected by salivary secretion.

(4) It is unaffected by pepsin, rennin, or any other known stomach ferment (B. Moore).

(5) In dogs fed on it, a very small amount was inverted (Soegen).

In vitro slight inversion takes place by dilute HCl, and this probably is what occurs in the stomach. We may, therefore, conclude that in the stomach cane sugar normally remains unchanged. In the intestine, it has been found that:

(1) Watery infusions from any part of the mucous membrane of the small intestine bring about its inversion into dextrose and lævulose (Paschutin).

(2) Intestinal contents of animals killed during digestion, possess the same power (Claude Bernard).

(3) Vella found that the succus entericus from a fistulous opening brought about this action instantaneously.

(4) The action is enzymic, but the nature of the enzyme is unknown.

(5) It is not due to bacterial action necessarily, as Hoppe-Seyler and Thurfelder supposed, for its progress takes place in antiseptics.

(6) Miura has shown that in young animals born under antiseptic conditions the mucous membrane of the small intestine, but not that of the stomach or large intestine, brings about inversion.

These facts require no comment, and we must conclude that not only all the saccharose which is assimilated, but all the maltose as well, becomes converted into dextrose in the small intestine, and is there absorbed by the capillaries of its mucous membrane.

If all the carbohydrates escape fermentation, and became inverted into dextrose, and thus absorbed, a consideration of their digestion would be greatly simplified. This, however, is not the case, and the decompositon products will now be taken up chiefly in connection with the stomach.

Thousands of examinations have been made of stomach contents by many investigators, and the information obtained, as an aid to diagnosis, has been found valuable; and in fact, in some cases, quite conclusive.

The methods devised, however, have been such that all we can say that we have now, is a standard for one set of conditions of the amount of HCl acid present at the end of an hour. This, indeed, would be satisfactory, if all the symptomatology of gastric affections hinged on its presence in certain amounts for each symptom. Unfortunately, however, this is not the case, and even the conditions under which the estimations are made are not normal.

Taking the test meal generally used as an example—that of Ewald, comprising a roll and some water, or weak tea, with no sugar and no fats—conclusions drawn from it are not satisfactory, as Chischin has observed.

He found that the ratio of the digestive power, estimated according to Mette's method of (a) mixed food, (b) meat, and (c) bread, at the end of the first hour, was as 3.5: 4: 5.22 to 7.56, respectively.

That the amount and quality of secretion varies with the nature of the ingesta is obvious, as Khigine has stated. He has also pointed out that the amount secreted is not necessarily proportionate to its acidity or digestive power, nor these to each other; and the duration of the digestive process is out of all relation to the strength of the secreted juice.

One can see, in consequence, how minimal is the information derived from the examination of stomach contents after a Ewald test meal at a stated period after ingestion.

It would be far more instructive if the stomach contents were examined every half hour, or even every hour, on successive days, after a mixed meal containing the different food substances met with in an ordinary diet. I would suggest the following:

Seventy-five grammes of toast or stale bread, 7½ grammes of butter, and 7½ grammes of cane sugar with 300 c. c. of water or weak tea. This is equivalent to 9 grammes of proteid, 9 grammes of fats, and 50 grammes of carbohydrate, or about the proportion the stomach is accustomed to digest. Because, therefore, of our methods of examination, we possess very little information of the changes undergone in the stomach by the carbohydrates when their proportions are varied.

The following facts bearing on this question are important:

(1) Lactic acid can be detected in normal digestion in from ten to thirty minutes after a meal. This is succeeded by a period when both lactic and hydrochloric acids are present, and later HCl exists alone. This is always the case after a carbohydrate meal (Ewald and Boas).

(2) Abelous isolated sixteen distinct species of microorganisms in normal stomachs, several of which produced fermentation on sugar. Among them were *Bacterium lactis, Bacillus butyricus*, the sarcinæ, etc.

(3) The feebler the activity of the gastric juice, the greater the amount of the organic acid liberated (Richet).

(4) When carbohydrates and proteids are present in the same solution with bacteria capable of decomposing them, the carbohydrates first suffer decomposition with the formation of organic acids, then later, the proteids (Maly).

With these facts before us, can we not conclude that a large amount of the saccharoses present or of the saccharine substances in a free state in the stomach during the first forty-five minutes after ingestion, undergoes bacterial decomposition with the formation of lactic, butyric, acetic, and occasionally formic, protionic, baldrianic, palmitic, and margaric acids (Ziegler)? At the same time there are liberated H, CO_2, CH_4, etc.

As soon as the HCl attains .2 per cent., bacterial decomposition is effectually arrested, and the further digestion of the carbohydrates ceases until they enter the stomach.

If, then, organic acids result from the excessive use of carbohydrates, how do they bring about a series of gastric disturbances which are more or less characteristic? For a proper comprehension of this, the normal physiological functions of the stomach must be reviewed. After the most painstaking investigation extending over many years by able physiologists, the following are some of the conclusions reached:

(1) The stomach is supplied by nerves through the vagi and sympathetic as well as by local ganglia.

(2) These contain sensory, secretory, motor, vasomotor, and inhibitory fibres.

(3) They are under the control of an "alimentary centre," situated in the caudal end of the medulla, which is capable of reflex stimulation and inhibition, cerebral, and peripheral (Pawlow, Richet, etc.).

(4) Repletion of the intestines will bring about

cessation of movement; so also will stimulation of the vagus or any other sensory nerve (Von Mering).

(5) Mental disturbances, such as anger and pain, will inhibit intestinal movement in the cat (Cannon).

(6) The pyloric end of the stomach is concerned chiefly in the movements which bring about the mixing, triturating, and acidulation of food. These movements begin shortly after ingestion, and continue to increase in vigor as digestion proceeds, thus paralleling the degree of gastric acidity (Cannon, Rossbach, Starling).

(7) Interferences with motility favor decomposition (Leubuscher and Schaefer).

(8) There is a latent period, after food enters the stomach, before secretion begins therein of from seven minutes (Pawlow) to fifteen minutes (Heidenhain).

(9) Local mechanical irritation reflexly causes slight local secretion (Beaumont, Tiedeman, Gmelin, Heidenhain).

(10) A smooth pebble will not produce it, but a piece of solid food will (Pawlow).

(11) The action of distilled water, dilute HCl, gastric juice, egg albumen, and sugar on the gastric mucous membrane of a dog with a Pawlow fistula gave negative results, as far as secretion was concerned; but peptones immediately caused a very copious secretion (Chischin).

(12) Saliva is a powerful stimulant to gastric secretion. Next to that stand dilute alcohol and the alkalies (Bernard).

We can, then, conclude that, under normal conditions of digestion, the saliva, and possibly the psychical effect, gives the initial stimulus to gastric secretion; and later on, peptones. When, then, do peptones make their appearance?

For the production of peptones, an acidulated pepsin is required in the presence of proteids. Pepsin is inert in all alkaline media; even .005 per cent. of sodium carbonate will appreciably affect it in from one to two hours, and 1 per cent. of sodium carbonate will destroy it in fifteen minutes (Langley and Moore).

In the presence of 2½ per cent. of peptone, ⅞ of the pepsin in an extract of a cat's gastric mucous membrane may be destroyed at 17° C. by .5 per cent. of sodium carbonate in one minute (Moore).

Before pepsin can become active by the presence of free acids, all the alkali of the salivary glands, which is present in .08 per cent., must be neutralized; also the bases of the food; and the proteids must be acidulated. If this depended on the presence of free HCl, the time required would vary according to the size of the meal ingested, from half an hour to two hours (Mon de Velden), for Ewald's test meal, three quarters of an hour. If, however, cane sugar is present in considerable quantities, and the conditions necessary for its fermentation, namely, the temperature, the sugar in solution and the bacteria are perfect, it is obvious that the organic acids will rapidly result.

It has, moreover, been proved that they predominate and acidulate the stomach's contents in a very short time, and as already stated, they have the power to free pepsin from pepsinogen. Undoubtedly. then, it can be inferred that the pepsin first formed, and consequently, the peptones, are due to the results of fermented cane sugar, and maltose.

The early formation of the peptones would reflexly stimulate the gastric secretion, and thus tend to hasten the digestive processes. This stimulation would also be aided by the direct irritating effects of the organic acids.

These conditions are sufficient to cause the proliferation of the oxyntic or border cells which, Hemmeter says, takes place in hyperacidity.

The acidity increases, so does motility; and the final result is, an early cessation of salivary digestion and an early evacuation of the stomach contents.

In consequence of this early or accelerated action in the secretion of the gastric juice, the Ewald test meal would show hyperacidity one hour after ingestion.

In addition to this action on HCl secretion, the organic acids produce other irritating effects, giving rise to symptoms more or less characteristic.

According to Lauder Brunton, butyric acid is very irritating; and MacFarland asserts that the *Bacillus butyricus*, as well as the sarcinæ, grow well in strong acid solutions. It has also been shown that disaccharides are converted by *Bacterium lactis* into lactic and butyric acids by a double action.

We have present, therefore, in excessive saccharine ingestion the conditions necessary to the development of a large amount of lactic, butyric, and possibly other irritating acids.

Granted, for example, that a person ingests one ounce of cane sugar daily in solution, and that a large part of it is converted into organic acids, the resultant would be more than that by weight of lactic acid, but somewhat less of butyric acid.

It requires little mental effort to imagine what an amount of irritation this would cause directly on the gastric mucous membrane. What, then, are these symptoms of irritation? It is well known that gastric mucous membrane is very insensitive as compared with either the œsophagus or duodenum. This was proved by Bence

Jones in his classical experiment. He found that by drinking a strong solution of tartaric acid, an intense burning feeling arose in the throat and continued all the way down the œsophagus until it reached the stomach. The sensation then ceased, and was only felt again about two hours after, as it entered the duodenum. This is about the sensation which might be expected from any organic acid, but the degree of irritation would depend on the action of the acid causing it.

It is well known that the burning sensations accompanying hyperacidity are chiefly localized in the pyloric and cardiac regions of the stomach. This is undoubtedly associated with irritation due to an acrid condition of stomach contents. If one examines the throat of a patient suffering from hyperacidity with acrid eructations, he will find the pharynx irritated and hyperæmic. In other words, the patient suffers from a chronic sore throat.

Beaumont observed that a craving appetite was associated with a red and irritable gastric mucous membrane, and if the irritation, either mechanical or chemical, was carried too far, the gastric secretion ceased and the mucous membrane became white and covered with mucus. This, then, explains the sensation of hunger associated with hyperacidity.

If a stomach is irritated, it is but fair to infer that all the structures of the mucous membrane are affected. It has been shown how increased secretion takes place and increased motility results; other nerves of sensation would also be irritated and their functions correspondingly increased.

The nervous mechanism of the stomach is not thoroughly understood. The afferent impulses which go to the "alimentary centre" in the medulla, and which give rise to the sensation of hunger in the cortex, are widespread in their distribution. The ablation of no organ consistent with existence will remove the sensation. The stomach may be removed from an animal, and so long as food be supplied to the intestines the hunger sensation is appeased. This has been found frequently in human subjects as the result of disease.

Similarly, large portions of the intestines have been removed without affecting the sensation. We are, therefore, justified in concluding that the afferent impulses giving rise to hunger are widespread in their distribution, though they may be more or less specialized in conformity with the distribution of special sensory fibres in the skin.

The sensation of hunger which is the cortical representation of the "alimentary centre" of the bulb, can be inhibited in a variety of ways, just as any other organic sensation, e. g., that of respiration represented in the cortex by the sensation of dyspnœa, which corresponds to hunger. The one is the demand of the system for air as the other is for food.

Under normal conditions, the "respiratory centre" and the "alimentary centre" do not intrude themselves into consciousness. If either is stimulated through systemic needs, the call upon the cortex, gives rise to the sensations of dyspnœa and hunger, respectively. If the cortex responds and, through voluntary effect, supplies the food or the air, the stimulated centres, "alimentary and respiratory," in the bulb cease to demand through inhibition fibres.

Inhibition fibres, in connection with the "alimentary centre," give rise to the feeling of satiation or repletion, while those connected with the "respiratory centre" give rise to the sensation of exhilaration. Every one is familiar with the sense of exhilaration he receives when an abundance of fresh air is obtained. It is the expression of superoxygenation of our system, as satiation or repletion is the expression of the supersupply of nutriment.

The "respiratory centre" can be inhibited centrally. We can voluntarily stop breathing; and we can stimulate it centrally in taking deep breaths. That is why, of a morning, when we step into the fresh air and by voluntary deep breaths overstimulate the "respiratory centre," we feel better or exhilarated. A cold bath reflexly stimulates, for we then involuntarily take deep breaths. This centre can also be stimulated by drugs, such as cannabis indica. In a precisely similar manner can the "alimentary centre" be inhibited centrally, stimulated centrally, stimulated peripherally, and stimulated medicinally.

These inhibitory fibres on the "alimentary centre" are distributed probably to the whole absorptive surface of the gastrointestinal tract, but chiefly to the stomach. As soon as the stomach is filled, even though with indigestible material, the inhibitory fibres act before there has been sufficient time for the food to reach the intestine in any form. A large drink of fluid will stimulate the inhibitory fibres and temporarily satisfy the sensation of hunger.

They are also distributed to the intestinal mucous membrane, for the sensation of hunger can be satisfied by food supplied directly to it when the stomach is removed or empty.

This will explain how delayed gastric or intestinal digestion, or even fæcal accumulation, removes the sensation of hunger through the inhibitory fibres distributed to their walls; and how the emptying of the alimentary tract will at once restore the appetite or desire for food, as expressed through the "alimentary centre."

A review of this has been necessary, in order to explain some sensory phenomena associated with stomach disorders, many of which, otherwise puzzling, are thus rendered intelligible.

A patient suffering from acid dyspepsia complains often of feeling hungry, but of being easily satisfied. This means that there is a demand in the system for food; but that when it is taken, owing to the hyperæmic condition of the gastric mucous membrane, the satiation fibres are easily stimulated and the sensation of hunger inhibited. The amount ingested has not been equal to the systemic demands, and hunger quickly ensues as soon as the stomach is evacuated.

In fact, all the other sensations, such as heartburn, gnawing, boring, fullness, weight, etc., which patients vaguely describe in connection with stomach disorders, can easily be explained by a proper comprehension of its nerve mechanism. We have "para-sensations" arising from disordered sensory nerves in the stomach, just as we have paræsthesias from disordered sensory nerves in the skin. In an irritable gastric mucous membrane, we have also motor disturbances. There is a cardiac sphincter, a pyloric sphincter and a preantral transverse sphincter, as well as the other muscular mechanism; each of these sphincters has its regulating nervous mechanism, just like any other sphincter.

Take that of the bladder, for example, evacuation of the contents of which takes place reflexly. We know that certain conditions modify its action. Hyperacid urine, for example, renders it prematurely active, and excessive irritation renders it spasmodic.

A similar condition of things exists in the sphincters of the stomach. The pyloric sphincter controls the passage of the food to the duodenum, and allows it to pass only when the proper fluidity and acidity is obtained. If irritated by excessive acidity, it will prematurely allow the contents to escape. It may, however, act spasmodically, preventing any escape through the duodenum, and eventually lead to organic changes in the gastric muscular wall. It has been observed that a solid mass of food will throw it into a spasm, thus preventing it from passing the pylorus.

The pylorus and fundus, which have different functions, are separated by the transverse band where stomach movements for the proper adjustment and mixing of the ingesta are initiated. If either of these sphincters is stimulated to spasmodic action, we get pylorospasm, cardiospasm, or gastrospasm, respectively.

(To be concluded.)

THE FEVER OF THE PUERPERIUM (PUERPERAL INFECTION);

A CHRONOLOGICAL REVIEW OF THE DOCTRINES OF ITS ÆTIOLOGY AND OF THE METHODS OF TREATMENT FROM EARLY TIMES TO THE PRESENT.

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(*Continued from page 1194.*)

TREATMENT.

The first work devoted exclusively to diseases of women was written by a certain Soranus of Ephesus, in the second century, who practised at Rome during the reigns of the emperors Trajan and Hadrian. This work, in the Greek original, is still in existence, and, as one commentator has said, "shows remarkable fulness of practical knowledge in relation to its subject." The author's treatment of the fever of the puerperium is based on the theory of lochial suppression and differs in no essential way from that recommended by Hippocrates. It is notable that the vaginal speculum, reinvented in modern times, was described by Soranus in this treatise.

It is well known that the medical knowledge possessed by the old-time Mexican Indians was extensive. Prescott, in his *Conquest of Mexico,* says that Cortez was enthusiastic in his praise of their skill in restoring him to health when his own physician had failed. In an exceedingly interesting paper, entitled *A Contribution to the History of Medicine in Southern California,* the late Cephas L. Bard, of Ventura, California, described the treatment of the parturient squaw which had been practised by the Indians since time immemorial, as follows:

"The delivered woman remained in bed a proper time, paid strict attention to cleanliness, and imposed upon herself a rigid regimen for a period of forty days. Her diet was restricted to broths and porridges. If fever developed, her care was in strict accord with the antiseptic regimen of today. It consisted of heating stones in a pit until they were red hot. On top of these, bundles of aromatic herbs were placed and covered with earth, leaving a small aperture in the centre. Over this, the recently delivered mother was placed astride, and water was poured into the opening, producing an immense volume of steam which caused her some suffering, but which her confidence in its value enabled her to endure."

In *The Byrth of Mankynde,* before referred to, occurs the following:

"Then as oft as it commeth for lacke of due purgation of the flowres, there must be ministered such things the which may provoke the same, whether it be by medicines taken at the mouth, or by lotion and washing of the feete, or by fumes, or odour, emplaistration, or by decoction of herbes serving to that purpose, or elles by oyntments, and such other things, according as the person or the perill doth require: of the which things few or no women be ignorant. And ye yet must take diligent heede that she be exactly and utterly purged. To this be agreeable all such simples the which provoke urine, and open the veynes, making free way for the blood to passe, and send the humours and matter downeward. . . .

"Howbeit as neere as ye can, use none of these things without the counsell of an expert Physitian, lest whilst ye helpe one place ye hurt another: also to sneeze, helpeth much to this matter, and to hold in the breath, enclosing the nose and mouth. Also a fumigation made of the eyes of salt Fishes, or of the hoofe of a Horse, put underneath, provoketh the flowres. If ye profit not by this means, then being able to beare it, let her bleed in the veyne called Saphena, under the ancles of the feete, for this provoketh flowres chiefly of all other things."

Riverius, in 1640, advised "emollient opening clysters, and cupping glasses to be fixed to the groin and hips, both with and without scarification." Furthermore, if these measures were without effect he recommended that "the veins about the knees, or in both thighs, are to be opened, or the hæmorrhoidal veins, if nature seem to point that way. But if this fever be attended with a total suppression of the lochia, then a vein must be opened in the arm."

It is to be remembered that William Harvey announced his discovery of the circulation of the blood (*Exercitatio de motu cordis et sanguinis*) in 1628, but that it was not until 1675, or thereabouts, that Anthony van Leeuwenhoek, the "Father of Microscopy," demonstrated the continuity of arteries and veins through intervening capillaries, thus affording ocular proof of Harvey's discovery. The Hippocratic theory of the humoral origin of disease was accepted, in modified form, as late as the beginning of the eighteenth century, if not later, and up to that time, in spite of the discoveries of Harvey and Leeuwenhoek, it was the universal custom to bleed a patient from specific veins for the relief of different diseases, the theory undoubtedly being that the balance between the body "humors" would thus be more readily established. In accordance with this idea, Thomas Willis, in 1662, agreed with Riverius to the extent that, in the treatment of puerperal fever, "a vein should be opened in the foot, or leeches applied to the hæmorrhoidal veins, but if necessity urges, the operation may be performed in the arm."

Sylvius, in 1667, advised the administration of "aromatics impregnated with a volatile salt, and uterine medicines, especially such as promote sweat," but adds that "the prescriber must be very careful in the use of these aromatics, lest they should increase the febrile heat." In 1708 Boerhaave was in the habit of prescribing "gentle anti-acid remedies to sheath the acid serum; soft diluents; the mildest specific aperients, from the moderately cordial, uterine class; topical deobstruents, clysters, fomentations, cataplasms, plasters, linaments, cupping-glasses, pessaries, and suppositories." He was most emphatic in declaring that "bleeding should never be practised in this disease without the most urgent necessity." To this author Thomas Denman pays a high tribute:

"Herman Boerhaave . . . enjoyed all the honours which the university could bestow, or the city of Leyden confer upon him. He raised the reputation of this school of medicine beyond that of any other in Europe. His industry, in the pursuit of knowledge of every kind, was almost incredible; that of any other man compared with his may be called amusement: the facility with which he communicated this knowledge to others, was beyond expression happy; and his whole conduct, in every religious, moral, and scientific view, to the highest degree laudable. . . . He died in the year 1738, in the seventieth year of his age."

A *Life of Boerhaave* was written by Dr. Samuel Johnson, which, Denman adds, "must ever remain a very useful study to medical men."

That medical practitioners of that period differed in opinion as radically on many subjects as at present is evident from the following: In *A General Treatise of Midwifery, Faithfully translated from the French of Monsieur Dionis, First Surgeon to the late Dauphinesses and sworn Master-Surgeon at Paris,* published in London in 1719, the author says:

"Let the Patient have a cooling and spare Diet, drinking only weak Broth made of Veal or Pullets, with Lettice, Purkstane, Succory, Borrage, Sorrel, or the like. . . . Let her body be kept open with simple Anodyne Clysters, and let her lie still. Bleeding is a most powerful Remedy in this Case; and therefore we must begin with it, and repeat it in a short time. . . . Above all, let us shun Purgatives, how mild soever; for as they are prejudicial in all Inflammations and Fluxions of the Womb, they are particularly *so* here."

There appears to have been very little important variation in the treatment of the disease for many years following this period. Quinquina, or "Jesuit's powder," which was introduced into medical practice in England in 1655, became very popular in the treatment of all fevers; and in that of puerperal origin, in addition, evacuants, cooling drinks.

and clysters were relied on. Thomas Cooper, in 1766; Thomas Denman, in 1768; Robert Wallace Johnson, in 1769; John Millar, in 1770, and Henry Manning, in 1771, all practitioners of great reputation, asserted that bleeding should not be resorted to, or practised with great caution, as it was liable to do great harm.

In 1772 Nathaniel Hulme laid down the principles of treatment as follows:

"When the puerperal fever develops I first give a simple emollient clyster; if the woman be not relieved, I follow with a cathartic. A solution of the *sal catharticus amarus,* in water; the *oleum ricini;* the *tartarum emeticum;* and the *vinum antimoniale;* are what I have found to answer the purpose best. . . . When the *tartarum emeticum,* or *vinum antimoniale,* are made use of, they are to be given in small doses, every two or three hours, till they pass through the intestinal canal: otherwise they will answer no other purpose than to amuse the patient, and deceive the prescriber. . . . To encourage diaphoresis I give small doses of ipecacuanha, combined with a gently dosed opiate. The saline draughts of Riverius should be taken freely, as they operate as antiseptics and assist in destroying the putrescence lodged in the bowels. I also order large quantities of chamomile tea, and the patient is made to strictly abstain from all caudle, spices, wine, spirituous waters, heating medicines, and cordials of every kind; whether under the denomination of comforters, strengtheners, revivers, expellers of wind, promoters of the lochia, relievers of after-pains, or under any other specious title whatever, which the good women are too apt to bestow upon them, and thus ignorantly administer to the destruction of the unhappy patient.

"The clothes of puerperal women should be frequently changed for clean, dry, warm ones; lest by retaining a great quantity of putrescent steams, they should add fuel to the disorder. All kinds of bandage, upon the trunk of the body, must likewise, in this malady, be carefully avoided; lest by their pressure upon the tender abdomen and inflamed viscera, they should help to increase the trouble. . . . Great care must be taken about bleeding the patient, for though there may be a flattering strength in the pulse, yet a tendency to a gangrene, in the omentum, and other viscera, will often follow soon after, and nature will be hurrying on towards a diarrhea, which seems to be the only way she takes, in order to relieve herself from such a terrible disaster."

In 1782 Dejean, Margault, Montabourg, Danié, Sollier, and others, in France, published papers in which they affirmed that ipecac was a specific for the disease. In 1793 John Clarke described in much detail a malignant form of puerperal fever which attacked patients at the London Lying-In Hospital in 1787, in which "quinquina united with opium in large doses, and ipecac," were employed.

In the second edition of his *Introduction to the Practice of Midwifery,* published at London in 1815, Thomas Denman admitted that his views regarding bloodletting had undergone radical change. As a result of more extended experience, he said:

"It is in general absolutely necessary to bleed in the beginning of the puerperal fever. . . . If benefit should be derived from the first operation, and the violence of the disease should require it, we shall be justified in repeating it at short intervals; not with a view of moderating or retarding the progress of the inflammation, but if possible, of wholly suppressing it. . . . I have rarely attempted to inject medicines of any kind into the vagina or uterus, though from a consideration of the probable state of the parts, and of the fetid humours discharged, it is reasonable to think that emollient or gently detergent injections might sometimes be useful."

Dr. J. W. Collingwood, in the *London Medical Repository,* 1821 (Vol. XV, page 12), raised his voice against bloodletting, and advised warm intrauterine injections; 1 ounce of sulphate of magnesia dissolved in 4 ounces of "aqua pulegii" internally once every twenty-four hours, effervescing draughts every hour; and hot fomentations to the abdomen.

In this country the practice of midwifery was keeping pace with that in England and France, because prominent medical practitioners in the larger cities had, for the most part, gained their practical experience from association with the well known teachers of the older countries, and because the only textbooks in use were of English origin. The first public teacher of obstetrics in the United States was Dr. William Shippen, of Philadelphia, who was appointed professor of anatomy and surgery in the newly established Medical School of Pennsylvania in 1762, and who delivered his first course of lectures during that year. In 1767 the Medical School of New York was founded under the direction of Kings, later Columbia, College, and Dr. John V. B. Tennert was appointed to the chair of obstetrics. It is unnecessary to more than make mention of the names of Hosack, Francis, Dewees, Meigs, and Hodge in connection with the early development of obstetrics in America.

In England, meanwhile, the belief in the contagious nature of the disease had been slowly gaining ground and the "tartar emetic and wine of antimony treatment" was being superseded by other methods. I have been unable to discover just when the mercurial treatment first attained prominence, but it is recorded that during an epidemic in the County of Sommerset in 1811 a certain Dr. Bradley prescribed calomel in purgative doses, with excellent results. Mercury soon became very popular in the treatment of the disease, and in 1812 Chaussier, in France, employed inunctions of the drug to combat puerperal peritonitis. The same plan of treatment was adopted by Laënnec and Lerminier in 1818, and in 1827 Velpeau saved 14 out of 19 women attacked with the disease. He ordered 8 to 12 grammes of the ointment of mercury rubbed into the skin of the abdomen every two hours, and in the intervals, 1 decigramme of calomel internally up to the point of salivation (38). Gooch, of London, in 1831, prescribed calomel in doses of 1½ grain every hour combined with opium and ipecac. Probably the most complete essay on the mercurial method of treatment is that by J. B. van den Zande, entitled Die angemessenste und erfolgreicheste Behandlung des entzundlichen Kindbettfiebers, oder der Peritonitis puerperalis, published in the *N. Jahrb. d. deutsche Med. u. Chir.*, Elberfeld, 1823, Vol. VIII, page 131.

Enough has been said to indicate the principal methods of treatment practised up to the time the germ origin of the disease was fully established. New and alleged improved methods were brought out from time to time, but none, except that employing oil of turpentine, internally and locally, gained wide popularity. In 1888 the routine treatment practised in Braun's wards, Vienna, was as follows: A warm intrauterine injection of a 1 to 1000 solution of thymol was given, after which the cavity was thoroughly curetted and the injection repeated. A suppository containing 5 grains of iodoform was then introduced into the uterus and held in place by iodoform gauze. Eroded or lacerated surfaces on the cervix or vaginal walls were brushed with tincture of iodine. The vagina was then packed with iodoform gauze, which was removed after twenty-four hours and a vaginal douche of thymol solution given. The douche was repeated daily as long as the discharge continued. Ice bags were always applied to the hypogastrium after the curettage. "A blunt curette was the only one used after abortions and confinements at term, the sharp curette in cases of flowing that had continued for some time, and in cases of endometritis" (39). By this method nearly 500 cases of puerperal infection were treated in Braun's service during two years and but two resulted fatally.

Antistreptococcic Serum.—In 1895 Marmorek submitted reports to the *Sociétié de Biologie de Paris* on the use of antistreptococcic serum in the treatment of infection, sixteen of the cases being of puerperal origin. In 7 of these streptococci alone were found; in 3, streptococci and colon bacilli; in 5, streptococci and staphylococci; and in 1, colon bacilli. In the first group of 7 all the patients recovered; in the second all died; in the third 2 died. As a result of his experience, Marmorek concluded that the serum treatment was the most efficacious known in pure streptococcic puerperal infection, but useless if other germs were associated with the streptococcus.

In April, 1896, Charpentier reported to the Obstetrical Society of France the results of 40 additional cases of puerperal sepsis in which the serum had been employed by 12 different practitioners. Twenty-four patients recovered. Of the 40 cases, but 24 were examined bacteriologically. Pure streptococcic infection was demonstrated in 16 of these, of which 7 resulted fatally. In 8 other cases streptococci were associated with either staphylococci or colon bacilli, or with both, and 4 of the patients died.

In 1898 the American Gynæcological Society appointed a committee to report on the value of the serum in puerperal infection. This report was published in the *Transactions* of the Society for the following year. The committee collected reports of all cases in which the serum was employed in puerperal cases from the date of Marmorek's first report to April 1, 1899, 352 in all. The mortality, in cases in which bacteriological examination was made, was 32.69 per cent.; in cases in which no bacteriological examination was made, 15.85 per cent. The committee concluded that "clinical observation has shown that the results obtained by its employment leave a great deal to be desired, and apparently indicate that it has little, if any, effect upon the general course of streptococcic infection."

During 1896 Wallich demonstrated the fact that, while the serum is harmless when administered to a non-infected person, it is very inefficient also as a prophylactic. At the Baudelocque Clinic, Paris, he injected it into 383 women suspected of being infected at the time of admission, and 58 of these later developed well marked symptoms of the disease. The total number of cases of infection at the hospital during the year mentioned was 179, and the patients treated with prophylactic injections constituted 32 per cent. of that number.

Intravenous Injections.—In 1903, Dr. C. C. Barrows, of New York, reported a case in which a solution of formalin had been injected into a vein for the cure of puerperal sepsis (40). The patient on admission to Bellevue Hospital had a rectal temperature of 108° F., pulse 124, and respiration, 30. Pure cultures of streptococci were demonstrated from her blood, and leucocytosis. There was a foul-smelling bloody discharge from the vagina. One litre of a 1 to 5,000 solution of formalin was injected into the median basilic vein. The following morning her temperature was 101° F., and pulse 104. During the second day 750 c.c. of the solution was injected, with the result that her temperature became normal, and remained so, and an examination of her blood failed to discover streptococci. The patient recovered.

This plan of treatment provoked considerable discussion, but subsequent attempts to duplicate Barrow's success resulted in failure and the method has been abandoned.

It is of interest, in this connection, to briefly notice another instance in which intravenous injections proved efficacious in the treatment of puerperal infection, although the agent employed was of a different nature. W. Tyler Smith reported the following case to the Obstetrical Society of London in 1870 (41):

A woman, aged twenty years, on the twelfth day after confinement, presented a general septic condition, her pulse for several days having ranged from 120 to 135. No temperature is recorded. Half a drachm of a solution of 1 part of liquor ammoniæ to 3 parts of water was injected into one of the veins of the right arm at 7.45 p. m. "She did not appear to feel the puncture, but as soon as two or three drops had been injected she complained of severe pain in the opposite arm. When the operation was completed there was very great pain over the whole body, with intense smarting of the right arm. This continued without abatement for several hours. Nausea ceased at 11 p. m., but the bowels moved four times in the course of the night. The pain subsided toward morning." A small ulcer occurred at the seat of the injection. The case terminated in recovery.

De Kesmarky, in 1895, reported (42) that he had employed intravenous injections of mercuric bichloride, one sixth of a grain a day, for twenty days, in the treatment of puerperal infection. The patient died in forty-five days from gangrenous metastatic abscess of the lung. In two other cases, in which the patients received about half a grain of the drug in 10 injections, both recovered.

Hysterectomy.—At the Fourth International Congress of Obstetrics and Gynæcology, before referred to, the subject of hysterectomy for puerperal infection was fully discussed by such authorities as Leopold, of Dresden; Hofbauer, of Vienna; Fehling, of Strassburg; Treub, of Amsterdam; Tuffier, Faure, and Pinard, of Paris; and Zweifel, of Leipsig. While opinions differed materially as to whether the operation was justifiable and would give promise of success in a fair proportion of cases, the conclusions of Leopold were generally accepted. His indications were as follows (43):

"In case of puerperal infection, hysterectomy will be indicated when it shall have been proved by all symptoms that the uterus is the sole point of continued departure of the infection, and that all other means employed against the malady are in vain. This indication applies especially to those cases of retention of the placenta, which is undergoing decomposition and cannot be removed.

"If the infection has extended beyond the uterus and if it has produced a severe peritonitis, or a septic thrombosis, or a unilateral or bilateral affection of the appendages, or an abscess of the uterus, hysterectomy alone will not suffice to cure the patient, because this operation does not take into consideration the anatomical alterations which are added.

"If the disease is pursuing its course toward a fatal termination one should, according to the circumstances, have recourse primarily to surgery with the intention of searching out and evacuating the focus of suppuration.

"In all cases early and minute search for foci of suppuration must be insisted upon. The searching for and extirpation of veins involved in suppuration will, in the future, contribute brilliant success in the treatment of the more serious types of puerperal septicæmia."

(To be concluded.)

A PLEA FOR A TRUER THERAPY—REAL TREATMENT OF THE SICK.

By WALLACE C. ABBOTT, M. D.,

CHICAGO.

The student of medical history will note that, in spite of our jealous insistence on a monopoly of matters medical, we, as a profession, have always been profoundly influenced by the waves and currents of outside or lay opinion on these topics; and our practice has conformed to the currents, and even the eddies, of the world's changing beliefs; and we fear that just now we are being influenced by the Eddy to our great detriment.

It has become the fashion to deride drug treatment. Every year sees new hordes of "quacks" pouring over the barriers into our domain, and under whatever title they classify themselves, their war cry is the same—' Down with the drug." Christian scientist, Weltmerist, vitapathist, mind healer, hypnotist, any form of practician of suggestive therapeutics, they all keep up the chorus of derision as to drug therapy. It has not only become irreligious to take drugs, it is unfashionable.

A glance over the pages of our most prominent medical journals will show how far this has influenced ourselves. Very little is to be found therein, pertaining to drugs and their uses. The journals are filled with the records of surgical practice and the exploitation of new methods. If a physician at a society meeting advances a therapeutic suggestion, he does it apologetically and is heard with impatience.

We see no reason for this abject surrender to quackery, and we fully believe the time has come for a revival of faith in drugs, founded on a much needed reform in the drugs themselves and in the methods of their application. And this reform can only be based on the use of better weapons, more precise, more efficient, more modern, than those that have brought upon us the contempt of the public, and have engendered that inhibition of utility, therapeutic nihilism. That this reform has been initiated, has been put in active application, and is now being utilized by many thousands of American physicians, may be news to many of the readers of this journal. It is the object of this paper to direct attention to this matter.

It is pertinent to ask, Why do we resort to drugs in the treatment of disease conditions? And the answer to this, while it may be explicitly stated that we use drugs to alleviate and cure disease, covers a much wider field than this statement would indicate. It means to alleviate and cure, *cito, tuto, et jucunde,* to discern those means by which this can be done with safety to our patients and as much pleasure to ourselves as may be. It brings to question the reliability of the means by which we are accustomed to get results, and to inquire whether these results are of a uniform and positive nature.

We are limited to a certain extent in the application and the administration of remedies, by the limitations of our materia medica, by the limits of our knowledge of the action of remedies, and by the untrustworthiness of their preparations as presented in the usual tinctures, fluid extracts, and tablets.

As a result of this untrustworthiness, many physicians have lost confidence in medicinal methods of treatment, and class themselves, or are classed, as "therapeutic nihilists." This loss of confidence is not due, as they think, to the untrustworthiness of drugs *per se,* but to that of the preparations they have been using; they use medicines often wrongly or ignorantly. A therapeutic nihilist is such, therefore, either because by using poor, unreliable preparations of drugs he gets no results or differing results, or because he is ignorant of the value of remedies in disease. He cannot offer as an excuse that he uses the *best* he can get; this excuse will not hold water.

Physicians constantly prescribe empirically, without a clear conception of what they wish to accomplish. No remedy should be prescribed unless there is a distinct indication present for its use. The old-fashioned "shotgun" prescription should be relegated to oblivion and supplanted by the small calibre rifle shot dosage with active principles.

The "shotgun" does hit occasionally, by virtue of its many missiles, but we cannot designate which of the many pellets is going "to bring down the bird." On the other hand, unless accurately aimed, with due allowance for wind and distance (susceptibility of patient, etc.), the rifle is even more uncertain than the shotgun.

This brings up the matter of dosage. Hare says, in his *Practical Therapeutics,* "This latter decision is almost as important, for very often an error in dosage will cause failure of the remedy. A large part of the skill of the physician *consists in fitting the dose to the needs of his patient.*" How thoroughly he grasps here the fundamentals of the principles of dosage, only to glide smoothly away on the ebb tide of ultraconservative empiricism. "There is *unfortunately* no absolutely fixed rule which can be applied to dosage: (1) The individual may not be easily affected, (2) the disease process antagonizes the action of a remedy, (3) age and sex have their influence, (4) susceptibility or idiosyncrasy."

From this reasoning he deduces that the nearest approach to accuracy is to give according to the weight of the patient, but admits that this is not feasible; that dose by "rule of thumb" is "as empirical and lacking in thought as is the use of a remedy without indication." "The dose must *be varied to fit the case.*" Obviously, without a doubt! He approaches closely to the only rational and correct principle of dosage, but fails to see just how close, and leaves us with no recourse, but to give empirically. Is that all that is left us? Let us see:

It is important to recognize clearly the facts on which dosage depends, and Hare gives them distinctly. Individuality of the patient as to susceptibility to the action of a drug cannot be known. Therefore, the dose *must* vary.

The effective dose depends on absorption, which, in turn, depends on the activity or passivity of the circulation, as in collapse, drowning, dropsies, delirium tremens; on the state of the stomach as to fulness or emptiness; on the crudity or pharmaceutical perfection of the remedy; in other words, on its absorbability. In the crude form, as powder, a drug must first be digested, in order to free the active principle from the mass of inert solid matter.

The effective dose also depends to as great an extent on elimination. If a remedy is quickly eliminated (and the more pure, the more quickly will this occur), the dose must be repeated often; if slowly eliminated, the effect is more prolonged and the dose need not be repeated so often. Therefore, the only effective dose is that part of the remedy which acts. The only logical deduction from this, then, is to dose often, in small quantities of an active, accurate, reliable preparation, until you get the effect you want. In no other way can you escape the Scylla of empiricism, on the one hand, or the Charybdis of therapeutic nihilism, on the other. There being absolutely no way by which we can determine *a priori* the amount of any drug which will produce the effect desired in any given case, it is left for us to find that dose by giving *to effect*—either remedial or physiological—beyond which we should not go.

There is thus no possible way in which we can get bad results; poisoning cannot occur, and in fact has never occurred, when the active principles are given "dosimetrically." We eliminate the idiosyncrasy of the patient; age and sex give no cause for worry; the weight need not be taken into account. All these vary as our patients vary; so must the dose vary, and the only "rule of thumb" possible, that is at the same time logical, is that outlined above—*give to effect,* disregarding quantity.

It is important, as you have no doubt determined, that our working materia medica, our remedies, must be revised. Hare says, under the heading "Strength and Reliability of Drugs," that those who die annually from the use of drugs that are untrustworthy present an alarming array of figures; that this for many years was unavoidable, because our knowledge of the active principles was deficient. But now, he states, it is different.

The active principles and their indications are well known, or are becoming well known. He gives examples of untrustworthiness coming under his own experience: One tincture of nux vomica contained twice as much strychnine and brucine as it should; another contained only the faintest trace of alkaloid. As a result of his investigations, he advises the use of only the assayed preparations; or, when these cannot be obtained, the employment of the active principles in granule form. He concludes: "A poor drug to the physician is worse than a rusty knife to the surgeon," to all of which I say "Amen!"

The above needs no comment except to drive home the fact, that the only avenue of escape from therapeutic nihilism lies along the straight well-paved road of medication by active principles in small doses given to effect. From these premises there can be deduced no other logical conclusion. How, then, can a physician who has an eye single to the interests of his patient hesitate to accept a therapy which will restore that confidence in remedial measures without which he is unworthy of the name?

Not alone by deduction is this the only rational therapy, but clinical experience with the active principles proves it absolutely. On the one hand, we have obvious untrustworthiness; on the other, absolute trustworthiness—inaccuracy then, accuracy now. There can be no hesitation in adopting the active principles, once you admit the obvious fact that all medicinal action that a drug possesses is the result of the presence in that drug of one or more active principles. If of one, then does this active principle contain in itself a full expression of the therapeutics of the drug? If more than one active principle is present, then is it not better and more scientific, more exact, to study the action of each separately, than to give such empirically, hoping to get the desired results, which perhaps depend on the presence in *excess* of a certain alkaloid?

I would only impress upon you the fact that to be successful in the use of the "arms of precision," their indications *must* be mastered. You will become a better diagnostician; you will practise your profession with greater pleasure and profit, mental and financial; you will gain the gratitude of a satisfied patient. The use of the active principles simplifies practice wonderfully; it develops confidence, which in turn cannot but impart itself to the patient. Through grasping and applying the principles of exact treatment of the sick you become, you are, a better doctor.

Therapeutical Notes.

Apocynum Cannabinum.—At the meeting of the American Medical Association, held in Atlantic City, June 7th, H. C. Wood, Jr., reported the results of a pharmacological investigation of Canadian hemp. He found that it caused a marked elevation of the blood pressure with slowing of the pulse; when given in sufficient doses the slow pulse was followed by an extremely rapid heart action with a sudden cessation of the heart. The rise of the blood pressure was due in part to a stimulation of the heart muscle, and also in part to the stimulant influence upon the bloodvessel walls. The slowing of the pulse did not occur after division of the pneumogastric nerve, and was due to stimulation of the cardioinhibitory centres. In the stage of rapid heart action he found that stimulation of the pneumogastric nerve failed to slow the heart, indicating that the peripheral ends of the nerves were paralyzed. The volume of the kidney was diminished, showing a contraction of the renal bloodvessels.

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NEW YORK, SATURDAY, JUNE 25, 1904.

FOURTH OF JULY TETANUS.

It is almost idle to hope that this year will prove an exception to the long succession in which the celebration of the anniversary of our national independence has been characterized by din and violence—the one robbing thousands of the sick of the quiet conducive to their recovery, and the other resulting in wholesale maiming and numerous deaths. The casualties attendant upon the recent celebration of Bunker Hill Day in Boston show plainly enough what we may expect, though no such indication was required. Here in New York there is every year some pretense of curbing the juvenile propensity to make a noise, but it always proves illusory, and the deadly work goes on.

We are not aware that the authorities have taken any real steps to check the sale of the toy pistol to reckless youngsters, that the manufacturers of that infernal contrivance have of their own volition taken any pains to reduce its capacity as a destroyer, or that the dealers have more than ever before recognized that the sale of a dangerous article to irresponsible boys is an offense against the public good. It rests, therefore, with parents to see to it that their immature offspring are not provided with this instrument of destruction. But on the one occasion of all others furnished by the Fourth of July American parents are proverbially lax in such matters. They forget the dreadful events of the year before, and in the majority of instances undoubtedly they have never adequately realized them. And so it is incumbent on us medical men to try to bring them to their senses by picturing to them vividly what horrors the toy pistol has wrought in the past and is sure to work in the future if it is not suppressed.

We shall fail, of course, in too many instances, as we have failed in the past, in our efforts at beating sense into parents' heads, and all that will be left to us will be, besides careful surgical treatment of the lacerations we shall be called upon to remedy, to begin the fight against tetanus early in each case, remembering that the small boy's hands are apt to be begrimed with earth bearing the germ of that fearful disease. It goes without saying that recourse will be had freely to a preventive measure that seems to give promise of fair success, that of the topical use of tetanus antitoxine at the outset.

THE MOSQUITOES ARE WITH US.

Three weeks ago we called attention to the prevalence of mosquitoes in Riverside Park. Nothing has since been done, so far as we have been able to observe, to rid us of these bearers of disease. They are now in the houses—not in force, but it does not take them long to multiply, and one in a house is too many. Irregularities of the pavement have not been corrected, and builders and others are allowed without let or hindrance to dig ditches that a very moderate rain will convert into pools quite to the mosquito's liking as breeding places. So far as is now apparent, we are to be robbed of sleep and inoculated with malarial disease this summer in the time-honored style. One might imagine that a committee of rustics was sitting in judgment on this pathogenic pest.

We are well aware that there is nothing particularly spectacular about the task of exterminating mosquitoes, and perhaps that is the reason that not a finger is lifted by our officials to accomplish the work. We are convinced, however, that the sanitary officer who does essay the undertaking and carry it through to accomplishment will be held to deserve so well of the community that his name will be engraved on a monument more enduring than bronze. Witness the esteem in which the memory of Colonel Waring is held, though he did no more than all his predecessors ought to have done, but far more than any one of his successors has accomplished.

Are the streets and vacant lots and roof tanks of New York to be allowed to go on indefinitely in the work of breeding pestiferous insects? When are mosquitoes to be suppressed, and when the squatters' privies and cesspools, from which flies spread typhoid fever broadcast? Is it not a shame that in one season the energy of our army surgeons rid Cuba of yellow fever while all the power of our sanitary machinery here in New York is held back from efficient contention against the infectious diseases mentioned, from which we have suffered for years and years?

THE QUESTION OF REMOVAL OF THE VERMIFORM APPENDIX.

It is well known that the first attack of appendicular inflammation is the most dangerous one, because it is during that attack that nearly all abscesses occur, and also fulminating inflammation arises during the first attack in the larger number of instances, so that any treatment which does not begin until after the second attack has come and gone, and simply prevents a future occurrence of the disease by removal of the appendix, is certainly not an ideal one. Without any doubt, an operation should be undertaken after the first attack, and, when it is done by a competent surgeon, the mortality should not be greater than 0.5 per cent. By removal of the appendix, the patient will avoid the risk of subsequent attacks and an average mortality of 5 per cent. at each attack.

The ideal thing which is accomplished occasionally is the removal of the appendix after an attack of appendicular colic, colic without a rise of temperature and due to the diseased condition of the appendix. It is attended by hyperæsthesia; there are areas of referred pain on the anterior part of the abdomen, due to the distention of the appendix. In some patients, on palpation, one may feel the appendix as a hard cord in the right iliac fossa; it may or may not give rise to pain. These attacks occur at frequent intervals and last for an hour or several hours. Their début is sudden, they end suddenly, and the patient feels perfectly well between them. When an appendix is removed in these cases, its lumen will be found filled or distended by a filthy secretion due to a catarrhal or ulcerated condition of the mucosa, or there may be a stricture or kinking of the organ. Oftentimes calculi are present. Occasionally the attacks occur during menstruation. Now, it is well known that there is a little artery connecting the right ovary with the appendix, and lymphatics from the right ovary pass to the appendix, so that there is good reason why these attacks should occur during the menses, especially if the appendix is already hyperæmic.

Appendicular colic is simply symptomatic of a mild inflammation, the lesions involving only the mucosa or muscular coat of the appendix, the organ being distended with fluid or fæcal concretions. This retention of secretion in the appendix has a very bad effect on the health of the patient, and there is always great improvement in the general condition as soon as the organ is removed.

Regarding the question of removing the appendix during the first twenty-four hours of the first attack, I have no hesitancy in saying that it is the ideal method. The patient comes down with all the symptoms of acute inflammation, and if the appendix can be removed at the very beginning without unreasonable risk, one avoids not only the risk of the first attack, but of all the subsequent ones as well. Moreover, removal should be done during the first twenty-four hours, inasmuch as one will thus avoid the risk of being obliged to operate during the second, third, fourth, or fifth day, with a mortality of forty per cent. If we operate during the first twenty-four hours, the mortality should not exceed five per cent.

During the first twenty-four hours of the attack, the operation should present but little difficulty, because very few or no adhesions exist, the appendix can be found with little difficulty, and generally it is not perforated, consequently infection of the peritonæum is slight. The absence or presence of hyperæsthesia will indicate whether there is perforation or not; if present, it is pretty certain that perforation has not taken place, but if it should disappear within the first twenty-four hours of the attack, it is practically certain that the organ is perforated, and that is all the more reason why it should be removed. Moreover, if the operation is undertaken within the first twenty-four hours, the peritoneal stitches will hold, but not afterward.

As to the first twenty-four hours of a subsequent attack, the indications for operating are not so evident. In a large number of cases adhesions will probably be present from the first attack, so that the appendix is less readily found and consequently will be more difficult to remove. The risk incurred by the patient in a subsequent attack is probably not so great as in the first; therefore, the difficulty is greater and the advantage to be gained is less, so that it would seem more rational to operate in only very acute cases.

In any attack I feel prepared to say that removal should not be undertaken during the second, third, or fourth day, except as a last resort or when the case becomes progressively worse. The difficulties are these: On opening the abdomen, so much lymph is present that the appendix is not easily found; if one hunts for it, the adhesions are broken down which are walling off the general peritoneal cavity from the septic process. Then, again, in many cases the appendix is already perforated and all the damage has already been done, so that removal of the organ at this stage is simply shutting the door of the stable after the horse has been stolen. Then, again, under these circumstances, one is forced to make a large incision, which means that the patient's life will be miserable for ever afterward on account of the resulting ventral hernia. Should one be obliged to operate, all that should be done is to open the abdomen and drain.

When an abscess is formed, all are agreed that it should be opened and drained, but to hunt for the appendix, which is in all probability tucked away in some inaccessible recess, is to be condemned. The appendix occupies such variable positions that no one can be certain where it may be found, and if it is searched for there is great liability of breaking down the adhesions and thus allowing pus to escape into the general peritoneal cavity. When general peritonitis has supervened, it makes very little difference whether the appendix is removed or not, so long as too much time is not wasted in the operation. The appendix has ruptured and the entire peritoneal cavity has become infected. If the appendix presents itself in the wound, it may be removed, but if not no search should be made for it.

Charles Greene Cumston.

THE PLAGUE IN MANILA.

It is interesting to learn from the monthly report of the Board of Health for the Philippine Islands that during the month of February there were seven cases of Oriental plague, none of which occurred among the Chinese, who, it is stated, have now largely received protective inoculations against the disease; and that, although but a relatively small number of the 30,658 rats destroyed during the month were examined in the laboratory, not one of those examined was found to be affected with the plague. Six of the seven cases of the disease observed in the human subject proved fatal—all in Filipinos.

POISONING WITH CREAM CAKES.

Commenting on the recent occurrence in Paris of several cases of poisoning with cream cakes, one of which proved fatal, the *Journal des praticiens* for June 4th remarks that similar instances of poisoning have been observed in Bordeaux and several other French cities. The "cream," says our contemporary, is made of flour, milk, sugar, eggs, and orange flower water or vanilla, and neither the sugar, the milk, nor the aromatics can be suspected—it is only the eggs that are at fault. The yolk and the white are treated separately. The yolks are heated to the boiling point of water, and therefore sterilized; so it is the white of the egg, with all its microbes, that does the damage. As regards the microbes, however, it is still uncertain whether the poisoning is chemical or septic. White of egg, it is added, is not always poisonous, even when it is so far gone as to be offensive; but sometimes it is, and it is therefore well to avoid it if it has been kept for a long time, although there may not be the least odor of putridity.

A NEW CHARGE AGAINST THE PROFESSION.

Under the heading of Can This Be True? with the subheading A Druggist's Charges of Collusion Between Doctors and Fakirs, the *New York Times* recently published a letter, signed A. F., in which the writer professed to quote as follows from a communication sent to physicians by the exploiter of some proprietary medicine: "And to add to your patients' comforts we will give you 25 per cent. of all the sales on every one of our preparations you may prescribe. So you see, doctor, you cannot lose. If he don't pay you, you have at least the comfort of making money out of him, anyhow." We have thought that we were pretty well acquainted with the circulars sent to physicans, but we have never met with anything of this sort, and we feel perfectly safe in saying that any communication of such a purport would tend powerfully to destroy the proprietary man's trade in so far as it might be promoted by prescribers.

EUCALYPTOL AND OIL OF EUCALYPTUS.

We have been much interested in a graduation thesis of the University of Sydney, by Cuthbert Hall, M. B., Ch. M., entitled *On Eucalyptus Oils, especially in Relation to their Bactericidal Power.* It seems that oil of eucalyptus is a very loose term, for each of the numerous species growing in Australia contains a volatile oil that differs in composition from the oils of all the other species; also that it is quite erroneously that certain well known authors have used the word eucalyptol as synonymous with oil of eucalyptus, though the so called eucalyptol of the early experimenters was almost the same thing as a eucalyptus oil. Eucalyptol properly so called is one of the proximate principles of the oil, but it appears, according to the author, not to be the most important of them as a bactericide. True eucalyptol (identical with cineol) is an oxide, and so is eudesmol; other constituents are the aldehyde aromadendral, the ketone piperitone, the sesquiterpene aromadendrene, the terpenes dextropinene, lævopinene, and phellandrene, and acetic acid. Of the constituents peculiar to the oil, aromadendral is the most powerful bactericide.

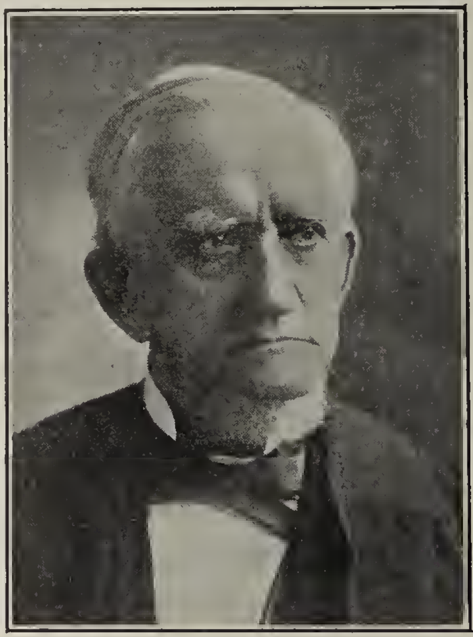
Obituary.

NATHAN SMITH DAVIS, M. D., LL. D.,

OF CHICAGO.

Dr. Davis, who died on June 17th, at the age of eighty-seven, was born in the town of Greene, N. Y. He was a graduate of the College of Physicians and Surgeons of the Western District of New York, Fairfield, of the class of 1837. His early career as a practitioner was spent in Broome County, N. Y., and it was during his residence there that he took a leading part in the Medical Society of the State of New York in the movement that resulted in great improvements in the teaching of medicine in the United States and in the formation of the American Medical Association. He moved to Chicago in 1849, and became a professor in the Rush Medical College. Ten years later he was one of the organizers of the Medical Department of the Northwestern University. His professional life in Chicago was exceedingly active, and he held numerous positions of honor and responsibilty.

The name of Nathan Smith stands high in the annals of the American medical profession, and we may almost imagine that when his parents bestowed it upon the subject of this notice they in a manner predestined him to a commanding place in the profession. Certain it is that he took it and maintained it. He has justly been called the father of the American Medical Association, the inception of which was largely due to his efforts, and he practically ruled it almost up to the time of his death, or for a period of half a century. These facts give us the keynote to his character. He was a born ruler of men, and he possessed those uncompromising characteristics that distinguished the Puritan preachers of New England in early colonial times. The entire profession felt and acknowledged his sway. He was unflinching and unsparing in pursuit of what he looked upon as the right. There can be no doubt that such a man was needed fifty years ago. If he failed to realize in the closing years of his life that work of his particular kind was no longer indispensable, that was only human nature. He goes to his rest with the good will of all his professional brethren.



NATHAN SMITH DAVIS, M. D.

It is quite possible that Dr. Davis's prominence in the polemics of the profession and in elevating educational standards has served to blind us in a measure to his merits as a physician, but in the end his writings will dispel the haze. Indeed, during his life it was not alone as a politician that those who knew him best esteemed him; he was rated as a practitioner of much more than ordinary learning and wisdom. In both capacities he has left upon the history of medicine in the United States an impress that will prove enduring.

News Items.

Society Meetings for the Coming Week:

MONDAY, *June 27th.*—Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, *June 28th.*—Buffalo Academy of Medicine (Section in Obstetrics and Gynæcology); Richmond, Va., Academy of Medicine and Surgery; New York Medical Union (private); Rome, N. Y., Medical Society.

WEDNESDAY, *June 29th.*—Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

FRIDAY, *July 1st.*—Clinical Society of the New York Postgraduate Medical School and Hospital; Baltimore Clinical Society; the Manhattan Clinical Society.

SATURDAY, *July 2nd.*—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

Changes of Address.—Dr. Daniel H. Craig, to 386 Commonwealth Avenue, Boston; Dr. William R. Buchanan, to 1236 Eleventh Street, N. W., Washington.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending June 18, 1904:

	Week end'g June 11.		Week end'g June 18.	
	CASES.	DEATHS.	CASES.	DEATHS.
Measles	814	18	652	15
Diphtheria and croup	366	35	375	50
Scarlet fever	216	15	190	16
Smallpox	..	1	..	..
Chickenpox	58	..	63	..
Tuberculosis	319	131	362	156
Typhoid fever	37	5	32	7
Cerebrospinal meningitis	..	54	..	53
Totals	1,810	259	1,674	297

Dr. John Osborn Polak, of Brooklyn, has accepted the chair of obstetrics in Dartmouth Medical College, made vacant by the death of Professor W. H. Parish, of Philadelphia.

A Medical School in Connection With Fordham College.—Fordham College, it is said, will branch out as a university in September. President Collins has announced that a medical school will then be opened. The faculty will be selected from Dr. Edebohls, Dr. Aspell, Dr. Butler, Dr. Dunn, and Dr. Walsh, all physicians of the city. Dr. James J. Walsh will, it is expected, be dean, and the institution will be affiliated in a clinical way with the new hospital, to be erected immediately on the grounds purchased from the college.

Kings County Hospital Training School.—The graduates of this institution, on June 16th, were: Fannie Louise Allen, Margaret Brennan, Anna Gertrude Doherty, Minnie Florence Finch, Margaret Grace Johnston, Maude Nash, Cecelia O'Brien, Sarah Marena Ripley, Lucy Denison Treadway, Harriet Mary Wakefield Warner, Mary Vianna Andrews, Mary Philemena Cavanaugh, Emma Helena Detlefsen, Margaret Irene Garvey, Irma Bertha Korn, Mary Elouise O'Connor, Marion Peacock, Nora Slattery, and Minnie Thompson.

St. Catherine's Hospital, Brooklyn.—Dr. D. G. Callahan, of No. 2 Third Place, has severed his connection with St. Catharine's Hospital, with which institution he had been associated for fifteen months. In consequence of his retirement Joseph E. Golding becomes senior house surgeon, Dr. Karl D. Wood house physician, Dr. Joseph Samenfeld ambulance surgeon, Dr. Schuyler P. Richmond junior house surgeon, Dr. Ward assistant house physician, and Dr. Harry Pflug externe.

PHILADELPHIA.

Philadelphia Health Report.—*The Report on Contagious Diseases, compared with that of the previous week, is as follows:*

	Week end'g June 11.		Week end'g June 18.	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	4	2	5	1
Diphtheria	45	8	54	4
Scarlet fever	64	2	60	2
Typhoid fever	78	16	72	7
Consumption	..	..	..	68
Cerebrospinal fever	..	..	..	..

Sir Frederick Treves has been the guest of Dr. J. William White, of Philadelphia. He received an honorary degree from the University of Pennsylvania on June 15th.

Chester Hospital, Philadelphia.—At the nurses' graduation class, on June 14th, an address was delivered by Dr. Samuel D. Risley, of the University of Pennsylvania. There were five graduates.

Germantown Hospital.—Miss Margaret G. Fay, superintendent of the John Sealy Hospital. Galveston, has been elected to succeed Miss Maude Vaughan as head of the nursing establishment at the Germantown Hospital.

Jefferson Hospital.—A permit has been taken out for the erection of the superstructure to this hospital, at the southwest corner of Tenth and Sansom Streets. It is to measure 107 by 166 feet, to be of brick, stone, and terra cotta, and to cost $800,000.

Banquet to Dr. John H. Musser.—A reception was given by the Medical Club of Philadelphia, on June 15th, at the Bellevue Hotel, Philadelphia, to Dr. John H. Musser, at which nearly three hundred members were present. Dr. E. E. Montgomery presided.

A New Hospital Chartered for Philadelphia.—The Fabiana Italian Hospital was recently chartered for Philadelphia, the trustees being Dr. Joseph Fabiana, Ferdinando Bartilucci, Carlo C. A. Baldi, Emmanuele V. H. Nardi, Michael Angelo Rossi, Francis H. Thole, and Thomas Price.

Colored Nurse Graduates.—Five colored nurses, Marie Josephine Narcisse, of Jamaica, W. I.; Frances Belle Richardson, of New York; Anna Eva Kirby, of New Jersey; Edna Louise Wood, of Pennsylvania, and Mamie Eliza Brottis, of Georgia, graduated at the Training School for Nurses of the Frederick Douglass Memorial Hospital, on June 14th. Many prominent persons were present.

University Hospital.—A contract has been awarded for the erection of a sun parlor at this hospital.

Training School for Nurses, Friends' Asylum for the Insane, Frankford.—The following graduated at this school on June 15th: Maude Asper, Beatrice Conway, Anna V. Coller, Margaret T. DeLaney, Jennie C. Flynn, Ida V. Jobbins, Margaretta Y. Mayrs, M. Katharine Magee, and Sarah A. Smith, of Pennsylvania; Bertha A. Fredericks, Elsie M. Fredericks, and Ida T. Orner, of New Jersey; and Nan B. Conley, of West Virginia.

Bequests to Philadelphia Hospitals.—John L. Devereux has left in his will the sum of $10,000 each to the Methodist Episcopal Hospital, St. Luke's Hospital, and the Hahnemann Hospital, to establish two free beds in each hospital to be named after the testator and his sister. St. Joseph's Hospital is also to receive $5,000, to endow a free bed in memory of John Devereux, the testator's father, and the Presbyterian Hospital a like sum, to endow a bed in memory of the testator's mother, Elizabeth Devereux. Other hospital bequests are as follows: Polyclinic Hospital, $5,000, for one free bed; Episcopal Hospital, $5,000, for one free bed; Home for Crippled Children, $5,000; Samaritan Hospital, $5,000, for one free bed; and St. Timothy's Memorial Hospital, $5,000, for one free bed. The Pennsylvania Society to Protect Children from Cruelty and the Pennsylvania Society for the Prevention of Cruelty to Animals also inherit $10,000 each.

GENERAL

Statement of Mortality in Chicago, Ill., for the Week Ending June 18, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on United States Census Bureau's estimated mid-year populations of 1,932,315 for 1904 and of 1,873,880 for 1903:

	June 18, 1904.	June 11, 1904.	June 20, 1903.
Total deaths (all causes)	380	420	451
Annual death rate per 1,000	10.28	11.36	12.54
By sexes—			
Males	212	247	257
Females	168	173	194
By ages—			
Under 1 year	57	66	93
Between 1 and 5 years	27	32	42
Over 60 years	86	73	78
Important causes of death—			
Acute intestinal diseases	24	24	29
Apoplexy	15	15	7
Bright's disease	36	25	25
Bronchitis	10	15	19
Consumption	51	63	48
Cancer	26	21	11
Convulsions	10	5	13
Diphtheria	4	6	9
Heart diseases	30	33	36
Measles	2	1	8
Nervous diseases	13	12	24
Pneumonia	28	52	57
Scarlet fever	..	3	7
Suicide	6	8	9
Typhoid fever	3	1	7
Violence (other than suicide)	24	36	26
Whooping cough	4	3	2

Niagara County, N. Y., Medical Society.—On June 7th, the following officers were reelected: President, Dr. John H. Miller, of Niagara Falls; vice-president, Dr. Carl G. Leo Wolfe, of Niagara Falls; treasurer, Dr. W. A. Scott, of Buffalo; secretary, Dr. F. A. Crosby, of Lockport.

Health Officer Appointed at Stony Point, N. Y.—Dr. Sengstacken has been appointed health officer at Stony Point, Rockland county, for the next four years.

Eye, Ear, Nose, and Throat Hospital, New Orleans.—Over $1,600 have been contributed to this hospital recently as the result of an appeal to the public by the trustees.

National Association of Medical Colleges.—At the recent meeting of this association at Atlantic City, Dr. S. C. James, of Kansas City, Mo., was elected president for the ensuing year.

Measles at Harvard.—The dignity of Harvard University has received a severe shock by an outbreak of measles in the four oar crew, the bow oar having been attacked by the irreverent exanthem.

Dr. G. M. Magruder, for the past four years chief surgeon at the United States Marine Hospital in Memphis, Tenn., has been transferred, and in a short time Dr. Eugene Wasdin will arrive to assume the duties of surgeon at the hospital in South Memphis.

Nurses Graduated at Rochester State Hospital.—The following received diplomas on June 16th: William J. McHugh, Alvin M. Beedle, Edward B. Hughes, Richard H. McGeheen, Karl P. Hall, Anna Nau, Alice A. Burns, Irene E. Peck, Nora E. Clifford, and Margaret M. Toner.

Union Hospital Training School for Nurses, Terre Haute, Ind.—At the third annual commencement of this school, on June 14th, the following graduated: Miss Lonella Gilkison, of Loogootee, Ind.; Miss E. Charlien Talbot, of Washington, D. C.; Miss I. May Goodwin, of Dana, Ind.

Board of Medical Examiners, D. C.—Dr. C. B. Purvis has forwarded to the commissioners his resignation as a member of the board of medical examiners, and the commissioners, at the suggestion of Dr. Purvis, have appointed Dr. B. S. Lamb, of Howard University, to fill the vacancy. The change will take place July 1st.

Chicago Medical Society.—At the annual election of the Chicago Medical Society, held on June 15th, in the Schiller Building, Dr. John B. Murphy was elected president. Dr. Frank X. Walls was reelected secretary and Dr. R. P. Preble, the outgoing president, Dr. M. L. Harris, Dr. A. D. Bevan, Dr. I. N. Danforth, and Dr. James H. Stowell were elected to the board of council.

Ontario, Canada, Medical Association.—The following officers were elected by this association on June 16th: President, Dr. William Burt, of Paris; first vice-president, Dr. J. L. Davison, of Toronto; second vice-president, Dr. George Hodge, of London; third vice-president, Dr. Edward Ryan, of Kingston; fourth vice-president, Dr. T. H. Middleboro, of Owen Sound; general secretary, Dr. C. P. Lusk, of Toronto; assistant secretary, Dr. Samuel Johnston, of Toronto; treasurer, Dr. Frederick Fenton, of Toronto.

Dr. Walter Lindley, the editor of the *Southern California Practitioner*, has recently been elected dean of the medical college of the University of Southern California. This Los Angeles school is now entering its twentieth session. Dr. Lindley was one of the organizers of the school and is professor of gynæcology in that institution.

Honor to the New President Elect of the A. M. A.—Dr. Hugh R. Manning made the arrangements for a banquet in honor of Dr. L. S. McMurtry, of Louisville, Ky., who was recently elected president of the American Medical Association. It was held at the Pendennis Club, Louisville, on the evening of June 15th, and was attended by about forty of the most prominent physicians in the city. There was an elaborate programme of toasts and speeches.

City Hospital, Rochester, N. Y., Training School.—The members of the graduation class are: Ethel Louise England, Harriet May Richardson, Henrietta Pascault, Myrtle Lenore Barry, Ida Henrietta Shankel, Lillian Beatrice Gray, Ida E. A. Tegart, Janette Netta Cathro, Lillian Crennell, Lou Cina Henderson, Harriet Louise MacDaniels, Catherine Helen O'Ray, Alice May Martin, Margaret Ann Berry, Ethel Alice Keyes, Myra Belle Ellsworth, Alice Louise Fitzgerald, Elizabeth Pauline La Duke, Mary Schoepflin.

American Surgical Association.—After deciding on San Francisco as the place for the next annual meeting, the American Surgical Association adjourned its convention on June 18th. These officers were elected: President, Dr. George Ben Johnson, of Richmond, Va.; vice-presidents, Dr. Emmett Rixford, of San Francisco, and Dr. James Bell, of Montreal; secretary, Dr. Dudley T. Allen, of Cleveland; recorder, Dr. Richard H. Hart, of Philadelphia; treasurer, Dr. R. S. Fowler, of Brooklyn.

Medical Department, University of Buffalo.—The following graduated from this institution on May 3rd:

Jabez Eldredge Armstrong, A. B.; Parker G. Borden, Fred Spencer Brickell, John Henry Burke, Melvil S. Coxe, Valentine Alphonsis Decot, Edward James Durney, Harry Henry Ebberts, Harry Richard Silas Emes, John FitzGerald Fairbairn, Harry Nicholas Feltes, Thomas Francis Foley, Chauncey Wayne Grove, William Bentley Hamilton, B. B. E. and M. E.; Haley Waldo Hammond, Claude Smith Johnson, Lesser Kauffman, Ph. B.; Earl Dean Kilmer, Edward Charles Koenig, Arthur Garfield Lane, John C. S. Lappeus, Robert James Lawler, George Emerson Learn, Harry Roy Lohnes, Horace Lo Grasso, William H. Lynch, Minor McDaniels, Myrtle Lothrop Massey, A. B.; William Michael Mehl, Robert C. Mehnert, Samuel Aloysius Moore, John Gray Morris, Jesse Clark Mosshammer, Stephen Vincent Mountain, John D'Arcy O'Brien, Caroline M. Osborn, John Corliss Plain, John Alphonse Ragone, Leonard Reu, Edna Augusta Rhodes, Victor Moreau Rice, Charles Richards, Floyd Richardson, Julius Richter, Herman William Schlappi, Charles Willard Selover, Robert Francis Sheehan, Jr., Douglass Henry Smith, Herbert Northrop Squier, Robert Shaw Taylor, Jr., Raymond Alexander Turnbull, John Lewis Van De Mark, George Garfield Wagner, Glenn Levi Whiting.

Change at the Smithsonian Institution, Washington.—Dr. F. A. Lucas, for more than twenty-five years associated with the Smithsonian Institution, will leave Washington in a few days for Brooklyn, where he is to become director of the Brooklyn Institute of Science and Art. Dr. Lucas was, on June 7th, the guest of honor at a dinner given at the Shoreham by his associates at the Smithsonian, who, in a series of toasts, wished him a continuation in Brooklyn of his former successful career as scientist. Dr. Lucas came to Washington from Rochester, N. Y., to accept the position of assistant in the department of comparative osteology, and in 1893 was given entire charge of the department. He has written many books, among them *Animals of the Past* and *The Animals Before Man on the North American Continent.* Dr. L. O. Howard, of the Department of Agriculture, acted as toastmaster at the dinner. Among the speakers were: Dr. C. Hart Merriam, Dr. Richard Rathbun, Dr. W. H. Dall, Dr. B. H. Evermann, Dr. A. B. Baker, and Professor E. L. Morris. The list of guests included A. R. Fisher, W. H. Osgood, V. Bailey, W. de C. Ravenell, M. Rose, W. H. Ashmead, T. S. Palmer, Colonel C. H. Rizer, W. Tassin, D. White, F. H. Knowlton, P. Bartsch, T. Gill, G. H. Girty, F. N. Hodge, H. W. Oldys, Charles R. Knight, T. W. Vaughan, W. W. Duffield, E. E. Howell, R. P. Currey, E. W. Nelson, A. C. Peale, and Marcus Benjamin.

McGill University, Montreal, Medical Faculty.—The following have received the degrees of M. D. and C. M. from the foremost Canadian institution:

W. E. Ainley, B. A.; J. H. Alford, H. S. Atkinson, S. K. Bentley, B. A.; J. C. Black, R. P. Bonin, F. D. Charman, W. W. Chipman, J. W. Coffin, W. J. Cook, I. E. Crack, B. A.; W. J. Cram, P. C. Crosby, B. C. Crowell, B. A.; H. D. J. Davidson, W. P. Dillon, E. Douglas, B. A.; J. F. Dunn, C. E. Eaton, J. A. Faulkner, B. A.; E. M. Fisher, F. Fisher, C. G. Folkins, H. S. Ford, S. Fraser, J. C. Fyshe, B. A.; G. M. Gibson, R. Gibson, J. E. Gillis, J. R. Gilroy, J. C. Gormely, R. W. Graham, N. P. Grant, W. T. Greenwood, L. L. Harrison, B. A.; F. J. Hogan, E. A. Hotchkiss, H. O. Howitt, J. W. Hutchinson, J. G. W. Johnson, M. A.; A. H. Judson, H. H. Kerr, M. J. Keys, L. C. Lauchland, B. A.; W. A. Lincoln, H. T. Lippiatt, A. J. Losier, A. B. MacKenzie, L. S. MacKid, L. de C. McIntosh, F. McKenty, R. P. McKenzie, D. C. MacLachlan, S. M. Markson, J. C. Martin, J. C. Meakins, C. Miller, V. L. Miller, B. A.; H. H. Murphy, B. A.; S. M. Nagle, J. A. Nutter, B. A.; A. W. Park, C. E. Preston, Joseph Price, B. P. Quain, A. C. Rankin, L. L. Reford, B. A.; C. A. Richardson, C. A. C. Richardson, B. A.; J. L. Robinson, J. T. Rogers, B. A.; A. C. Sellry, Ph. B.; H. A. Sims, J. A. Stewart, C. A. H Tanner, William Warwick, O. M. Wilson, T. R. Wilson, B. A.; H. G. Wood, A. G. Wright, F. P. Yorkston, M. A.

Graduates of Albany Medical College.—The seventy-third commencement of the Albany Medical College took place at Odd Fellows' hall yesterday afternoon, and was observed with appropriate and fitting exercises. The following graduates received degrees:

Palmer Romaine Bowdish, of Cornwall-on-Hudson; George Lay Branch, of East Springfield; Charles William Chapin, of Unadilla Center; Guy Forsythe Cleghorn, of Green Island; Chester Thompson Cobb, of Easthampton, Mass.; Thomas Folwell Cole, of Romulus; John Isaac Cotter, of Poughkeepsie; Marcus Albert Curry, of Voorheesville; Arthur Thomas Davis, of Utica; William Sebastian De La Hoyde, of Brooklyn; Bransen Keemper De Voe, Malcolm Douglas, A. B., of Albany; Thomas Joseph Dowd. of Cohoes; Silas Lorenzo Filkins, of Albany; Leland Delos Fosbury, A. B., of Sidney; Joseph Nicholas Bennett Garlick, of Albany; William Entwistle Garlick, of Fall River, Mass.; Everal Caleb Haviland, of Wolcott; Harold Eliphalet Hoyt, A. B., of Cambridge; George John Jennings, of Ballston Spa; William George Keens, of Albany; Arthur Charles Kline ,of Port Leyden; George Spencer Lape, of Mechanicville; Harry Lovejoy Loop, of Cohoes; Dennis Alphonsus Murphy, of Gloversville; Robert Joseph O'Brien, B. S., of Watervliet; Daniel Vincent O'Leary, Jr., of Albany; Joseph Day Olin, B. A., of Watertown; John Hendry Reid, Burt Luverne Shaw, Ph. G., of Troy; Benjamin John Singleton, of Glens Falls; Arthur Wesley Thomas, of Middle Granville; Edward Augustine Stapleton, of Hoosick Falls; Chester Erastus Hidley Tracy, of Troy; Richard Henry Van Denburg, of Albany; Frank Barton Wheeler, of Troy; Frank Edward White, of Union: George David Wilde, of Cranesville; Guy Vail Wilson, of Masonville; Maurice Wolkowitz Wolff, of New York; Trevor Crandall Yates. of New Lisbon.

Graduates of Tulane Medical College of New Orleans.—This year Tulane graduates ninety doctors and five pharmacists. The graduates in medicine are:

D. W. Alford, E. F. Bacon, W. P. Barton, E. P. Bass, L. E. Bergeron, T. A. Blinn, W. F. Bolton, J. E. Brierre, E. T. Brown, G. S. Brown, E. G. Burges, C. H. Burley, R. B. Chachere, W. A. Cheek, T. W. Collins. S. J. Couvillon, W. H. Crain, C. S. Crew, L. R. DeBuys, W. B. Dobson, J. H. Edmonson, E. Ehlert, N. A. Elder, I. Erwin, C. L. Eshleman, D. R. Evans, J. S. Ewing, T. J. Finley, H. G. Fridge, H. A. Gamble, G. L. Gaudet, H. E. Gautreaux, H. D. Gayden, F. C. Guilbeau, W. S. Guyton, F. B. Handley, H. N. Harper, W. S. Harrell, F. J. Hartley, J. G. Harz, J. H. Holt, E. J. Hubbard, J. T. Jelks, M. D., M. S. Kaln, E. J. Kevein, P. B. Landry, J. Leland, G. B. Le Sueur, J. W. Lewis, L. D. McGehee, J. S. McIntosh, E. W. Mantooth, L. A. Meraux, W. Noble, F. O. Pavy, J. R. Perry, P. H. Phillips, F. A. Pierce, L. H. Pirkle, I. Posnainsky, J. A. Price, J. M. Price, E. S. Rauch, H. H. Rightor, E. D. Robbins, I. Sardina, C. Y. Seagle, F. C. Shute, E. A. Sigvest, J. M. Slaughter, J. H. Slaughter, Jr., J. F. Smith, M. Smith, M. D., G. M. Snellings, J. M. Steiner, D. B. Stevenson, J. J. Strickland, R. F. Thomas, C. C. Thompson, J. A. Tucker, J. W. Turner, D. C. Turnipseed, Jr., C. V. Unsworth, J. W. Warren, M. D., S. H. Watson, Jr.. J. W. Watts, Jr., W. M. Wier, E. M. Williams, L. J. Williams, R. P. Woods, R. C. Woodson. Graduates in Pharmacy—W. H. Grun, R. A. Kearny, L. F. Magruder, L. J. Maine, S. L. Whitely.

Maryland Medical College Graduates.—No fewer than 104 students of this institution received their diplomas on May 5th, at Chase's Theatre, Baltimore. Following are the names of the successful candidates:

H. I. Adler, of Russia; J. A. Baker, of West Virginia; William J. Barrett, of New York; Joseph D. Beauparlant, of Massachusetts; W. E. Bedingfield, of Georgia; Charles Edgar Benson, of Maryland; Ben W. Bird, of West Virginia; G. W. Bordeaux, B. S., of Georgia; Frank J. Born, of Maryland; B. D. Braswell, of Georgia; F. M. Bruce, of Georgia; T. E. Callahan, of New Hampshire; L. J. Chedel, of Georgia; A. J. Choate, of Massachusetts; Hormidas Choquette, of Massachusetts; Rufus L. Cone, of Georgia; I. C. Conn, of Virginia; A. R. Core, B. S., of Pennsylvania; H. M. Crossland, of Massachusetts; John A. Dent, of Maryland; W. P. Dey, of Alabama; E. A. Dickey, of Maryland; Clarence Drew, of Georgia; O. O. Eackel, of West Virginia; W. A. Ellison, of Georgia; F. F. Farnsworth, of West Virginia; T. B. Fitts, of South Carolina; D. H. Funderburk, of North Carolina; W. I. Gautier, of West Virginia; A. M. Giffin, M. D., of New York; J. A. Gilmer, of Virginia; Arthur P. Gimpel, of Maryland; R. V. Glann, of New York; R. E. Graham, of Georgia; A. B. Gamling, of Alabama; H. D. Grant, of Massachusetts; Courtland P. Gray, of Louisiana; Frank W. Hashtel, of Maryland; William George Hairston, of Alabama; Stephen F. Hale, Ph. G., of Alabama; John A. Hamrick, of North Carolina; Oaka S. Hare, of West Virginia; J. F. Haselden, of South Carolina; Elmer C. Hazard, Ph. G., of New Jersey; T. O. Hearn, of Alabama; R. R. Higinbothom, of Bermuda; J. F. Hipsh, of Tennessee; Burton C. Houser, of Pennsylvania; Ford Huff, of West Virginia; J. R. Hughart, of West Virginia; R. S. Irwin, of Pennsylvania; F. William Janisch, of Pennsylvania; G. E. Jarrell, of Alabama; A. B. Jones, of Rhode Island; E. E. Jones, of Georgia; Albert S. Joyner, of Georgia; James H. Kane, of Connecticut; D. D. Kinard, of South Carolina; S. P. J. Lee, D. D. S., of North Carolina; Milton J. Lilly, of West Virginia; R. S. Maneely, of Florida; D. A. Mason, of Alabama; M. Abi Massoud, of Syria; Arthur Maynard, of Massachusetts; L. G. McCollum, Ph. G., of Alabama; E. C. McComos, M. D., of West Virginia; T. E. McGuire, of West Virginia; Lewis C. McNeer, Jr., of Maryland; Leon J. Menville, of Louisiana; N. B. Michael, of West Virginia; Lester Miller, of West Virginia; Gilmer H. Moore, of Alabama; Martele F. Morrill, of Maine; S. G. Moye, of Georgia; Alexander E. Muse, Ph. G., of California; J. C. Nicholson, of South Carolina; John E. Offner, of West Virginia; Andrey O'Neill, of Pennsylvania; Charles M. Quimby, of Massachusetts; A. M. Richards, of Alabama; Miguel Roses, A. B., B. S., of Spain; Jacob L. Rosenstein, of Maryland; M. P. Rucker, of Virginia; J. A. Rusmisell, of West Virginia; Jesse H. Russell, of Maine; T. H. Saunders, of Massachusetts; Charles A. Schaefer, Ph. D., of Maryland; George W. Shriver, of West Virginia; Eugene R. Smith, of Alabama; Fred W. Stainbock, D. D. S., of Pennsylvania; W. B. Stevens, of Alabama; Charles V. Stickley, of Virginia; J. T. Sullivan, of Canada; Homer W. Tabler, of West Virginia; J. A. Usher, of Georgia; Elbert Vermillion, of West Virginia; A. T. Von Schulz, B. Sc., M. Sc., of Maryland; Everett Walker, M. D., of West Virginia; F. W. Watlington, of Bermuda; O. C. Webb, of Georgia; Charles T. Whaland, of Maryland; Wiley Leon Whitehead, of South Carolina; William A. Wykel, of West Virginia; R. M. Younger, of Virginia.

The Late Dr. John Metcalfe Polk.—At a meeting of the Medical Association of the Greater City of New York, held June 13, 1904, the following report was presented and adopted. P. Brynberg Porter, M. D., recording secretary:

It is the sad duty of the committee to report to the association the death, from pneumonia, of Dr. John Metcalfe Polk, younger son of Dr. William Mecklenberg Polk, long a practising physician of high standing in this city.

Dr. Metcalfe Polk was born on May 6, 1875. He graduated from Yale University in 1896 and from the Medical Department of Cornell University in 1899. He then entered Bellevue Hospital as interne, and after remaining there two years went to Vienna to perfect himself in pathology and medical diagnosis. On his return from abroad he was appointed instructor in medicine and physical diagnosis in the Cornell Medical College and assistant visiting physician to Bellevue Hospital.

At the time of his death he had just completed an exhaustive study of pneumonia. He had written, and was about to publish, a paper on The Blood Changes in Pneumonia, which promised to bring to the attention of the profession some very important and original ideas.

The untimely death of Dr. Polk has removed from the ranks of the profession one of the most brilliant of its younger members. He had prepared himself through his great natural abilties and untiring energy to begin a professional life of unusual promise. At the time of his death he was pursuing with enthusiasm those branches of science the investigation of which would mean for him the broadest and most durable foundation of future success.

His gentle manners, unselfishness, and sterling character had won for him warm friends among the best of the profession, both old and young.

To the older men who knew him his death will mean the sacrifice of a career which the profession can ill afford to lose—to the younger, the loss of a model well fitted to inspire earnest emulation.

Resolved, That the association tender their deepest sympathy to his sorrowing father and mother, and that this note be entered on our minutes and a copy be sent to the family.

Henry P. Loomis, M. D.,
J. Clifton Edgar, M. D.,
Austin Flint, Jr., M. D.,
Committee.

Johns Hopkins University.—At the twenty-eighth annual commencement exercises of this institution, held on June 14th, the degree of doctor of medicine was conferred on the following:

Jay Harvey Bacon, of Tiskilwa, Ill., S. B., Knox College, 1900; Theodore Baker, of Bellevernon, Pa., A. B., Princeton University, 1900; Robert Bennett Bean, of Gala, Va., S. B., Virginia Polytechnic Institute, 1900; Ruth Bennett, of Chicago, Ill., A. B., University of Illinois, 1899; John McFarland Bergland, of Baltimore, S. B., Princeton University, 1900; Maurice Buford Bonta, of Harrodsburg, Ky., A. B., Kentucky Wesleyan College, 1894; Walter Vernon Brem, Jr., of Morganton, N. C., S. B., University of North Carolina, 1896; Julius Alexander Caldwell, Jr., of Salisbury, N. C., S. B., University of North Carolina, 1899; John Robert Carr, of Durham, N. C., A. B., University of North Carolina, 1899; DeWitt Bellinger Casler, of Little Falls, N. Y., A. B., Yale University, 1900; Ralph Torrey Edwards, of Galesburg, Ill., A. B., Knox College, 1897; Anfin Egdahl, of Menominee, Wis., S. B., University of Wisconsin, 1900; Harold Gould Garwood, of Denver Col., S. B., University of Colorado, 1899; Herbert Ziegler Giffin, of Atlantic City, N. J., S. B., Princeton University, 1900; Harry Seliger Greenbaum, of Baltimore, A. B., Johns Hopkins University, 1899; Josephine Hemenway, of Glasgow, Mo., A. B., Pritchett College, 1898; William Raphael Kellogg, of Baltimore, A. B., Adelbert College, 1898; Kenelm Julius Lee, of Renville, Minn., S. B., University of Wisconsin, 1900; John Marion Love, of Petersburg, Va., A. B., Hampden-Sidney College, 1899; Wilfred Hamilton Manwaring, of Ann Arbor, Mich., S. B., University of Michigan, 1895; Herman Weston Marshall, of Brockton, Mass., S. B., Massachusetts Institute of Technology, 1897; William Carpenter McCarty, of Louisville, Ky., S. B., Kentucky State College, 1900; Ernest Clare McGouldrick, of Machias, Me., A. B., Yale University, 1900; Lorenzo Seymour Morgan, of Galva, Ill., S. B., Knox College, 1900; James Francis Morrison, of Thompsonville, Conn., A. B., Harvard University, 1900; Norman Oscar Nelson, of Madison, Wis., S. B., University of Wisconsin, 1900; James Henry Randolph, of Tallahassee, Fla., A. B., Florida State College, 1900; Jewett Villeroy Reed, of Jeffersonville, Ind., S. B., Kentucky State College, 1900; Charles Mallory Remsen, of Baltimore, A. B., Johns Hopkins University, 1899; William Gray Ricker, of Ryegate, Vt., A. B., Yale University, 1900; Esther Rosencrantz, of San Francisco, Cal., A. B., Leland Stanford, Jr., University, 1899; Ernest Sachs, of New York city, A. B., Harvard University, 1900; Orville Hickok Schell, of Harrisburg, Pa., A. B., Yale University, 1900; Harry Russel Stone, of Middletown, Conn., Ph. B., Wesleyan University, 1899; Henry John Storrs, of South Boston, Mass., A. B., Amherst College, 1899; George Lane Taneyhill, Jr., of Baltimore, A. B., Johns Hopkins University, 1900; Benjamin Taylor Terry, of Birmingham, Ala., A. B., Vanderbilt University, 1898; William Lawton Thompson, of Portland, Me., A. B., Bowdoin College, 1899; George Thomas Tyler, Jr., of Fredericksburg, Va., A. B., Randolph-Macon College, 1896; William Jerome Vogeler, of Baltimore, A. B., Yale University, 1900; Robert Glendenning Washburn, of Milwaukee, Wis., S. B., University of Wisconsin, 1900; Louis Schneider Weaver, of Newry, Pa., A. B., Pennsylvania College, 1899; John Scott Willock, of Allegheny, Pa., S. B., Princeton University, 1900; Walter Scott Wilson, of Savannah, Ga., A. B., North Georgia Agricultural College, 1880; Winfred Wilson, of Weatherford, Tex., A. B., Weatherford College, 1900.

Pith of Current Literature.

BERLINER KLINISCHE WOCHENSCHRIFT.

May 9, 1904.

1. New Investigations on Formaldehyde Disinfection, By H. Bonhoff.
2. Two Cases of Gonococcus Infection with Gonococci in the Blood, By P. Krause.
3. Cobra Poison and Antitoxine, By Preston Keyes.
4. Ferment Action in Mummy Muscles, By F. Sehrt.
5. Congenital Absence of the Patella, By A. Heine.
6. Prophylaxis of Infectious Diseases in Schools (*To be continued*), By F. Hueppe.
7. Hyperalgetic Zones in the Neck After Gunshot Wounds in the Head, By R. Milner.

1. **Formaldehyde Disinfection.** — Bonhoff speaks of the efforts to make formalin disinfection of more value by having it penetrate below the surface of things. He says that his experiments with formalin on tubercle bacilli show that when the drug is used in its present concentration, it can destroy the infectious character of the bacilli if the articles to be disinfected can have the infectious material superficially disposed. The effect of temperature upon the disinfecting power of formalin is greater than has been believed. In ordinary cases two drachms and a half for every cubic metre of space are enough if the exposure is continued for seven hours.

2. **Gonococcus Sepsis.**—Krause reports two such cases in detail. In one, the patient died of pericarditis and endocarditis, but no bacteria were found on the valves. In the second case, gonococci were found in the venous blood by culture during life. This patient, a puerperal case, recovered after a prolonged febrile course.

4. **Ferment Action in Mummy Muscles.**—Sehrt took pieces from the muscles of a mummy and placed them in a solution of glucose, in some instances mixing them with pancreatic tissue. The muscle possessed glycolytic qualities the same as fresh muscle, but did not have the faculty of destroying the sugar. The mummy was over 2,000 years old.

5. **Congenital Absence of the Patella.**—Heine considers the embryology and the function of the patella. He reports in detail a case of congenital absence of the bone, with a radiographic picture. The father and sister of the patient had the same peculiarity. The function of the knee joint was perfect, the tibial tuberosities being enlarged. The patient also had a congenital luxation of the head of the radius.

PRESSE MEDICALE.

April 27, 1904.

A Contribution to the Study of the Diathesis of Autoinfection. The Nature of Appendicitis, By Gilbert and Lereboullet.

Nature of Appendicitis.—Gilbert and Lereboullet think that appendicitis is due to an autoinfection, being most frequently found in those who suffer habitually from cholæmia, gastroenteric troubles, angina, or mumps. A hyperpeptic dyspepsia is particularly common in these patients or in members of their families. Of the other diseases, cholecystitis seems to be the commonest antecedent. Numerous striking family histories are cited by the writers. In the necropsies they have performed they have found almost invariably a chronic angeiocholitis where appendicitis had been the immediate cause of death, and, where the latter had been due to biliary or hepatic disease, a chronic appendicitis was usually present. Bacteriological examinations have confirmed their views. They think that many untoward consequences have been attributed to appendicitis that were really due to a coexisting angeiocholitis.

April 30, 1904.

1. Occipital Neuralgia in the Common Anginas, By VINCENT.
2. Chats on Electricity, Physiology, and Properties of the Electric Current, By ZIMMERN.

1. **Occipital Neuralgia in Common Angina.**—Vincent has noticed this complication in 17 cases out of 136 of non-diphtheritic angina, or in 12.15 per cent.; in 6 cases the neuralgia was very severe. In 9 cases the neuralgia was on the right side, in 4 on the left, and in 4 it was bilateral. Details of 2 cases are given. Vincent does not consider this complication to be of a rheumatic nature, but due to the anatomical relations between the pharyngeal plexus and the sensory nerves of the occipital region, an abnormal connection existing in those patients in whom the neuralgic complication occurs.

2. **Chats on Electricity.**—Zimmern, in this paper, explains the phenomena of resistance, conductivity, etc. In the human body, the epidermis seems to be the poorest conductor among the tissues. There is, variation among individuals, an hysterical subject being more resistant than a healthy one, and a sufferer from Graves's disease less so. Passage of the current through the body invariably generates heat, although delicate tests are sometimes required to demonstrate this fact.

LYON MEDICAL.

May 8, 1904.

1. Hospitalization of the Tuberculous Poor, By MOUISSET.
2. Elimination of Chlorides and Renal Permeability in a Case of Interstitial Nephritis (Hyperchlorhydric Diabetes Insipidus), By TEISSIER and COURMONT.

1. **Hospitalization of the Tuberculous Poor.**—Mouisset demands that special retreats be constructed for the tuberculous poor, with a surgical department and a carefully supervised cuisine, and states that education is rapidly counteracting the prejudice against such institutions, while the inspection of a properly equipped sanitarium would do away with the last vestige of fear. Mouisset advises from motives of economy and urgency the alteration of certain existing hospitals to meet the conditions. The article then discusses the local situation at Lyons.

2. **A Case of Interstitial Nephritis.**—Teissier and Courmont present an exhaustive study of a case interesting on account of the opportunity to study the chloriduria and of value in affording data upon which to found prognoses in various cases of Bright's disease.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

March 27, 1904.

1. A Family Epidemic of Pneumonia, By C. TARCHETTI, and CURLO.
2. On Hepatic Hæmostasis, By G. B. SEGALE.
3. Traumatic Ureteral Stenosis in the Law Concerning Accidents in Employees, By CARLO MOMO.
4. Some Remarks on Otorhinopharyngology, By UGO ARTURO BETTI.

1. **A Family Epidemic of Pneumonia.**—Tarchetti and Curlo, in reporting a case of pneumonia in a man whose entire family succumbed to the disease within a short time, attribute this sequence of events to two factors: (1) The increased susceptibility of the members of this family to pneumonic infection, and (2) to the fact that the diplococcus increases in virulence as it passes from one human organism to another. In this instance it is important to note that the weakest and least healthy member of the family was first attacked, and the most robust succumbed last.

4. **Bleeding Due to Adenoids.**—Betti reports, among other cases, one of a man twenty-one years old, who had had a series of hæmorrhages from the throat that alarmed him, as they did not yield to ordinary medical measures. Examination showed that he had granular pharyngitis and a hypertrophy of the pharyngeal tonsil, which showed hæmorrhagic spots. The growth was removed with the curette under cocaine, and a mild astringent application ordered, with a perfectly satisfactory result.

ROUSSKY VRATCH.

April 10, 1904.

1. Cancer of the Stomach Without Characteristic Symptoms During Life, By A. P. FAVITSKY.
2. The Action of Poisons Upon the Vessels of Isolated Kidneys, By V. V. ZAKUSSOFF.
3. High Tension and High Frequency Currents (Tesla-d'Arsonval) in Surgery), By P. M. ZHDONOFF.
4. Life and Death (*Concluded*), By G. G. SCHLATTER.

1. **Cancer of the Stomach.**—Favitsky reports two cases of cancer of the stomach in which there was a marked absence of the characteristic symptoms, and which assumed the type of dropsical affections spoken of by Strümpell and others. These cases gave the impression of affections of the heart, liver, or kidneys, accompanied by dropsy. In the first case the symptoms consisted of general debility, loss of strength, slight cough, and enlargement of the abdomen, while the appetite remained good to the end, and vomiting took place only occasionally, at the end of the disease. No tumor could be felt in this patient at any time, and no pain was complained of in the stomach or abdomen. In both cases there was a carcinoma of the peritonæum, but in neither was there any of the characteristic pain on pressure, or other abdominal signs of cancer. The exudate in one of the cases was serous, in the other hæmorrhagic. In both cases, cancer of the stomach was found on autopsy.

2. **Effect of Poisons on the Vessels of Kidneys Removed from Cold-Blooded Animals.**—Zakussoff kept up life in kidneys removed from cold-blooded animals, by means of artificial circulation

with Locke's fluid, and tested the effects of various poisons upon these kidneys. He found that a solution of digitalis produced a marked contraction of the blood vessels in dilutions of 1 part in 1,000,000. Strophanthin produced a contraction of the renal blood vessels in very great dilutions, but convallariamin produced a weak contractile action. The secretion of the skin glands of frogs (phrynin) possessed very marked arteriocontractile powers. Barium chloride induced arterial contraction in very dilute solutions (1 in 100,000). Physostigmine had a scarcely perceptible effect in solutions of 1 : 100,000, while in solutions of 1 : 20,000 it proved fairly effective. Nicotine induced contraction of vessels in solutions of 1 : 100,000. Atropine contracted the renal vessels in solutions of from 1 : 10,000 to 1 : 50,000. Cocaine in 1 : 10,000 solutions proved ineffective. Sodium nitrate in one quarter to one half per cent. solution produced a marked dilatation of the renal vessels. Chloral hydrate had the same effect in solutions of from 1 : 100 to 1 : 10,000, and caffeine in solutions of 1 : 1,000.

3. **Currents of High Tension and High Frequency in Surgery.**—Zhdanoff recommends the application of the analgetic, antiphlogistic, trophic, and vasomotor effects of currents of high tension and high frequency (Tesla-D'Arsonval) in surgery. These currents are perfectly harmless in man, and during their application no contractions of the muscle or other disagreeable phenomena take place. They never produce any untoward effects. They are indicated in acute, subacute, and chronic surgical affections, and in many chronic cases produce permanent cures. These currents have been successfully used in surgical tuberculosis of various types, in flat, as well as in cavernous angeiomas, in fissures of the anus and in hæmorrhoids. The present author treated 196 cases of fissure of the anus, of which 188 also had hæmorrhoids, and found the method rapid and efficient in these cases.

4. **Is Death a Natural Phenomenon?**—Schlatter in this article argues that death is not a natural phenomenon necessary to all living things, but is always pathological. There is no such thing as natural or physiological death, and all organisms, from man down to the infusorium, die because they suffer pathological changes.

BOSTON MEDICAL AND SURGICAL JOURNAL.

June 16, 1904.

1. Some Aspects of Medical Education, By John H. Musser.
2. The Association of Surgical Lesions in the Upper Abdomen, By William J. Mayo.
3. The Caspar-Hirschmann Demonstration and Photographic Cystoscope, By G. S. Whiteside.
4. Human Slavery as a Prevention of Pulmonary Consumption, By Thomas G. Mays.

1 and 2.—Abstracted in our issue of June 11th. Report on the meeting of the American Medical Association.

3. **The Caspar-Hirschmann Cystoscope.**—Whiteside explains the advantages of this form of cystoscope. The instrument combines three valuable features. It may be used as a simple inspection cystoscope, or it may be used as a means of demonstrating and teaching cystoscopy and vesical pathology, in the living, to students, or it may be used for taking permanent photographic records of interesting features in normal or diseased bladders. For taking photographs its utility is very great. It is possible to observe the object not only before, but during the time it is being photographed, because the surgeon may look through one eyepiece of the instrument while the camera is placed at the other. Cystoscopy in the female, when fully developed, is destined, in the author's opinion, to be of the greatest utility in shedding light on diseases of the uterus and its appendages.

4. **Prevention of Consumption.**—Mays asserts that consumption, in the southern negro, has increased since 1860 by 228 per cent. , Chinese coolies were imported into Cuba from 1860 to 1870 to the number of 250,000. .They were pretty well tainted with tuberculosis. After a few years the disease disappeared, either through death or cure, and did not again reappear either in the original coolies or in their offspring. From such facts as these the author concludes that the spread of tuberculosis among the poor and ignorant can be controlled by resorting to practically the same customs that prevail in slave communities. That is, the hygiene, habits, and morals of the masses must be systematically supervised. As such results can no longer be obtained through coercion resort must be had to education.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

June 18, 1904.

1. Benjamin Rush. An Address Delivered at the Unveiling of a Monument Erected by the American Medical Association to the Memory of Benjamin Rush in Washington, D. C., June 11, 1904, By J. C. Wilson.
2. The Developmental Defects of the Skin and Their Malignant Growths. Chairman's Address Before the Section on Cutaneous Medicine and Surgery, By Henry G. Anthony.
3. The Value of Symmetry in Education and Character. Chairman's Address Before the Section on Stomatology, By George F. Eames.
4. The Evolution of Standards in Dental Education, By Charles C. Chittenden.
5. Some Phases of Dental Education, By A. E. Baldwin.
6. Dental Education. A Retrospective and Prospective View, By John S. Marshall.
7. Notes on Curettage. With Report of a Case of Accidental Perforation of the Uterus, By A. P. Stoner.
8. The Prophylaxis and Treatment of Fourth of July Tetanus.

7. **Curettage.**—Stoner gives some very general remarks on the abuses and uses of uterine curettage. According to the author, gonorrhœal endometritis should never be treated by scraping the inside of the womb. He reports one case in which he perforated the womb doing a curettage for the cure of an endometritis caused by pieces of retained placenta. The woman made a good recovery, and was treated by the expectant plan.

8. **Tetanus.**—The present article is in a sense a continuation of a similar one which appeared

about a year ago in this same journal. The total number of deaths from Fourth of July tetanus last year is said to have been 406. The mortality from this variety of tetanus is greater than the mortality of tetanus as given in the books. That is, it is 95 per cent., as against 70 to 80 per cent. The article reviews the different treatments that have been recommended for this disease, and lays special stress on the advantages of using tetanus antitoxine early and in large quantities. It is further urged that all Fourth of July wounds be treated with the patient under a general anæsthetic. While the article contains nothing new, it is full of seasonable reminders.

MEDICAL NEWS.

June 18, 1904.

1. Management of Fever in Childhood, By EUGENE W. MURRAY.
2. Two Cases of Paralysis of the Ulnar Nerve; One Following a Severe Attack of Typhoid Fever, the Other Caused by Pressure During Occupation, By JAMES HENDRIE LLOYD.
3. Apparatus for Nitrous Oxide Ether Anæsthesia, By WELLER VAN HOOK.
4. A Brief Report of Four Years of Genitourinary Work in the Second Surgical Division of Mount Sinai Hospital (*To be continued*), By HOWARD LILIENTHAL.
5. Vesical Retention of Urine, By FERD. C. VALENTINE, and TERRY M. TOWNSEND.
6. The Danger of the Use of Opium in Infancy, By T. D. CROTHERS.
7. Water Anæsthesia in Surgery, and Its Suggestions in Medicine, By JOSEPH CLEMENTS.
8. A New Instrument, By W. A. SEDWICK.

1. **Fever in Childhood.**—Murray considers the treatment of the symptom fever much as if it were an independent entity. He recognizes the fact that temperature may be one of Nature's methods of combating the toxicity of germs and their products. The four chief means at our disposal for the control of temperature are rest, drugs, hydrotherapy, and diet. Each of these means is considered by the author. The paper ends with a few thoughts on the fever of inanition or starvation.

2. **Paralysis of the Ulnar Nerve.**—Lloyd reports two cases of paralysis of the ulnar nerve. In the first case the paralysis followed a severe attack of typhoid fever. In the second case it was due to pressure, exerted intermittently during a long time, the result of a vicious method of writing. While in the first case it is possible that the paralysis was of toxic origin, yet in the author's opinon it was most likely due to pressure. This is all the more likely, since all isolated paralyses of the ulnar nerve so far recorded have been clearly due to trauma or to some local lesion.

5. **Vesical Retention of Urine.** — Valentine and Townsend give a systematic summary of the best ways of relieving the symptom "vesical retention of urine." They touch on the ætiology of retention only to the extent necessary for the intelligent choice of the methods to be employed to relieve the emergency. They thus summarize their paper: (1) When danger to life is not imminent, the domestic methods ordinarily employed may relieve the vesical retention, provided no mechanical obstacle exists. (2) Diuretics, diluents, and antispasmodics are of no use in vesical retention of urine. (3) Opiates and general anæsthesia are useful only under certain circumstances. (4) Capital surgical intervention may be necessary to cure the basic condition, but the urgent symptoms can, in most instances, be relieved without life endangering procedures. (5) Even the youngest general practitioner can carry every case of vesical retention of urine to a successful issue. (6) The cause of the retention must in each case be ascertained. (7) Only most exceptionally does a case present itself which cannot be relieved by minor procedures. (8) No bladder should be suddenly entirely emptied because of the danger of hæmorrhage *ex vacuo.*

6. **Opium in Infancy.**—Crothers asserts that the use of opium in infancy is apt to lead to deplorable consequences in later life. Two examples are given: First: Three children of a missionary were nursed by a Hindu woman addicted to opium. All three developed the alcohol and drug habit before middle life. Second: A woman gave large quantities of a soothing syrup to her first two children. They grew up neurotics and became spirit and drug takers in middle life. Three children born later got no soothing syrup. They grew up normal and healthy. The author further asserts: "The presence of nervous dyspepsia beginning soon after puberty, and continuing for a few years, until some form of alcohol or opium is used, is a hint of the use of opium in early life. Early and profound exhaustion from overwork or excitement, low vitality and feeble nervous resistance is a natural sequel to the use of opium in infancy. Defects and degeneracies which break out in early manhood suggest the same cause, and often follow from the use of soothing drugs given in infancy. A tendency to seek relief from every discomfort and pain, which may properly be called a neurotic diathesis, can be positively grown and cultivated by the use of opium in early life, although it it may not appear for years after."

MEDICAL RECORD.

June 18, 1904.

1. Myelopathic Albumosuria, By S. J. MELTZER.
2. The Present Status of the Surgical Treatment of Chronic Bright's Disease, By A. A. BERG.
3. A Few Words Concerning Radium, By HENRY G. PIFFARD.
4. Hydrocele of the Cord; Report of Cases, By A. JACOBY.

1. **Myelopathic Albumosuria.**—Meltzer reports one case of this disease, the essential clinical points of which are pain of the bones, especially those of the trunk; the presence of Bence Jones's albumose in the urine; and a more or less rapid decline leading invariably to a fatal termination. The occurrence of the albumose in the urine is pathognomonic for this disease. All told, there are about thirty such cases on record. Some of the early cases were thought to be osteomalacia. It was in 1873 that v. Rustitzky described

a malignant disease of the bone marrow, which he termed multiple myeloma. Kahler some years later published his study and put forward the statement that the presence of Bence Jones's albumose in the urine was pathognomonic for multiple myeloma. In the case reported by the author no blood examination was made, no x ray pictures were taken, and no autopsy was performed. The diagnosis was, therefore, based entirely on the clincal evidence. There does not seem to be any treatment that is of the least avail. In the author's case ice applications relieved the pain while all drugs proved useless for this purpose.

2. **The Surgical Treatment of Bright's Disease.**—Berg asserts that both chronic parenchymatous and interstitial nephritis arise from a variety of causes, and that it is not possible to determine the fundamental cause of the affection by studying the pathological anatomy of the kidneys, the chemical examination of the urine or the clinical history of the case. This much is certain: Cases of Bright's disease due to certain ætiologic causes are improved or even cured by operation, other cases of different ætiologic origin are not only not improved, but are actually aggravated by operative intervention. The author attempts to indicate which class of cases should be treated surgically and which medically. At present it is not possible to formulate any definite rules. One thing is imperative, and that is, that cases of nephritis must be more accurately studied.

3. **Radium.**—Piffard attempts to give, in as few words as possible, a summary of our present knowledge of radium. From the very nature of the subject the paper is a collection of more or less connected facts for whose presentation in a few words the author requires five and a half pages of space. An abstract of such a paper would be useless.

4. **Hydrocele of the Cord.**—Jacoby asserts that hydroceles of the cord are very frequently mistaken for hernias. Three such mistakes in diagnosis have recently come under his observation. He therefore thinks it well to go over the symptomatology of hydrocele. The only method of treatment worthy of serious consideration is the radical method. *(a)* Incision and drainage; *(b)* excision of the sac; *(c)* incison of the sac, its eversion and suture. None of the cases reported by the author submitted to operation.

AMERICAN MEDICINE.

June 18, 1904.

1. Some Remarks on the Treatment and After Treatment of Congenital Dislocations of the Hip, By Adolf Lorenz.
2. Surgery of Hydrocephalus, By Benjamin Merrill Ricketts.
3. Concerning the Embryology of Kidney Anomalies, By A. G. Pohlman.
4. Two Cases of Fatal Poisoning (Criminal) by Strychnine, with a Report of the Toxicologic Examination of Some of the Organs, By John Marshall.
5. The Antiseptic Treatment of Smallpox, By Samuel M. Wilson.
6. Strangulated Femoral Hernia Containing the Vermiform Appendix, By Emery Marvel.
7. State Registration of Nurses. By Maud Banfield.

1. **Congenital Dislocation of the Hip.**—Lorenz says that, although he has tried to improve his original method of reducing congenitally dislocated hips, and although he has tried many of the various modifications proposed by other workers in this field of surgery, yet his original method has remained unchanged in its entirety during the past ten years, and he has nothing new to add to what he has already set forth in his book. The method of the after treatment is elaborated at some length. The author says that he does not undervalue the x ray as a scientific discovery. However, in his special field of work, it should not be relied upon too absolutely. "However, it would be an error, and would lead to an absolute undervaluation of the practical worth of the method, if we formed our judgment of the functional results of the bloodless reposition from evidence drawn from radioscopy alone. We should come to the unjustified as well as false conclusion, that the method is valueless in nearly half of the cases, which conclusion is entirely inconsistent with everyday experience. If the functional—that is to say, the practical result is satisfactory, I do not lay too much stress upon the Röntgen picture. *Nil perfectum sub sole!*"

2. **Hydrocephalus.**—Ricketts's paper is a brief historical review of the different methods of treating hydrocephalus. It does not lend itself to abstracting. The author formulates twenty conclusions. Space forbids reproducing more than the following: (4) The cases of spontaneous recovery are probably numerous, especially in infant life, in which the arachnoid is alone involved. (12) Probably the greater number of cases of early hydrocephalus, whether of the third, fourth, fifth, or lateral ventricle, or of the arachnoid variety, can be cured by some form of drainage. (13) Continuous drainage by seton or the repeated use of the trocar has given the best results in the way of benefit or cure. (14) Spinal drainage has been practised in a very limited degree, and its value is as yet undetermined. (15) Subcutaneous drainage has not resulted in a cure, but there seem to be many possibilities for this method. (16) Trephining for drainage is only resorted to in cases in which the fontanelles have been closed by bony union. (17) Results from drainage are more favorable if done when the presence of fluid is first detected. (18) It is sometimes necessary to drain both hemispheres, together with the right and left cerebellar cavity. (19) The secret of curing arachnoid hydrocephalus by drainage probably lies in obliterating the arachnoid cavity. However, this can be done with hydrocephalus of the third, fourth, and fifth ventricular variety.

5. **Smallpox.**—Wilson believes that the antiseptic treatment of smallpox, if properly carried out, will do much to prevent scarring. He recommends the following routine: The daily use of the scrub bath before papules develop appears to prevent vesiculation. If instituted too late for

that, it does away, to a great extent, with the repulsive appearance and foul odor characteristic of patients treated without this means. If the patient is not seen until vesiculation has begun, the summits of the vesicles must be punctured, compresses of full strength hydrogen dioxide solution applied, and these followed by a mask wet with some antiseptic. A solution of mercuric chloride—1 to 1,500, gives good results. This need remain in place for a few minutes only. The hydrogen dioxide followed by the mask may be used several times daily if desired, and appears to add to the comfort of the patient, as well as to promote desquamation.

LANCET.

June 4, 1904.

1. Intermittent Hydrops of the Joints: and the Influence of Growth on Deformities (Hunterian Lecture), By H. MARSH.
2. Some Disorders of the Spleen (Lumleian Lectures: II), By F. TAYLOR.
3. A Case of Acute Hæmorrhagic Pancreatitis, By E. T. FISON, and L. S. LUCKHAM.
4. A Case of Pneumococcus Ulcerative Endocarditis Treated by Antipneumococcus Serum, the Pneumococcus Having Been Cultivated from the Blood, By T. J. HORDER, and A. E. GARROD.
5. Appendicitis, By R. COOMBE.
6. Some Points in the Diagnosis of Appendicitis, By W. B. BELL.
7. Removal of the Semicircular Canals in a Case of Unilateral Aural Vertigo, By R. LAKE.
8. A Case Exhibiting the Adams-Stokes Syndrome, By E. E. LASLETT.
9. Central Midwives' Board, By W. J. SINCLAIR.

1. **Intermittent Hydrops.**—Marsh reports two cases of periodical swelling of the joints, occurring in a man aged thirty-eight years, and a woman aged twenty-eight years respectively. There is usually in this condition an effusion into the cavity of the joint concerned; this may be so great as to cause considerable pain. The fluid is sterile and apparently diluted synovia. In other cases there may be but little fluid, the swelling being due to œdema of the synovial membrane. The knee is the joint most frequently involved, but all the large articulations may be concerned. The attacks generally reach their height in two days and subside in two days more, but may be much shorter. They may occur every evening, every third or fourth day, or only once a month. Owing to the fact that the first case yielded rapidly to quinine, and the second to arsenic, and bearing in mind the accurate periodicity of the attacks, and the occurrence of neuralgia, the author at first thought them to be malarial in origin. But according to our present knowledge this view is untenable. No form of local treatment is of any definite service. In conclusion the author reports a group of cases illustrating the corrective influence of growth upon deformity (bow legs, knock knee, deformed joints, etc.), and shows that such action may often be turned to valuable account in the surgery of childhood.

2. **Splenic Diseases.**—Taylor, in his second Lumleian lecture, takes up the conditions known as splenic anæmia and Banti's disease, and discusses the condition of the spleen in pernicious anæmia. The criteria of splenic anæmia are (1) Splenic enlargement; (2) no enlargement of glands; (3) anæmia of chlorotic type; (4) leucopenia; (5) a long course; (6) tendency to hæmorrhage, especially of the chlorotic type; (7) pigmentation of the skin; and (8) secondary enlargement of the liver. The condition of the spleen is not distinctive or specific, and the cause of the changes therein are not known. The anæmia is probably due to inhibition of blood formation by poisons produced in the spleen. Banti's disease is the termination of splenic anæmia in cirrhosis of the liver, jaundice, and ascites. It is essential for its diagnosis that the early history of the case should be known in respect to the blood, as an alcoholic cirrhosis can bring about essentially the same condition.

4. **Serum Treatment in Endocarditis.**—Horder and Garrod report the case of a man aged twenty-six years suffering from lobar pneumonia complicated by ulcerative endocarditis. Symptoms of sepsis appeared and cultures from the blood showed the presence of pneumococci. Antipneumonic serum was then injected in ten cubic centimetre doses daily for five consecutive days. No good results followed and the patient died twelve days after entering the hospital.

5, 6. **Appendicitis.**—Coombe reviews the advances in our knowledge regarding appendicitis and the conclusions arrived at. Appendicitis is a bacterial inflammation of the appendix and with stenosis of the organ the pain of tension may be severe; the tension may be so great as to cause perforation or gangrene, but these may result also from the virulence of the poison; in all but the mildest cases the connective tissue and lymphatics are inflamed, and this inflammation is the cause of the pain and tenderness remaining after the acute pain of onset. Appendicitis undoubtedly occurs more frequently than formerly: this increase in frequency is probably due to (1) the increased hurry of life; (2) imperfect mastication of food due to decayed teeth; (3) constipation; and (4) the use of tinned and frozen food.

Symptoms.—Shivering is not uncommon, but a definite rigor is a very grave symptom, and usually indicates gangrene. Vomiting is common in acute cases, but is often absent in ultraacute cases. It is serious if it returns after an interval, or if it persists after feeding by the mouth has been discontinued. Diarrhœa indicates a severe attack but is favorable in that it indicates that peristalsis is going on. A rising pulse with a falling temperature is an especially bad sign. The rate of the pulse is more important than its character. Temperature is a factor of questionable value in diagnosis. A too rapid fall to subnormal, especially if the patient be drowsy, is a bad sign, and suggests toxæmia. Distention of the abdomen may be due to diffuse toxæmia, opium, or paralysis. Fixity and rigidity of the abdominal muscles are symptoms of the greatest importance. The pain of appendicitis is due to inflammation of the parietal peritonæum or of the postperitoneal cellular tissue, or to traction on the mesentery. Cutaneous hyperæsthesia, deep tenderness, and tumor are symptoms which may or may not be present. Œdema of the skin suggests underlying pus. Rectal examination should never be omitted, especially in women. The leucocyte count and examination of the urine often furnish very valuable information. In acute diffuse cases operation should be performed when symptoms of "peritonism." In abscess cases the condition of the pulse, temperature, and the presence or absence of a tumor must be considered. Bell also reviews the diagnosis of appendicitis. In general rigidity of the abdomen, consequent upon some acute lesion, the site of the lesion is situated beneath that area of muscular rigidity which is the latest to relax as anæsthesia progresses. Local hyperæsthesia and the reflex pain sign (increased by pressure, not at the site of the pain, but at the appendix) point to appendix infection.

BRITISH MEDICAL JOURNAL.

June 4, 1904.

1. An Address on Arterial Sclerosis and Hypertonus in Their Relation to Diet and to the Digestive System, By W. Russell.
2. Abstract of Two Lectures on the Essential Similarity of Innocent and Malignant Tumors, By C. W. Cathcart.
3. The Obstetric Satchel, By J. W. Ballantyne.
4. The Value of the Imperfectly-Descended Testis, the Advisability of Operation, and the Value of Operations Performed for Its Relief, By E. M. Corner.
5. Four Abdominal Cases, By D. Macewan.

1. **Arterial Sclerosis.**—Russell states that arterial sclerosis is often due to an increase in the "tone" of the arteries (hypertonus) with or without an increase in the blood pressure. Gastrointestinal disorders are a frequent cause of hypertonus. The big feeder and free drinker, with his recurring attacks of biliousness, often dies in comparatively early life from the result of vascular changes in his brain or kidneys. But it should be recognized that there are minor degrees of the same class of phenomena. In many persons of early or middle life suffering from one or other form of gastrointestinal functional disorder—dyspepsia or constipation—there occurs an autointoxication of long duration, but relatively mild in its manifestations. In many cases arterial hypertonus is noted, and is often mistaken for a sclerosis occurring in early life, while, as a matter of fact, it is a hypertonic vessel and not a permanent thickening. Indigestion and constipation, common though they be, lead slowly, insidiously, and surely to vascular changes in a great number of people. The proteid element enters too largely into the dietary; by reducing this and increasing the carbohydrates the symptoms of autointoxication are often removed and arterial changes arrested. The true place of cereals in a rational and healthy dietary should be recognized.

2. **Innocent and Malignant Tumors.**—Cathcart discusses the question of the essential similarity of innocent and malignant tumors, and arrives at the following conclusions: I. That innocent and malignant tumors are essentially similar. II. That both forms of tumor might equally be considered as due to growth broken free from normal restraint. Among the deductions which follow are the following: (1) That every type of tumor has associations with malignancy, no class being exempted. The more highly organized and formed the tissue of a tumor, the more it belongs to the simple class. All forms of connective tissue tumors seem to converge to the round-celled sarcoma type, and all forms of epithelial tumor to the encephaloid cancer type. (2) Mere structure does not necessarily indicate clinical behavior, as shown by the difference in behavior between the developing cells of a tumor and of an embryo, although they may be indistinguishable under the microscope. (3) No theory of tumor growth can be considered satisfactory which does not apply equally to innocent and malignant tumors. (4) The similarity of all forms of tumor should keep the surgeon always on his guard. The life of tumor cells may be more precarious than those of the normal tissues, and thus spontaneous subsidences may occur, or tumor cells may be readily injured by toxines, x rays, or even mental influences. Mental influence may explain the effect of many vaunted cancer cures. (5) Tumors should be divided primarily according to the type of tissue or organ from which they arise, and in each class the individuals should be arranged according to the degree of malignancy manifested by them.

4. **Imperfectly Descended Testis.**—Corner tells us that the imperfectly descended testis can very rarely or practically never produce spermatozooids, though this may occur for a year or so at about the age of twenty. But it is endowed with very various capabilities with regard to assisting the development and perfectation of other sexual features. When the condition is bilateral the outlook is bad, as there is no known remedy for errors of development. If the failure is only unilateral, however, there need be no alarm. If the testis is allowed to remain long in its imperfectly descended position it will become largely functionless on account of undergoing sclerosis, which may be hastened by torsion of the cord. Attacks of pain probably indicate spasmodic increase of torsion, and abortive suicidal attempts at strangulation by the organ. A hernial sac is found in about seventy per cent. of the cases. Hence, operation should be considered in every case. The operative procedures may be summarized as follows: 1. Orchidopexy is only applicable in mild cases, and even then is not often called for.. 2. Orchidectomy is only justifiable in cases of torsion, severe neuralgia, extreme atrophy, etc., and in older cases after puberty and after a possible and problematical period of testicular activity and spermatogenesis has passed. 3. Replacement in the abdomen is indicated in by far the majority of cases, and should always be done before puberty and, perhaps, up to the age of twenty. 4. No operation is called for when the testis is close to the bottom of the scrotum, or when both testes are abdominally retained. 5. Operative intervention is demanded in most cases on account of the secondary changes of an inflammatory or sclerotic nature in the testis, which the position of imperfect descent leads to. Again, there is the frequent coexistence of hernia with this condition. The narrow opening of the sac may cause one of the most dangerous varieties of strangulation. The acquired imperfectly descended testis is almost always the result of an operation for the radical cure of a hernia.

AMERICAN MEDICAL ASSOCIATION.

Fifty-fifth Annual Session, Atlantic City, June 7, 8, 9, and 10, 1904.

SECTION ON NERVOUS AND MENTAL DISEASES.

SYMPOSIUM ON CHOREIFORM AND OTHER SPASMODIC MOVEMENTS.

First Day, Tuesday, June 7th.

(*Continued from page 1173.*)

(A) **Symptomatology, Pathology, and Treatment of Choreiform Movements,** was the title of a paper read by Dr. WILLIAM G. SPILLER, of Philadelphia, Pa., in which he considered the clinical characteristics of Sydenham's chorea, Huntingdon's chorea, posthemiplegic chorea, postapoplectic hemihypertonia and athetosis, giving full consideration to the time of life the disease occurred, and dwelling particularly on the occurrence of chorea in the pregnant woman. The relations of chorea to cardiac disease, rheumatism, Graves's disease, etc., were carefully gone into. The pathology of Sydenham's and Huntingdon's chorea was discussed at some length, as was also Gilles de la Tourette's views regarding the time of development of the former, the bacterial origin thereof, the seat and nature of the lesion causing posthemiplegic chorea, chorea bodies, and the treatment. He considered confinement in bed of the utmost importance. He remarked at some length on the arsenic treatment, which, to secure the best effects, should be commenced within the first three weeks of the disease, and should be carefully watched, as a number of cases of neuritis from this cause had come under the writer's observation. He referred to the report of 180 cases of this condition made before the Moscow Society for Diseases of Children, 86 of which were treated with arsenic; 9 with rest; 20 with antipyrine; 29 with bromide, and 31 with quinine, the best results being secured by the arsenic and the least useful being those of bromide and quinine.

(B) **Convulsive Tic** was the title of a paper read by Dr. HUGH T. PATRICK, of Chicago, Ill., in which he stated he believed it to be a very common and frequently misunderstood disease. He went fully into the features and genesis of the condition, the nature of the affection and manner of growth, giving in detail the points of difference between tic and chorea, spasm, paramyoclonus, multiple and other myoclonias abnormal movements dependent upon hallucinations or delusions, stereotypic and excessive gesticulation. He believed that prognosis in children was ordinarily good, but it was a most rebellious disease, and the two factors figuring most prominently in the prognosis were the nature of the patient and the nature of the disease. The causative factor should be searched for, and if possible found and removed, after which stimulation of inhibition by means of rewards for controlling a spasm and punishments for not doing so were of value; such rewards and punishments must, however, be slight and frequent, as severe punishments sometimes produced untoward results. He referred to one case in which prolonged artificial sleep had been followed by good results, while the same success had not been attained with this method in another case. Several other cases of the condition were also referred to.

(C) **Hysterical Movements** was the title of a paper read by Dr. HOWELL T. PERSHING, of Denver, Col., in which he considered the general character of the movements, and stated that the morbid process was an excessive reaction to morbid ideas and emotions occurring in the higher cortical centres. He differentiated the mode of onset from that in other diseases causing similar movements, and stated that the psychic origin could generally be traced. He then considered seriatim in detail the highly coordinated movements, such as the saltatoric spasm; the hysterical imitation of chorea; differential diagnosis; hysterical blepharospasm; hysterical imitations of Jacksonian epilepsy, and hysterical torticollis. This he followed with suggestions as to prognosis and treatment, which he stated must be guided by the ideas applicable to hysteria in general, believing mental influences to be of paramount importance.

The discussion on these papers was opened by Dr. CHARLES K. MILLS, of Philadelphia, who stated that he believed Sydenham's chorea was largely an infectious condition due to an action of some toxines upon an exhausted nervous system, while Huntingdon's chorea, he believed, came under the developmental or family type. In regard to arsenical neuritis, he stated that in almost every case of chorea, there existed at some stage of the disease a mild form of neuritis, probably due, just as arthritis and endocarditis were, to some cause acting on a weakened nervous system. Rest and hygienic treatment were of paramount importance and the drugs which had proved of the most value were arsenic and other remedies which tended to restore the tone to the nervous system. Tic, he felt, was more of a hereditary disease, arising perhaps not from an infection, but from a modification or continuation of a habit.

Dr. B. ONUF, of Sonyea, N. Y., reported a case of spasm of the retina, recti muscles, and pupils, appearing about fifteen years before the patient came under his observation, the patient at that time having consulted an oculist, who prescribed white glasses, prior to which time she had been wearing dark glasses. He explained this on the ground that the frequent accommodation of the pupil made the retina hypersensitive to light, and that as soon as slight dilatation took place, the light was too strong to be borne.

Dr. COULTER, of Omaha, Neb., referred to the fact that Russell, in his reports of chorea occurring in pregnancy, made mention that the greater percentage were in those subjects who were pregnant illegitimately. He stated that suggestive therapeutics, in conjunction with the use of the static spark, in a case of tic of four or five years' duration, occurring in a man sixty-four or sixty-five years of age, had been employed with good results, and he believed that the combination rendered the remedies more effective.

Dr. MCGREGOR, of Saginaw, Mich., reported several cases of choreiform movements, one of them dating from the time when the patient first saw the flashing of a searchlight from the top of a building, and another after an experience with a runaway horse. He believed that it was safe to assume in such cases that there was an unstable condition of the nerve centres, probably a malnutrition of the nervous centres similar to that to which melancholia following fright was attributed. He also referred to a case of chorea occurring in a patient who was very fond of veal, which ceased as soon as the veal was stopped, and reappeared eighteen months later, when she again indulged in this article of diet.

Dr. Hamilton, of Independence, Iowa, stated that he believed the term "chronic progressive chorea" would be preferable to the term "hereditary chorea," as this would include not only the cases in which a history could be elicited, but others also. He reported the case of a woman thirty-six years of age, in whose family the history of chorea began with her grandmother, and had been present in every female, but in no male, member of the family since, except two, never being noticed until after the marriage of the women and the commencement of pregnancy; the two exceptions had never been married. He was inclined to think that the chorea had been present unnoticed prior to pregnancy and had simply been aggravated by it. He did not believe that alcohol, syphilis, and rheumatism were very often present as causative factors. He reported the cause of death and pathological findings in several cases from the State Hospital for the Insane, at Independence, Iowa.

Dr. S. M. Crowell, of Charlotte, N. C., believed the treatment of these cases by suggestive therapeutics to be an important movement, and urged the education of the profession through the State and county societies to the value thereof.

Dr. D. J. McCarthy, of Philadelphia, reported the pathological findings in several cases of Sydenham's and Huntingdon's chorea, and also the clinical aspects of some of the cases, one of which was considerably benefited by suggestive therapeutics and the patient was able to resume his work as a carpenter for some months, but afterward relapsed. Another case referred to was that of a little girl who practiced voluntarily moving her ear, which afterward developed into a habit spasm.

Dr. Punton, of Kansas City, Mo., emphasized the value of therapeutic suggestion, and reported the case of a man who had been operated on five times for tic, in which he and a surgeon suggested the advisability of removing the Gasserian ganglion, but the patient refused this operation, and went to a quack, after which he was seen, and reported that he was entirely cured by therapeutic suggestion without the use of drugs.

Dr. John H. W. Rhein, of Philadelphia, reported a case of Sydenham's chorea, the patient dying during the second week of the second attack of the disease, in which there appeared to be some change in the muscles, but he was unable to demonstrate any pathological change in the spinal cord or cortex. If there was anything characteristic in the reflexes in chorea, he believed that they should be increased. He did not believe that arsenical neuritis occurred very often. He also referred to the possibility of choreiform movements in rare cases of locomotor ataxia.

Dr. Wharton Sinkler, of Philadelphia, believed that there was too much of a tendency to include under general headings too many kinds of cases, citing, for instance, Sydenham's chorea, which he believed was due to various causes, such as fright, infection, etc.

Dr. Harges, of Richmond, Va., stated that in an experience of ten years he had never seen a case of chorea associated with rheumatism, either before, after, or during the attack, and only three cases in which there was cardiac involvement—two of mitral regurgitation and one a soft murmur. He believed the combination of iron with mercury would be of value in the treatment of chorea.

Dr. Albert E. Sterne, of Indianapolis, believed that the prognosis decreased as the age of the patient increased, and also stated that he did not deem it wise to break away from the established classifications of the disease.

Dr. C. H. Williams, of Texas, remarked upon the value of symposiums of this character as producing a coordination of ideas.

Dr. W. C. Jones, of Texas, stated that in that locality there was a great deal of chorea, but very little rheumatism and still less cardiac trouble, and that our energies ought to be directed toward remedying the cause of the disease.

The discussion was closed by Dr. Spiller, Dr. Patrick, and Dr. Pershing.

SECTION ON DISEASES OF CHILDREN.

First Day, Tuesday, June 7th.

(Concluded from page 1172.)

Dr. Charles G. Kerley, of New York, in the chair.

Erythema Nodosum in Children.—Dr. Isaac A. Abt, of Chicago, presented this paper. He stated that modern dermatologists differed among themselves as to the relation of erythema multiforme and erythema nodosum. The disease undoubtedly belonged to, or was to be classified as, one of the exanthematous fevers. The patients were for the most part children, ranging in age from two to fourteen years. The disease usually began with vague pains, gastrointestinal disturbance and fever. The temperature was usually continuous, the disease rarely running its course without some fever. The fever in some case was remittent and usually fell by lysis. Its duration was from two to seven days, while in the relapsing cases it sometimes lasted two or three weeks. The eruption generally occurred in the form of node-like swellings, most frequently located on the shin bones; in some cases on the forearms and thighs; rarely on the tongue and face. The lesions were round or oval in shape, varying in size from that of a walnut to a hen's egg. They were at first painful and tender to the touch, and tense and firm in consistence. They did not produce itching, or tend to suppurate. They were of a bright red color, and the overlying skin was tense and glossy, as though it had been polished. In their involution, the changes resembled those observed in a bruise, and it might take a week or ten days for a single nodule to go through its cycle.

Whooping Cough: A Study of 18 Cases Treated With the Elastic Abdominal Belt.—By Dr. Theron W. Kilmer, of New York. The method consisted in the application of a slightly constricted silk elastic abdominal belt to children having pertussis. The method of applying the belt was as follows: A stockinette band was applied in the same manner as was done by orthopædists before applying the plaster of Paris jacket. This band extended from the axillæ to the pubes, and fitted snugly. Two muslin shoulder straps were used to prevent the band from slipping down. Upon this stockinette a single width of silk elastic bandage was sewn, extending entirely around the body and covering the abdomen. In a child under a year old, it was found necessary to use but one width (five inches) of the elastic bandage; in an older child, two widths would often be found necessary entirely to cover the abdomen. This silk elastic bandage was pinned in place while very slightly on the stretch. After it had been pinned in place, it was sewn to the stockinette band underlying it, all around its entire edge. The lower projecting portion of the stockinette band was pinned down to the outside of the diaper or other clothing, thus keeping the elastic belt smooth over the abdomen. Dr. Kilmer said he had used this belt with great success to control the obstinate vomiting of pertussis. In some of the most aggravated cases the vomiting stopped at once with the application of the belt.

Dr. Kerley thought the method was particularly valuable in very young children, in whom medication was rather difficult, because of the severe remedies that were necessary in whooping cough —severe on account of their effect on the mucous membrane of the stomach in these patients of tender age.

Dr. R. B. Gilbert, of Louisville, Ky., asked if there was any danger of hernia as a result of the tight constriction of the chest and abdomen.

Dr. J. F. Bigony, of Hinton, W. Va., referred to the method of relieving the paroxysms by a constriction about the head and underneath the jaw.

Dr. Kilmer, in closing, said he had never seen a hernia result from the application of the belt. In reply to a question as to the *rationale* of the method, he said he was inclined to believe that it was purely mechanical. In the cases reported, no other treatment but the belt had been used.

Prophylaxis of Tuberculosis in Children.—Dr. Louis Fischer, of New York, read this paper, which was based upon a study of 5,000 cases from the childrens' service of a large outdoor dispensary in New York. These children had been brought to the dispensary for the treatment of various infantile disorders, and were examined for the presence or absence of pulmonary lesions, with special reference to tuberculosis. Of these 5,000 cases, 1,700 suffered from adenoids, pharyngeal disease and catarrh of the nasopharyngeal tract. Fifty-nine showed distinct evidence of pulmonary tuberculosis, and in nine cases tubercle bacilli were found in the sputum. Of the 59 cases that showed evidences of pulmonary tuberculosis, 43 had bone or joint tuberculosis disease and five had Pott's disease in addition to the pulmonary manifestations. Of the 59 tuberculous cases, two were breast fed. Their mothers were very anæmic and dyspeptic, and showed evidences of malnutrition. Thirty-seven were bottle fed, the food consisting of grocer's milk. Eighteen were fed exclusively on condensed milk, and two were fed on modified cow's milk. The writer emphasized the necessity of removing mechanical impediments, such as adenoids and enlarged tonsils in the upper respiratory tract of children, and stated that such deformities as pigeon breast were the result of imperfect oxygenation of the blood. Breast milk and fresh air he regarded as the most important factors in the prevention of infantile tuberculosis.

Dr. A. Jacobi, of New York, said that if the mother was tuberculous, he would forbid her to nurse the baby, not, perhaps, because he believed that her milk was very dangerous, but because, by nursing that child, holding it in her lap and putting it to the breast, there was a distinct danger of its becoming infected through the sputum. He did not wish it to be understood, however, that he excluded the possibility, or even the probability, of the milk being directly dangerous to the child. The milk of a single tuberculous cow was undoubtedly dangerous; the milk of a tuberculous cow that formed one of a herd of thirty or more was much safer. It had been shown that tuberculous milk, when diluted to a sufficient degree, became innocuous.

Dr. W. B. Ulrich, of Chester, Pa., said he agreed with Dr. Jacobi that tuberculosis, *per se*, was not transmitted from parent to child, but that the tendency or diathesis was transmitted, and in those cases tuberculosis developed upon slight provocation. Prophylactic treatment should be in the direction of reforming or controlling the marriages of the world. While a child should be removed from a tuberculous mother, it was better still that there should be no children with tuberculous mothers. The speaker thought that one of the most fruitful sources of trouble in children was overfeeding.

Dr. Charles G. Browning, of Highland, Cal., said that in a series of autopsies recently held, including a large number of hospital cases, less than one tenth of one per cent. of the deaths previous to the first month of life were due to tuberculosis. The percentage of deaths from this cause increased rapidly with the third month until about the eighteenth month. The manner of infection was probably largely due to the inhalation of tubercle bacilli through the mouth. The practice of allowing infants to crawl about on dirty floors should be discouraged.

Dr. Paulus A. Irving, of Richmond, Va., spoke of an infant asylum in the South, where 29 out of 30 inmates died in the course of a year. The cause of the high mortality was vainly sought for. Finally, it was discovered that the cow that supplied the institution with milk was tuberculous. This the speaker regarded as pretty strong evidence of the transmission of bovine tuberculosis to the human family.

Dr. Fischer, in closing the discussion, said he thought a tuberculous mother should not only be isolated from her healthy child, but also from her husband and from every one else who was receptive to tuberculosis, which he believed we all were.

As to whether bovine tuberculosis was transmissible to the human, he thought we were not yet prepared to answer that question. He did not believe we could prove to-day that milk alone was a causative factor of tuberculosis. There were other conditions that predisposed to infection.

SECTION ON MEDICINE.

Second Day, June 8th.

(*Concluded from page 1217.*)

Treatment of Arteriosclerosis.—Dr. James N. Anders, of Philadelphia, said that he had subdivided the cases into ætiological categories as follows: (1) Those due to toxic agencies in the blood, e. g., in chronic alcoholism, lead poisoning, diabetes mellitus, syphilis, gout, rheumatism, and other infectious diseases; (2) arteriosclerosis caused by the constant ingestion of an excess of either the carbohydrates or nitrogenous food; (3) cases dependent upon constant hypertension, due to muscular over exercise, as in certain laborious occupations and violent competitive sports. He emphasized the importance in early life with reference to competitive efforts in athletics. The maintenance of a complete nutritive equilibrium was a potent means of preventing pathological processes which led to arterial changes. In gouty subjects nothing was so vitally important as a suitable diet and regimen. There was, however, no special diet suitable for all cases of gout, no dietetic rules universally applicable. A suitable and considerable restriction in the amount of food was the prime requisite. Such subjects should adopt an open air life coupled with regular systematic muscular exercise. By remembering the principal causes of arteriosclerosis it was clear that by a proper regulation of the *séances*, massage became a most useful means of prophylaxis and exercised a beneficial influence upon the glandular secretions and the nervous system, as well as upon the vascular system. Warm baths were serviceable in lowering the tension of both the arteries and veins. It might be seriously doubted whether the disease was ever arrested by medicine, however we might retard its progress to some extent and restore the normal rapidity of the blood current and lower the blood pressure by dilating the arterioles. The remedies employed for this purpose were nitroglycerin, the nitrites, and potassium iodide. Except in cases due to syphilis, the results obtained by the use of iodides were in no wise comparable in brilliancy to those obtained by following the careful application of hygienic measures and the use of nitrites. The iodides were called for, and had been shown to be of decided value in cases showing a luetic taint. Sphygmographic tracings indicated the results of nitrites and nitroglycerin. The result of these studies made clear the different conditions described under the title of arteriosclerosis. The blood pressure was not materially increased in many cases dependent upon senile degeneration, chronic diabetes, and certain toxæmias. The nitrites were strongly indicated and most effective in that category of cases in which there was an early and marked increase in arterial pressure and the heart was hypertrophied.

Dr. Alfred Stengel, of Philadelphia, said that if we wished to accomplish anything in the treatment of arteriosclerosis, especially its consequences, it should be done in the early stages of the disease and, therefore, that greater efforts should be made in the direction of diagnosis and its ætiology. He felt convinced that alcohol was a very important cause. He was much surprised at a recent meeting of the British Medical Association, in hearing the statement made that the convalescence of typhoid fever should take from one year to eighteen months, and the more he saw of the end results of typhoid fever, the more he believed in the truth of this statement. After having had the disease, it was necessary to direct avoidance of strains of any kind until long after.

Dr. Frederick Shattuck, of Boston, referred to the multiplicity of causes of arteriosclerosis. It seemed to him that the carrying of responsibilities, such as by the captains of industry, men who carried great strains, etc., was a cause; but there were the men from whom we could not get statistics; he could not but believe, however, that this weight—carrying was one of the causes of arteriosclerosis through defective metabolism. There was a high arterial tension in these people, and if to that was added alcoholism, what was the result? The biggest alcohol drinkers in the country who still maintained good health were not the men who led strenuous lives. In Canada the life was a hard one; the Scotch and the Scandinavians were enormous consumers of alcohol; the Scotch led intelligent lives, yet not the high tension life, as in this country. It was a notorious fact that a man could not use alcohol here as in Europe. All this seemed to show that there was an extreme complexity of problems with which we were dealing.

Dr. William Kraus, of Memphis, Tenn., said that the anatomical classification of the disease was fraught with difficulty. The ætiological feature of this disease seemed to be associated with the circulation of toxines in the system and with degeneration in solid organs. Primary degeneration was not so much the result of increased pressure or pathological change as in the circulating toxines in the outer coats. With regard to malarial fever, it must be very severe and characterized by long duration before it produced arteriosclerosis. In all cases he found changes in the kidney, and in the severe malarial fever there was usually associated albuminuria. He referred to the instance of a man who, twenty-four or twenty-five years ago, had suppression of the urine, and to-day this man could not drink alcohol without raising the blood pressure so much as to cause throbbing of the temples.

Dr. Charles G. Stockton, of Buffalo, spoke of the appearance of pain in the abdomen, depending upon arteriosclerosis, which was often not even suspected. Instead of using the ordinary warm baths he thought better results were obtained from short hot or vapor baths, which had as good effect in opening the capillary vessels. When the nitrites or nitroglycerin was given and the drug was desired to have a constant and uniform effect, it should be given more frequently. Without the use of the iodides he did not think we should have favorable results in the treatment of arteriosclerosis.

Dr. S. J. Meltzer, of New York, assumed that he was not wrong in stating that local causes could cause local arteriosclerosis. In referring to Dr. Cabot's remarks he said that the peripheral arteries only were examined, but the splanchnic area was not examined, and he did not think that Dr. Cabot should draw the conclusions he did without examination of this area. Alcohol in health was sometimes a curse, but alcohol in disease was often a blessing.

Dr. Babcock, of Chicago, did not think that we should attribute any special ætiological influence to any one factor in the production of arteriosclerosis. He thought we should consider the form in which alcohol was consumed. The Germans were in the habit of consuming many quarts, 25 to 30 litres of beer a day, and he believed that in dealing with these individuals we must consider, not merely the fact that alcohol had been taken, but other factors, such as the excessive amounts of fluids consumed and the nutritive material such as was contained in beer. When individuals consumed such large quantities of beer there was the additional strain to be considered.

Dr. F. R. Weber, of Milwaukee, referred to certain salts which had a wonderful effect upon the blood pressure. At present he was experimenting with barium chloride, which, like adrenalin, would increase markedly the blood pressure. By its use he had been able to produce an obliterating endarteritis.

Dr. Boardman Reed, of Philadelphia, thought that the association of alcoholism and arteriosclerosis was due to the effect of the former upon the gastrointestinal tract. Toxines that were formed in the alimentary tract might produce arteriosclerosis.

Dr. A. M. Phedren, of Toronto, Canada, said that three years ago there was an epidemic of peripheral neuritis at Birmingham, and attention was drawn to the fact that it was not due to the alcohol, but to arsenic.

Dr. A. Jacobi, of New York, in speaking of those cases of arteriosclerosis dependent upon syphilis, said that we expected to be successful in the treatment by the use of mercury and the iodides. He referred to cases of congenital smallness of large and small arteries, and here there was a peculiar form of congenital sclerosis that gave rise to obstruction in the peripheral circulation, and it was attended by an increase of the size of the heart.

(Afternoon Session.)

A Study of One Hundred and Eighty-six Cases of Mitral and Tricuspid Stenosis.—Dr. Judson Daland and Dr. E. L. McDaniel, of Philadelphia, made a report on a heart showing mitral and tricuspid stenosis, and gave an analytical and statistical study of 186 cases of this affection that had appeared in literature from 1809 to 1904. In 157 cases, as regarded the age of the subjects, 14 per cent. occurred between the ages of ten and twenty years, 40 per cent. between twenty and thirty, 26 per cent. between thirty and forty, 12 per cent. between forty and fifty, 4 per cent. between fifty and sixty, and 1 per cent. between the ages of sixty and seventy years. Males were afflicted in 21 per cent. All cases occurred in the white race. In 21 per cent. of the cases it was distinctly stated that rheumatism was not the cause. From the observations made, the only important known cause of this affliction was rheumatism. Difficulty in breathing occurred in 35 per cent. of the cases; dropsy occurred in 34 per cent.; cough in 9 per cent. Pericardial pain and distress occurred in twelve cases, epigastric pain and distress in three cases, angina pectoris in one case, asthenia in ten cases, hæmoptysis in six cases, vertigo in five cases, embolism in three cases, jaundice in three cases, vomiting in three cases. In thirty-one cases the apex beat was in the fifth or sixth interspace. A presystolic murmur was heard in the mitral area in forty-one cases; in the tricuspid area in eleven cases. The systolic murmur was best heard at or near the apex in 30 per cent. of the cases and over the base of the heart in 15 per cent. In thirty-one cases a presystolic thrill was observed at the apex and in nine cases a systolic thrill. Aortic stenosis was discovered in 30 per cent. and aortic insufficiency in sixteen cases. The average weight of the heart was 15.8 ounces. Albuminuria was present in thirty-seven cases.

Pleural Effusions in Heart Disease.—By Dr. J. Dutton Steele, of Philadelphia, presented this paper. He said that he had already called attention to the fact that passive pleural effusion might occur in the course of failing compensation of the heart, before there was any tendency to external dropsy, and that this pleural effusion was very often unilateral, with a preference for the right side. This conclusion had been arrived at from a study of 75 autopsies and a series of seventeen cases which Dr. Stengel had investigated. It was the general opinion that hydrothorax was apt to occur before general œdema, though many observers had reported isolated cases of right sided cardiac hydrothorax. In deciding between cases of cardiac effusion and effusion from other causes, it was required that there should be decided evidence of myocardial disease and enlargement of the heart, and also that the cardiac condition should be predominant. A very interesting point shown by a study of these cases was that, while right sided effusions occurred with enlargement of the right heart, left sided effusions were usually associated with the left side of the heart. The theory that appeared to explain most satisfactorily the preference of these pleural effusions for the right side, supposed that enlargement of the heart and especially of the right auricle could press upon the root of the right lung and obstruct the vena azygos major. However, the pressure of a dilated auricle upon the root of the left lung would not obstruct any large venous trunk analogous to the vena azygos major. He could not explain this, but could only call attention to the fact that left sided cardiac dilatation seemed to bear some relation to left sided pleural effusions. The effusion in certain cases was very obstinate, lasted a long time, and returned quickly after aspiration. It was important that we should recognize that such effusions occurred in heart disease in the diagnosis of both cardiac and pleural effections.

Prolonged Delirium in Pericarditis and Endocarditis, with the Report of a Case.—Dr. E. M. Greene, of Easton, Pa., said that all the authorities that he had consulted, while recognizing delirium as a frequent symptom in severe cases of pericarditis, especially where there was effusion, spoke of the delirium as being of short duration, with marked cerebral symptoms, and usually associated with hyperpyrexia. He reported a case of acute rheumatism followed by endocarditis, and accompanied by slight pleurisy with effusion. At the onset, respiration ran up to 37 or 38 per minute, the pulse to 100 to 108, the temperature to 100° F. to 101° F. Auscultation revealed symptoms of acute pleurisy and a systolic murmur over the pericardium, most intense at the apex. His delirium lasted for five weeks, dyspnœa was always present, as was also cyanosis. The degree of fever was not sufficient to account for continuance of delirium through so long a period. Recovery took place slowly, but within a few months after the patient had returned to work, he was able to exercise at an elevation of 10,000 feet without discomfort, and subsequent physical examination revealed no marked lesion.

The Limitations of Digitalis in Mitral and Aortic Regurgitation.—By Dr. Frank Jones, of Memphis, Tenn., reviewed the anatomy and physiology of the heart. He said that the mitral valve, being located at the gateway between the great arterial reservoir, the left auricle, and the arterial pumping station, the left ventricle, when it failed to close in systole, threw its burden on various organs, the right heart, lungs, liver, and kidneys. When compensation had failed, or was failing, the pathological picture was venous stasis. Œdema and bronchitis would result in proportion to the degree of obstruction and stasis, and the condition of the cardiac muscle. Nutrition was profoundly disturbed, as a result of this stasis and engorgement. With this clinical picture there was no necessity to dwell upon the marked effects of digitalis in mitral insufficiency with failing compensation. On the other hand, digitalis was contraindicated in aortic regurgitation. In consequence of the anatomical location and the physiological action of the valves, when the aortic valve became incompetent and could not close with the diastole, we had a backward column of blood thrown upon the left ventricle. In its effort to relieve the valve it became hypertrophied, and there was a high blood tension. There frequently existed a well defined arteriosclerosis. He thought that to give digitalis in such a condition was useless. Hyperæmia, venous stasis, and dropsy, were late symptoms, and in the majority of cases when they did appear the fault was at the mitral valve. The right and left ventricles were both so worn out that the administration of digitalis was useless, or even harmful. Digitalis only increased the work of the ventricle, while the ventricle called for blood. When compensation failed the left ventricle went to pieces. There was no justification for the use of digitalis in aortic regurgitation, no matter what might be the condition of the heart muscle. After a careful study of bountiful clinical material, he was convinced that there was but one valvular lesion where digitalis was indicated, and that was mitral insufficiency,and then not until compensation had failed.

Some Points in the Acoustics of Respiration.—Dr. Charles E. Quimby, of New York, presented this paper, to demonstrate the following propositions: (1) The tracheal note represented the interference of pitch limit of respiratory sounds, and that limit might be defined by a letter of the musical scale, as might every other respiratory pitch. (2) In vesicular respiration, the inspiratory sound represented the superior pitch limit of respiratory sound. (3) The passage from vesicular respiration to bronchial breathing was attended, at first, by a lowering in pitch of the inspiratory note, and later by lowering of both inspiration and expiration. (4) In vesicular breathing the inspiration was of a higher pitch than expiration; in rude, bronchial, and tracheal breathing, the inspiration was of a higher pitch than, or the same pitch as, expiration. There was no respiration resulting from consolidation in which expiration was of higher pitch than inspiration.

Letter to the Editor.

THE LIGHT TREATMENT OF DISEASE.

772 Park Avenue,
New York, *May* 24, 1904.

To the Editor,

Sir: On April 23rd I published in your journal an article on the treatment of diseases by light. I stated that, this being a preliminary report, "I would refrain from discussing the literature of phototherapeutics nor detail the various methods and their advantages or shortcomings, but briefly relate my personal experience and the results obtained." I intended to avoid all controversy and criticism for failing to give this or other authors due credit for their researches and publications. My aim in publishing this brief report was not to enter into a discussion as to which wave length was most serviceable or how deep certain rays would penetrate the tissues, but to relate my failures and successes with light therapy. Nevertheless, Dr. Piffard, in a letter published in your journal on May 7th, has taken me to task for ascribing the curative results obtained in my cases to the ultraviolet rays and also to my statement that "the investigations of Finsen and his assistants have proved the universal penetrating power and bactericidal action of these rays." I frankly confess that thus far I have made no experiments as to which rays of the spectrum are most desirable, but I do know by practical experience that light rich in ultraviolet rays, that is from the iron carbon arc, gives the best and quickest results. As to my statement that Finsen ascribes penetrating power to the chemical light rays, I may be permitted to append a brief extract from one of his publications:

"By sealing strips of aristo paper on one side of a person's ear and then turning a stream of concentrated light upon the other side, it is found from the blackening of the paper that the chemical rays are capable of penetrating the tissues of the ear." Finsen: Om Anoendelsen i Uredecinen of Konceutreaede Kemiske Lystraaler. P. 36.

Julius Rosenberg.

Book Notices.

Anleitung zum chemischen Arbeiten fur Mediciner. von Dr. F. Rohmann, ausserordentlicher Professor an der Universität Breslau. Zweite Auflage. Mit 32 Abbildungen in Text. Berlin, 1904. S. Karger.

The introduction to the chemical work for physicians by Dr. Rohmann, extraordinary professor in the University of Breslau, is a small volume of well digested and admirably arranged material. The first portion of the work is devoted to analytical tables showing the methods for separating the various elements. This is followed by a tabular summary of the dry reactions. The method of separating the various groups of elements is then given, all this occupying about twenty-two pages.

The second part of the work is devoted to an explanation of the methods of examination which are likely to be of use to the physician in diagnosis. Directions are given for the more important of the various reactions for the sugars, the pentoses, the starches, the fats, albuminoid substances, vitellin, etc. The composition of the gastric juices and its functions are dealt with briefly but clearly. The functions of the pancreas and a description of its secretions are given, and the more important decomposition products of albumin are described and a list of the excretions of the liver and the gall bladder is set forth in tabular form. The chemical constitution of the blood is briefly outlined and the spectra of its various coloring matters are presented. A brief description of the urine and of the ordinary methods used for its examination together with a reference to the more important of the constituents of the normal and pathological urine closes the volume. The little hand book is an admirable, though necessarily a very condensed introduction to the study of chemistry for physicians.

Bäder-Almanach, Mitteilungen der Bäder, Tuftkurorte und Heilanstalten in Deutschland, Oesterreich, der Schweiz und den angrenzenden Gebieten. Für Aerzte und Heilbedürftige. Neunte Ausgabe, Mit Karte der Bäder, Kurorte und Heilanstalten. Berlin: Rudolf Mosse. Pp. xcvi-489.

The ninth edition of this excellent manual of the baths, climatic resorts, and sanatoria of Germany, Austria, Switzerland, and the neighboring territory may be taken as evidence of the just appreciation in which the book is held.

Studies from the Rockefeller Institute for Medical Research. Reprints. Volume I, 1904.

There can be no question of the value of this collection of articles, twenty-seven in number, by such authors as E. B. Vedder, C. W. Duval, C. A. Herter, A. N. Richards, A. C. Abbott, N. Gildersleeve, L. F. Rettger, P. Kyes, F. P. Gay, H. Sachs, W. R. Brinkerhoff, E. E. Tyzzer, S. J. Metzer, W. Salant, May Wheeler, Theobald Smith, A. L. Reagh, Clara Meltzer, R. L. Thompson, Clarence Quinan, Martha Wollstein, F. P. Underhill, H. W. Conn, and W. M. Esten.

It is to be regretted that the typographical appearance of the volume is marred by the variety of the papers' sources, and we think that at least the pagination might have been made continuous, so that an index could be constructed.

Theorie und Praxis der Augengläser. Von Dr. E. H. Oppenheimer, Augenarzt in Berlin. Mit 181 Textabbildungen. Berlin: August Hirschwald, 1904.

This is a compilation of the literature regarding the optician's art, which had for the most part been lost in the ocean of medical journalism till rescued by the collator.. First comes a sketch of the history of spectacles, the development of the industry of their manufacture, and the latter as it is to-day. A chapter 40 pages long is devoted to a description of the various parts of a pair of spectacles, and a shorter chapter is given to eyeglasses, followed by a rather brief account of lorgnons, lunettes, and the other less common forms in which glasses are used; and also of accessories found in the shops. A few words on the advantages and disadvantages of wearing glasses lead up to their separation into corrective and protective and the importance of their proper adjustment. Under corrective lenses are included, not only those which are used to correct refractive errors, but also those worn for cosmetic purposes or to correct such deformities as ptosis and entropion. Crown glass, flint glass, pebbles, etc., receive attention, and a description of the various ways in which lenses are ground is followed by the nomenclature of lenses and prisms.

There is little if anything original in the book, which the author says was written for three classes of readers, " ophthalmologists and general practitioners, so far as they may be interested, opticians, whose needs are given equal attention, and the laity," but there is a certain stiff-jointed unbending, which smacks of provincial superciliousness, toward America, whence the most valuable fourth of the material has been drawn.

BOOK AND MAGAZINE NOTES.

The third edition of *Materia Medica, Pharmacology, and Therapeutics of Inorganic Substances,* by Dr. Charles D. F. Phillips, comes from Messrs. Longmans, Green and Co., of New York, London, and Bombay. The work is a standard one and hardly needs an introduction to our readers. The 921 pages are printed on a fine quality of thin paper, rendering the volume one to be conveniently handled.

We do not know why we have been favored with a copy of *It Was Summer Time in Dixie Land,* by the Theatrical Music Supply Co., there being no reference to the medical profession therein, unless the publishers have heard of the supposed value of music in certain neurasthenic cases. We are willing to say that we do not think the song, if well rendered, would increase the gravity of any particular case.

The superb fifth edition of Dr. John H. Musser's *Medical Diagnosis* has been issued by Messrs. Lea Brothers and Co., of Philadelphia. It contains over 1,200 pages, 395 wood cuts, and 63 colored plates, and is probably the most complete, as well as the handsomest, work of its kind that is offered to the profession.

In our issue of June 4th, we asked why the title of Dr. Edward E. Gibbons's book was *The Eye; Its Refraction and Diseases,* when no mention was made of disease. The author has written to us explaining that diseases of the eye are to be discussed in a second volume, together with operations.

The World To-Day (Chicago and New York), for June, contains a striking article, by " Enricus Cordus,

M. D.," on Medical Graft. Some of the statements are shocking. The assertion that one physician "vaccinates" with croton oil seems to mark the limit in petty thievery; while the frequency with which doctors are invited to accept commissions from sanitariums, manufacturers of mineral water, and others, seems to show that many accept. The writer, however, has confidence in his colleagues, and knows that they are oftener graftees than grafters.

Beginning with the July issue, the price of *The World To-Day* will be reduced to ten cents. We recommend it to busy practitioners who wish to know what is going on around them and want the information in terse yet readable form.

BOOKS, PAMPHLETS, ETC., RECEIVED.

State Requirements (Summary) for Medical Practice in the United States, 1904. Compiled by the Illinois State Board of Health. Chicago: American Medical Association Press, 1904.

Diseases of the Intestines. By Dr. I. Boas, Specialist for Gastrointestinal Diseases in Berlin. Second revised and enlarged American edition, translated by permission from the German edition, with special notations and additions, by Seymour Basch, M. D., New York city. With 48 Illustrations. New York and London: D. Appleton & Co., 1904.

Adolescence. Its Psychology and Its Relations to Physiology, Anthropology, Sociology, Sex, Crime, Religion, and Education. By G. Stanley Hall, Ph. D., LL. D., President of Clark University and Professor of Psychology and Pædagogy. Two Volumes, 8vo. New York: D. Appleton & Co., 1904. [Price, Cloth, $7.50 net.]

The Extra Pharmacopœia. Revised by W. Harrison Martindale, Ph. D., F. C. S., and W. Wynn Westcott, M. B., Lond., D. P. H., H. M.'s Coroner for Northeast London. Eleventh Edition. London: H. K. Lewis, 1904. [Price, 9s. 6d. net.]

Official News.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending June 18, 1904:

Edger, Benjamin J., Jr., Captain and Assistant Surgeon. Promoted captain and assistant surgeon, to rank from June 14, 1904.

Ewing, Charles B., Major and Surgeon. Granted seven days' leave of absence from June 12, 1904.

Gilchrist, Harry L., First Lieutenant and Assistant Surgeon. Granted ten days' leave of absence, to take effect about June 20, 1904.

Havard, Valery, Colonel and Assistant Surgeon-General. Relieved from duty at the Military Academy, West Point, N. Y., and ordered to proceed to Governor's Island, N. Y., about September 1, 1904, and report to the Commanding General of the Department of the East for duty as chief surgeon of that department.

Phillips, John L., Major and Surgeon. Temporarily in charge of the office of the Chief Surgeon of the Department of the East, is relieved temporarily from his present duties as post surgeon at Fort Jay and attending surgeon at the department headquarters, and will report direct to Division Headquarters for duty in connection with the field exercises at Manassas.

Rand, Irving W., First Lieutenant and Assistant Surgeon. Granted twenty days' leave of absence, to take effect June 14, 1904.

Stiles, Henry R., Captain and Assistant Surgeon. Leave of absence, on account of sickness, extended three months.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending June 18, 1904:

Chapman, R. B., Assistant Surgeon. Detached from the Naval Hospital, Mare Island, Cal., and ordered to the Navy Yard, Washington, D. C.

Hart, G. G., Acting Assistant Surgeon. Ordered to the *Alliance* for temporary duty, and on the arrival of that vessel at Culebra, W. I., detached and ordered home to await orders.

Mink, O. J., Assistant Surgeon. Appointed assistant surgeon, with the rank of lieutenant, junior grade, from June 7, 1904.

Porter, F. E., Assistant Surgeon. Appointed assistant surgeon, with the rank of lieutenant, junior grade, from June 7, 1904.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending June 17, 1904:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
California—San Francisco	May 29-June 5	1	
Dist. Columbia—Washington	May 28-June 4	7	
Florida—Jacksonville	June 4-11	1	
Georgia—Macon	June 4-11	1	
Illinois—Chicago	June 4-11	1	
Iowa—Dubuque	June 4-11	2	
Kentucky—Covington	June 4-11	2	
Louisiana—New Orleans	June 4-11	5	
Maryland—Baltimore	June 4-11	6	
Michigan—Detroit	June 4-11	3	
Michigan—Grand Rapids	June 4-11	1	
Missouri—St. Louis	May 28-June 4	22	
Nebraska—Omaha	June 4-11	3	
New Hampshire—Manchester	June 4-11	8	
New York—Buffalo	May 28-June 4	5	
New York—New York	June 4-11		1
Ohio—Cincinnati	May 27-June 3	10	
Ohio—Dayton	June 4-11	2	
Ohio—Toledo	June 4-11	1	
Ohio—Zanesville	Apr. 30-May 7	1	
Pennsylvania—Altoona	May 4-11	4	
Pennsylvania—Philadelphia	June 4-11	4	2
Pennsylvania—Pittsburgh	June 4-11	2	
South Carolina—Greenville	May 28-June 4	2	
Tennessee—Memphis	June 4-11	4	
Tennessee—Nashville	June 4-11	2	
Washington—Tacoma	May 29-June 6	1	
Wisconsin—Milwaukee	June 4-11	6	
Smallpox—Foreign.			
Austria—Prague	May 14-21	12	
Brazil—Campinihas	Apr. 17	Epidemic.	
Canada—Winnipeg	May 27-June 4	2	
China—Canton	Apr. 26	Present.	
Colombia—Barranquilla	May 23-29		1
France—Paris	May 21-28	13	
Great Britain—Bradford	May 7-21	11	
Great Britain—Bristol	May 14-21	5	
Great Britain—Dundee	May 21-28	1	
Great Britain—Edinburgh	May 21-28	2	
Great Britain—Glasgow	May 27-June 3	334	1
Great Britain—Hull	May 14-28	8	
Great Britain—London	May 21-28	33	2
Great Britain—Manchester	May 14-28	6	
Gt. Britain—Newcastle-on-Tyne	May 21-28	2	
Great Britain—Nottingham	May 21-28	7	
Great Britain—Sheffield	May 14-21	2	
Great Britain—South Shields	May 14-28	15	
India—Bombay	May 3-17	46	
India—Karachi	May 8-15		7
Italy—Leghorn	Apr. 10-17	1	
Italy—Palermo	May 7-14	1	
Japan—Nagasaki	May 1-10	40	18
Panama—Panama	May 22-June 5	1	
Russia—Moscow	May 14-21	15	5
Russia—Odessa	May 21-28	5	
Russia—St. Petersburg	May 14-28	25	7
Yellow Fever.			
Costa Rica—Limon	May 21-June 4	3	
Ecuador—Guayaquil	May 11-25		24
Mexico—Coatzacoalcos	May 21-28	3	
Mexico—Jallipan	May 21-28	2	
Mexico—Merida	May 22-June 4	5	1
Mexico—Salina Cruz	May 28-June 4	1	1
Mexico—Tehuantepec	May 22-June 4	11	2
Mexico—Vera Cruz	June 4-11	1	1
Cholera.			
India—Madras	Apr. 30-May 6		1
Turkey in Asia	To May 9	165	130
Plague—Insular.			
Hawaii—Honolulu	June 8		1
Plague—Foreign.			
Africa—Cape Colony	May 9-16	1	
Arabia—Aden	May 15-24	4	2
Argentina—Tucuman	May 7	Present.	
Australia—Brisbane	Apr. 16-30	4	2
Australia—Sydney	Apr. 9-26	4	1
Egypt—Port Said	Apr. 30-May 7	3	3
All Egypt	Apr. 30-May 7	41	18
Formosa	Apr. 23-May 14	1,222	842
India—Bombay	May 10-17		567
India—Karachi	May 8-15	127	105
Peru—Lima	May 7-14	9	6

Births, Marriages, and Deaths.

Married.

Banker—Hanford.—In New York, on Wednesday, June 8th, Dr. Charles Everett Banker and Miss Francena E. Hanford.

Beach—Rasbach.—In Ithaca, N. Y., on Thursday, June 9th, Dr. Judson Beach and Miss Frances Rasbach.

Bodkin—Fisher.—In Brooklyn, N. Y., on Saturday, June 18th, Dr. D. George Bodkin and Miss Madeline Fisher.

Brandt—Lenson.—In New York, on Tuesday, June 14th, Dr. Henry Brandt and Miss Clara Lenson.

Caruthers—Brown.—In Washington, D. C., on Wednesday, June 8th, Dr. V. O. Caruthers and Miss M. Josie Brown.

Crabtree—Kelly.—In Roxbury, Massachusetts, on Thursday, June 2nd, Dr. George H. Crabtree and Miss Inez May Kelly.

Fowler—Ramsey.—In St. Louis, Missouri, on Wednesday, June 8th, Dr. Samuel Robertson Fowler and Miss Helen Ramsey.

Hands—Vallette.—In New Orleans, Louisiana, on Thursday, June 2nd, Dr. Edgar Beach Hands and Miss Doris Vallette.

Harris—Burrell.—In Brooklyn, N. Y., on Wednesday, June 9th, Dr. Allan Harris and Miss Mabel Burrell.

Hirsch—Wittenberg.—In Philadelphia, Pennsylvania, on Tuesday, June 14th, Dr. Charles Hirsch and Miss Fannie Wittenberg.

Kennedy—Jacobs.—In St. Louis, Missouri, on Wednesday, June 1st, Dr. J. J. Kennedy and Miss Lola Jacobs.

Lee—Leonard.—In Kansas City, Missouri, on Wednesday, June 1st, Dr. Richard Henry Lee and Miss Florence Leonard.

Miller—Metz.—In Summerside, Ohio, on Wednesday, June 8th, Dr. G. William Miller and Miss Flora Metz.

Moses—Ryder.—In Brooklyn, N. Y., on Wednesday, June 1st, Dr. Chester Davis Moses and Miss Maud Louise Ryder.

Myers—Lukens.—In Conshohocken, Pennsylvania, on Wednesday, June 8th, Dr. Albert William Myers and Miss Mary Shepherd Lukens.

Polkinhorn—Butler.—In Washington, D. C., on Wednesday, June 1st, Dr. Henry A. Polkinhorn and Miss Grace Elizabeth Butler.

Randell—Bohne.—In New York, on Wednesday, June 15th, Dr. William A. Randell and Miss Minnie Catherine Bohne.

Sands—Du Bois.—In Baltimore, Maryland, on Wednesday, June 1st, Dr. William Hupp Sands and Miss Christine Du Bois.

Singer—Loewenberg.—In Philadelphia, Pennsylvania, on Wednesday, June 1st, Dr. Benjamin L. Singer and Miss Hattie May Loewenberg.

Smith—Harney.—In Washington, D. C., on Wednesday, June 15th, Dr. Charles Gordon Smith, U. S. A., and Miss Margaret Lea Harney.

Symonds—Bacon.—In Goshen, N. Y., on Saturday, June 11th, Dr. Brandreth Symonds and Miss Florence Bacon.

Truax—Duvall.—In St. Louis, Missouri, on Monday, June 13th, Dr. H. E. Truax and Dr. Florence Tippett Duvall.

Warfield—Murdoch.—In Baltimore, Maryland, on Wednesday, June 8th, Dr. Mactier Warfield and Miss Mary C. Murdoch.

Weisse—Young.—In Morristown, New Jersey, on Wednesday, June 1st, Dr. Faneuil Suydam Weisse and Miss Margaret Young.

Williams—Thrift.—In Baltimore, Maryland, on Wedneday, June 1st, Dr. Jesse Wootten Williams and Miss Jane Grey Thrift.

Willson—Patterson.—In Shrewsbury, New Jersey, on Wednesday, June 15th, Dr. Robert B. Willson and Miss Mary Jennetta Patterson.

Willson—Voit.—In Tunis Mills, Maryland, on Wednesday, June 1st, Dr. Spry Denny Willson and Miss Anna Kathryn Voit.

Yale—MacDonald.—In Petersburg, Michigan, on Wednesday, June 1st, Dr. I. Victor Yale and Miss Maude MacDonald, daughter of Dr. T. H. MacDonald.

Zimmer—Crossman.—In Detroit, Michigan, on Wednesday, June 1st, Dr. Lorenzo Linn Zimmer and Miss Zoe Crossman.

Died.

Andrews.—In Dixmont, Pennsylvania, on Friday, June 3rd, Dr. Lawrence G. Andrews, in the seventy-sixth year of his age.

Andrews.—In Detroit, Michigan, on Friday, June 3rd, Dr. Myron H. Andrews, in the eighty-ninth year of his age.

Baker.—In Conneaut, Ohio, on Thursday, May 26th, Dr. C. D. Baker.

Beale.—In Camden, New Jersey, on Tuesday, June 7th, Dr. P. W. Beale, in the forty-eighth year of his age.

Brooks.—In New York, on Friday, June 3rd, Dr. George Washington Brooks, in the eighty-eighth year of his age.

Campbell.—In Montreal, Canada, on Monday, May 30th, Dr. Rollo Campbell, in the fortieth year of his age.

Carlson.—In St. Paul, Minnesota, on Friday, June 3rd, Dr. S. W. Carlson, in the thirty-first year of his age.

Clement.—In Philadelphia, Pennsylvania, on Sunday, June 12th, Dr. James M. Clement, in the seventy-second year of his age.

Collins.—In Detroit, Michigan, on Thursday, June 2nd, Dr. Frank P. Collins, in the thirty-second year of his age.

Corey.—In Washington, D. C., on Thursday, June 16th, Dr. Waterman F. Corey, in the seventieth year of his age.

Creekbaum.—In Salt Lake City, Utah, on Tuesday, June 7th, Dr. John H. Creekbaum, in the twenty-sixth year of his age.

Cousins.—In Jonesboro, Georgia, on Thursday, June 9th, Dr. I. W. Cousins, in the seventieth year of his age.

Davis.—In Chicago, Illinois, on Thursday, June 16th, Dr. Nathan S. Davis, in the eighty-eighth year of his age.

Denham.—In Kansas City, Missouri on Thursday, June 9th, Dr. Silas N. Denham, in the sixty-seventh year of his age.

Dolley.—In Albion, N. Y., on Wednesday, June 8th, Dr. Jephtha G. Dolley, in the seventy-sixth year of his age.

Dorn.—In London, England, on Friday, June 17th, Dr. John H. Dorn, of New York, in the sixty-third year of his age.

Duerson.—In Bethlehem, Indiana, on Saturday, June 11th, Dr. William T. Duerson, in the sixty-first year of his age.

Dunn.—In St. Louis, Missouri, on Thursday, June 16th. Dr. James H. Dunn, of Minneapolis, in the fifty-second year of his age.

Fithian.—In Paris, Kentucky, on Wednesday, June 15th, Dr. Washington Fithian.

Horton.—In Ryecove, Virginia, on Wednesday, June 15th, Dr. James H. Horton, in the seventy-seventh year of his age.

Ingman.—In Oak Park, Illinois, on Friday, June 3rd, Dr. Lucius S. Ingman.

Lang.—In Pawtucket, Rhode Island, on Wednesday, June 8th, Dr. Benjamin Franklin Lang, in the forty-ninth year of his age.

Lawless.—In Chicago, Illinois, on Tuesday, June 7th, Dr. James Lawless, in the sixty-first year of his age.

Leeper.—In Glen Cove, Long Island, New York, on Saturday, June 4th, Dr. Matthew Leeper, in the fiftieth year of his age.

Mann.—In Nicholasville, Kentucky, on Wednesday, June 1st, Dr. Charles Mann, in the sixty-eighth year of his age.

Moore.—In Brockville, Ontario, on Wednesday, June 8th, Dr. Vincent Howard Moore, in the fifty-seventh year of his age.

Noyes.—In Oshkosh, Wisconsin, on Tuesday, June 7th, Dr. J. C. Noyes, in the sixty-fourth year of his age.

Schaefer.—In Chicago, Illinois, on Friday, June 3rd, Dr. F. C. Schaefer, in the fifty-fifth year of his age.

Smith.—In Perry, Georgia, on Saturday, June 4th, Dr. J. B. Smith, in the ninety-second year of his age.

Spencer.—In Saybrook, Connecticut, on Friday, June 3rd, Dr. William D. Spencer.

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